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Multiple Nordic Geographies

9th Nordic Geographers Meeting

19th – 22nd of June 2022

Joensuu, Finland

Editors:
Moritz Albrecht, Sergey Sidorenko, Henrik Nielsen, Jarmo Kortelainen, Laura Poikolainen
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Foreword

Tervetuloa to the NGM 2022 in Joensuu, Finland. The journey to make this 9th Nordic Geographers Meeting happen as an in-person event in COVID-19 times has been a rocky one to say the least. Hence, we foremost would like to thank all of you who have put their trust in this conference (and its organisation team) and have stayed onboard, needing to register and re-register, despite the two postponements and multiple uncertainties throughout the 2+ years of planning. Despite these challenging circumstances we are proud to announce that more than 340 participants have taken up our invitation to Joensuu, the centre of the North Karelian periphery, to engage with the conference theme Multiple Nordic Geographies. The choice to focus on and celebrate multiplicity at this 9th NGM stems not only from the perspective that we actively wanted to re-involve Physical Geographers in this predominantly Human Geography-focussed meeting, but also to pay tribute to the spatial complexities that are at the heart of geographical engagement and therefore require multiple approaches and perspectives in research and education. Thus, encouraging Nordic geographers and colleagues to look actively beyond one's own scientific community and, at the same time, portraying the multiple character of Nordic geographies both lay at the heart of this NGM 2022 in Joensuu. While listing the various topics to be presented and discussed in our 41 sessions would be beyond the scope of this introduction, our keynote speakers, covering topics including poetry and place, shrinking geographies, spatial scales of river restoration, reproductive geopolitics, and ecosystem services as a unifying geography concept, reflect this ambitious focus on multiple (Nordic) geographies.

The previous time Nordic geographers gathered in North Karelia was in 1990 when The Nordic Symposium on critical social geography took place at the Mekrijärvi Research Station of the University of Joensuu. This past symposium's theme, "Europa förandras – förändras geografin?" (Europe is changing – is geography changing?), manifests the then ongoing profound geopolitical and societal changes and their geographical interpretations. At that time, European geographies indeed were changing, as the Iron Curtain was crumbling, national borders were opening, as well as a more unified Europe and globalised world were emerging. Now, thirty-two years later, we live in an increasingly unstable world where pandemics and growing geopolitical tensions drive development in the opposite direction than in the early 1990s. New symbolic and physical walls between nations are being built again and climate change continues to set major challenges for societies. We are sure that the forthcoming sessions of NGM 2022, as well as our keynote presentations by Benjamin Burkhard, Tim Cresswell, Carolin Schurr, Lina Polvi Sjöberg and Josefina Syssner, will provide us with ideas and inspiration that will help us better navigate these multiple and turbulent geographies.

The organisers from the Department of Geographical and Historical Studies and the Karelian Institute of the University of Eastern Finland warmly wish you welcome to Joensuu and North Karelia. We hope that you will have a fruitful time with many thought-provoking presentations, lively academic debates, and joyful personal encounters, and will enjoy some of the cultural treasures, be they Karelian pasties, luxuriant landscapes, or a proper wood-heated sauna, that our northern EU periphery has to offer.

Moritz Albrecht & Jarmo Kortelainen

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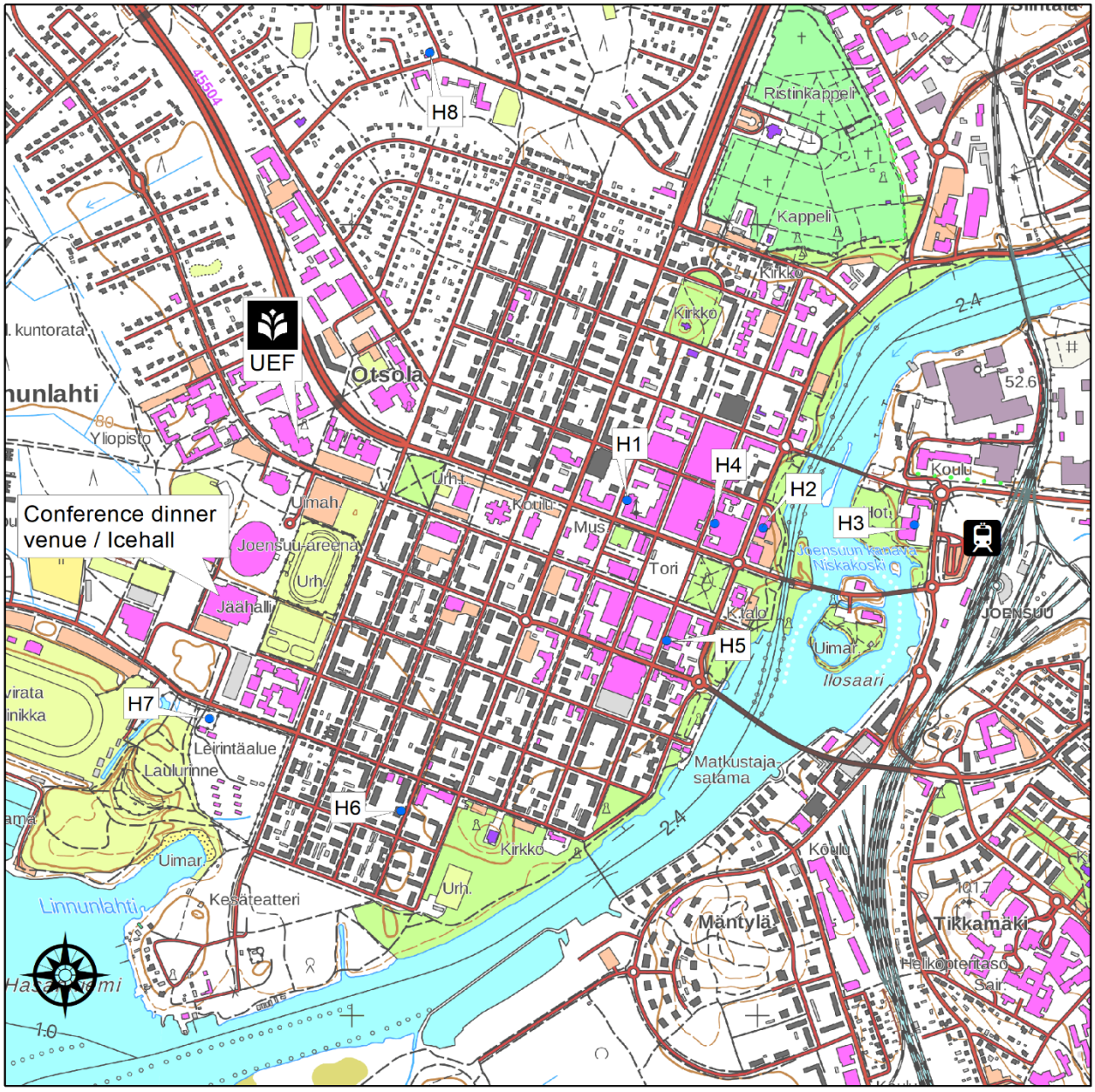
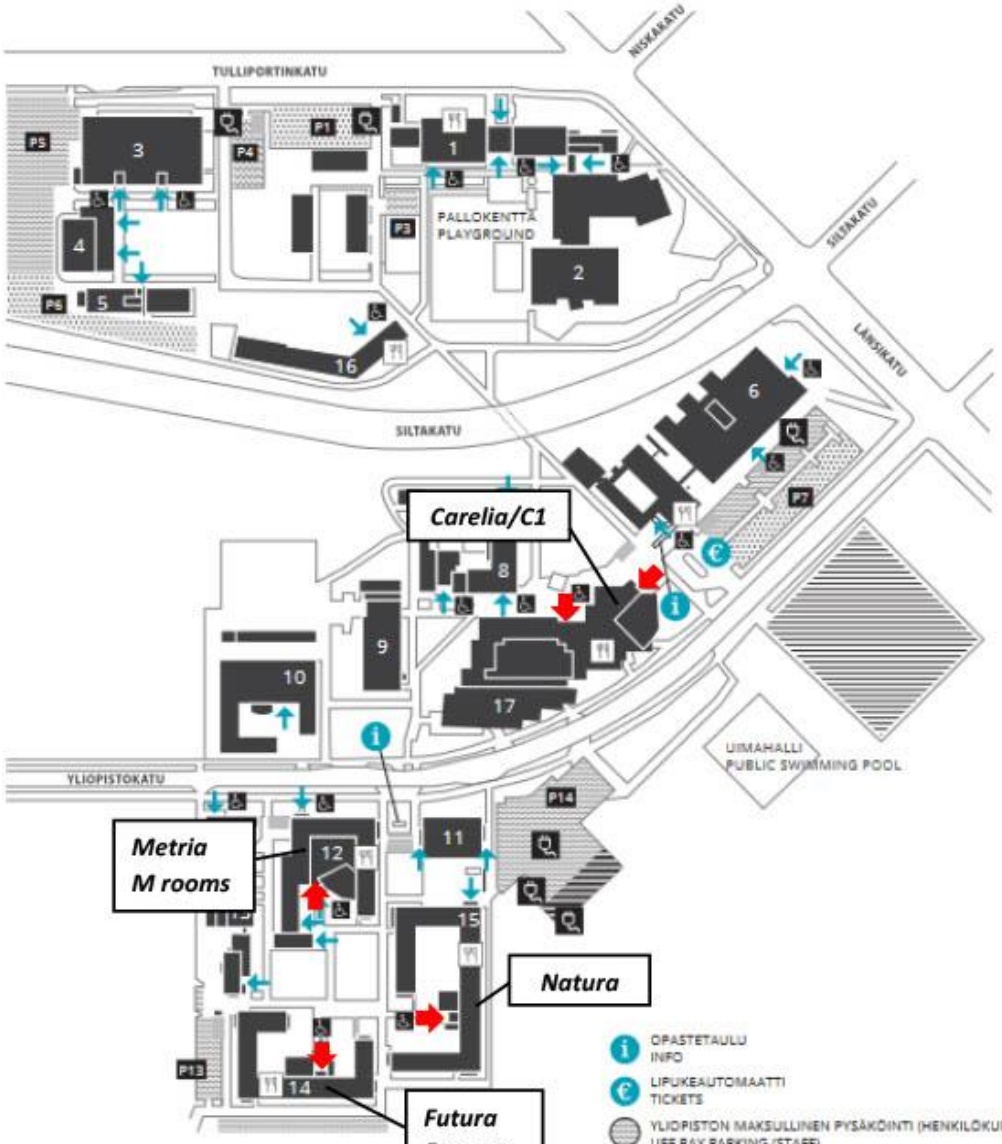


H1 Scandic Hotel
H2 Lietsu Boutique Hotel
H3 Sokos Hotel Kimmel
H4 Sokos Hotel Vaakuna
H5 Greenstar Hotel
H6 ISLO Hostel /Finnhostel Joensuu
H7 Linnunlahti Cottages
H8 Partiotalo Hostel

0 0,25 0,5 1 km

National Land Survey Finland 2020



Tulliportinkatu 1
1 EDUCA
2 LÄNSIKADUN KOULU
3 - 4 TULLIPORTIN KOULU
5 TAITOLA

Yliopistokatu 2
6 AURORA

Yliopistokatu 4
7 CARELIA
8 AGORA

Yliopistokatu 6 A
9 KANSALLISARKISTO

Yliopistokatu 6 B
10 LUKE

Yliopistokatu 7
11 HALTIA
12 METRIA
13 BOREALIS
14 FUTURA
15 NATURA

Ylioppilaanpolku
16 JOENSUUN ELLI

17 JOENSUUN KONSERVATORIO

OPASTETAULU
INFO

LIPUKEAUTOMAATTI
TICKETS

YLIOPISTON MAKSULLINEN PYSÄKÖINTI (HENKILÖKUNTA)
UEF PAY PARKING (STAFF)

YLIOPISTON MAKSULLINEN PYSÄKÖINTI (HENKILÖKUNTA JA OPISKELIJAT)
UEF PAY PARKING (STAFF & STUDENTS)

MUU MAKSULLINEN PYSÄKÖINTI
OTHER PAY PARKING

KONSERVATORION PYSÄKÖINTI
PARKING FOR CONSERVATORY STAFF

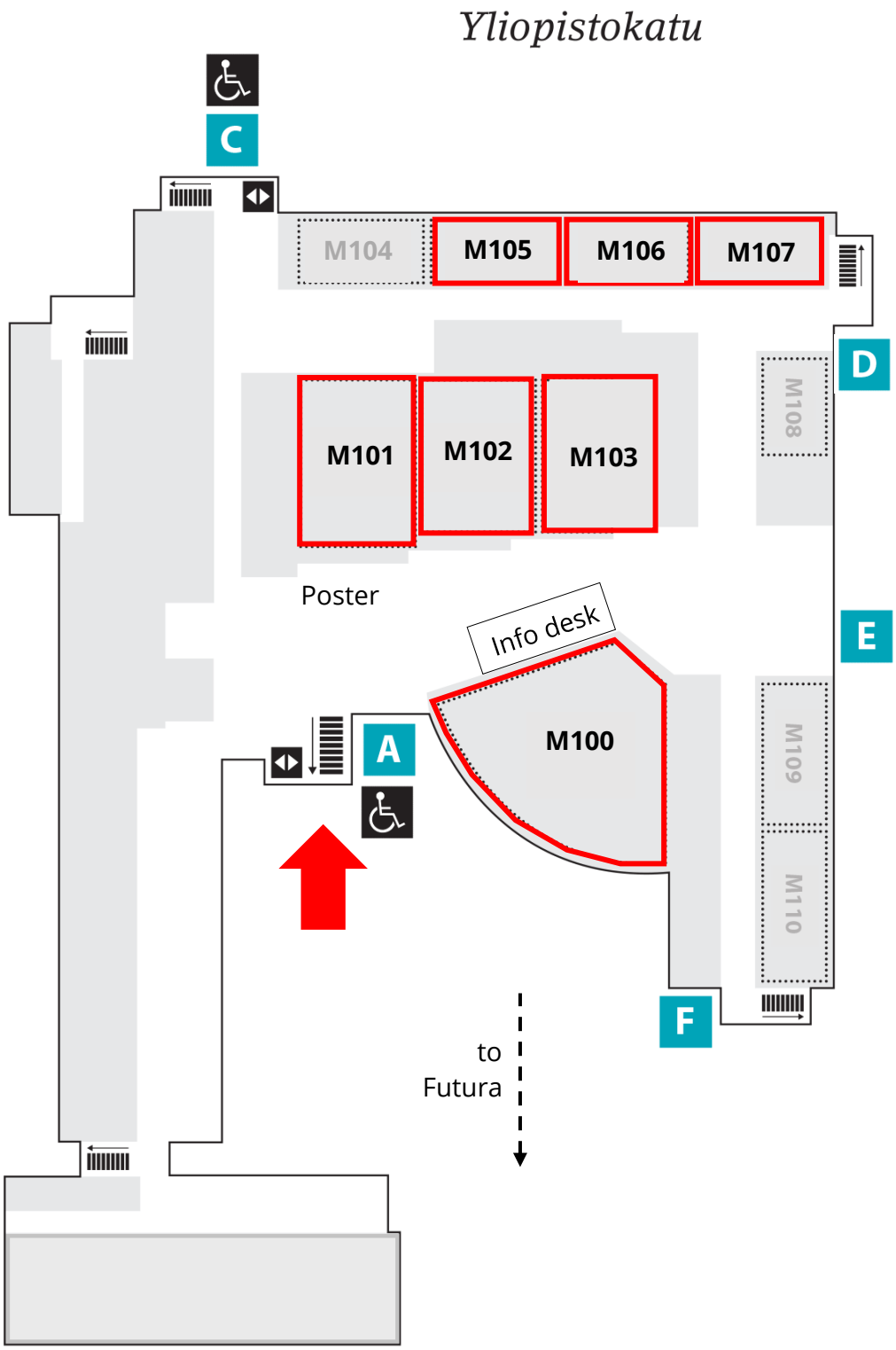
ESTEETÖN PYSÄKÖINTI
ACCESSIBLE PARKING

RAVINTOLA
RESTAURANT

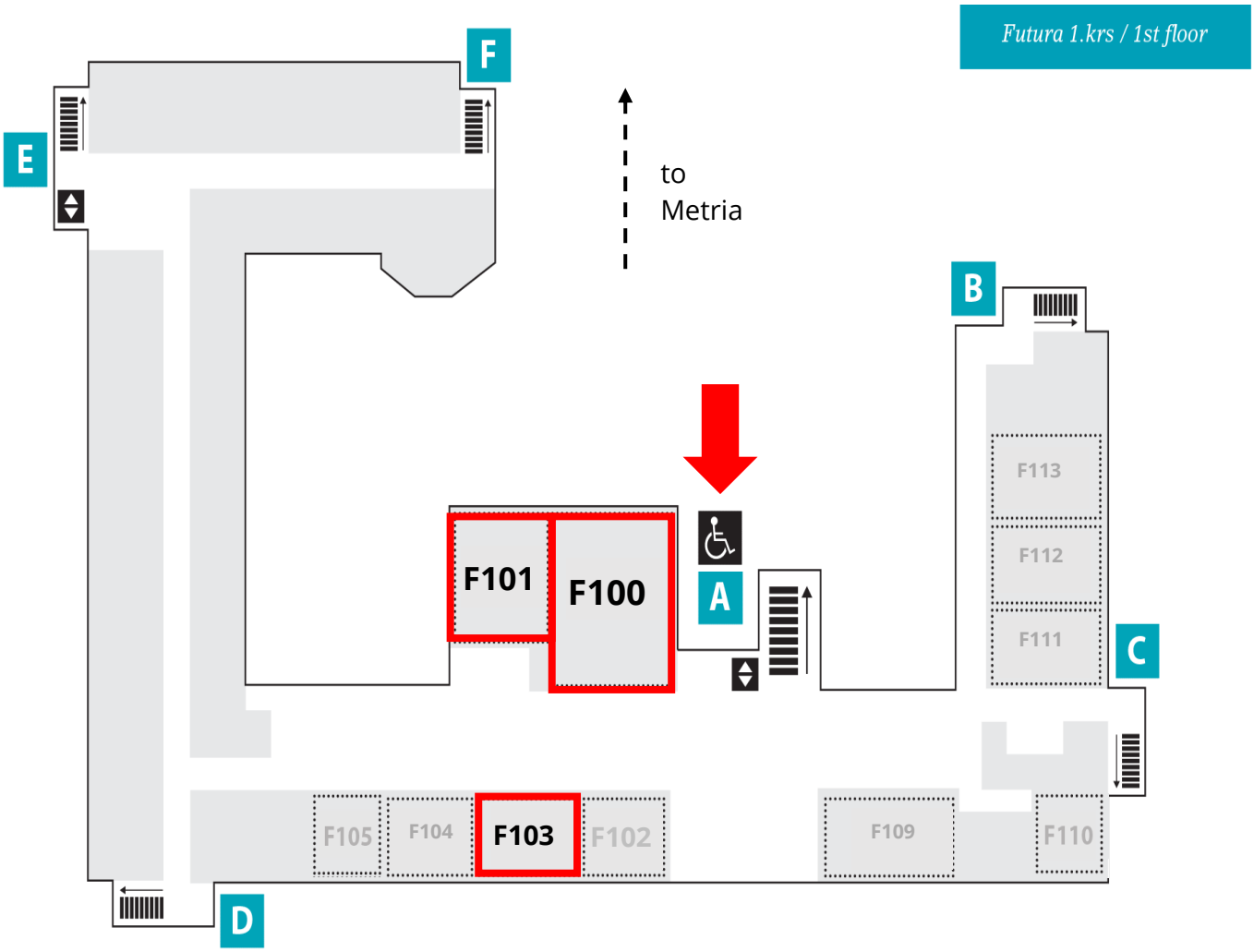
SISÄÄNKÄYNTI
ENTRANCE

ESTEETÖN SISÄÄNKÄYNTI
ACCESSIBLE ENTRANCE

SÄHKÖAUTON LATAUSPISTE
ELECTRIC CAR CHARGING POINT



Metria 1.krs / 1st floor


Futura 1.krs / 1st floor
F
E
to
Metria
B
F113
F112
F111
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F101
F100
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Schedule at a glance

Sunday, 19th June 2022

09:00-15:00	Pre-conference excursions to Koli
12:30-17:30	Local Beer and Sauna excursion
16:00-21:00	Registration opens (Carelia building; Aula)
19:15-19:30	Opening of the conference by Minna Tanskanen (Vice-Dean Faculty of Social Sciences and Business Studies, UEF) & Moritz Albrecht (Chair of NGM 2022 Organization Committee) (Carelia building; auditorium C1)
19:30-20:45	Geografiska Annaler B lecture by Tim Cresswell (University of Edinburgh): *Writing (new) Worlds: The Poetics of Place in a time of Emergency.* (Carelia building; auditorium C1)
20:45-22:00	Welcome reception Carelia building (Carelia building; Aula)

Monday, 20th June 2022

08:00-19:00	Registration continues (Carelia & Metria info desks)
08:30-09:50	Fennia lecture by Josefina Syssner (Linköping University): *What could Geographers do for shrinking geographies?* (Carelia building; auditorium C1) Commentary by Petri Kahila (University of Eastern Finland)
10:20-11:30	Keynote by Benjamin Burkhard (Leibniz University Hannover): *One Geography … to rule them all.* (Carelia building; auditorium C1)
11:30-12:45	Lunch break (Restaurants Carelia & Natura)
12:45-19:00	Parallel Sessions & Panels (Metria & Futura buildings)
19:15-20:30	City tour excursion (meeting in front of Metria building)

Tuesday, 21th June 2022

08:30-18:00	Registration continues (Carelia & Metria info desks)
09:00-10:15	Space & Polity lecture by Carolin Schurr (University of Bern): *Towards a reproductive geopolitics.* (Carelia building auditorium C1) Commentary by Eleanor Jupp (University of Kent)
10:40-11:50	Keynote by Lina Polvi Sjöberg (Umeå University): *Why spatial scale matters in river restoration.* (Carelia building auditorium C1)
11:50-13:00	Lunch break (Restaurants Carelia & Natura)
13:00-18:00	Parallel Sessions & Panels (Metria & Futura buildings)
19:00-24:00	Conference Dinner (Joensuu Icehall)

Wednesday, 22th June 2022

09:00-12:15	Parallel Sessions & Panels (Metria and Futura buildings)
12:15-13:15	Lunch break (Restaurants Carelia & Natura)
13:15-14:35	Parallel Sessions & Panels (Metria & Futura buildings)
14:40-15:00	Closing of the conference (Metria, M100)

Auditoriums for sessions

Auditorium M100, Metria building

Monday: Panels

Wednesday: Panels; Closing of Conference

Auditorium M101, Metria building

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Tuesday: Session 19, Session 10

Wednesday: Session 21, Session 39

Auditorium M102, Metria building

Monday: Session 43, Session 44

Tuesday: Session 42, Session 2

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Tuesday: Session 14

Wednesday: Session 6

Auditorium M105, Metria building

Tuesday: Session 35, Session 31

Wednesday: Session 31

Auditorium M106, Metria building

Tuesday: Session 9

Auditorium M107, Metria building

Monday: Session 37, Session 1

Tuesday: Session 40, Session 45

Wednesday: Session 41, Session 13

Auditorium F100, Futura building

Monday: Session 15, Session 4, Session 38

Tuesday: Session 46, Panel

Wednesday: Session 24, Session 23

Auditorium F101, Futura building

Monday: Session 28, Session 16, Session 8

Tuesday: Session 11

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Auditorium F103, Futura building

Monday: Session 17, Session 29

Tuesday: Session 34

Wednesday: Session 45

Keynotes

Sunday, 19th June 2022

19:30 – 20:45

Carelia building: Auditorium C1

Geografiska Annaler B lecture

Writing (new) Worlds: The Poetics of Place in a time of Emergency

Tim Cresswell *(University of Edinburgh)*

It may appear that the act of writing is fruitless in the face of the size and open-ended complexity of gathering environmental calamities including global heating, species extinction, and the appearance of plastic in everything. And yet - and yet - poets and others continue to write in ways that allow us to think about the earth's futures and, more specifically, the future of place in catastrophic times. Geo- and Eco- poetics are both acts of making - making earth and making home. Making earth as home. This talk will consider the work of poets including Jorie Graham and Juliana Spahr as all as writers who are not formally poets, focusing on the ways writing-as-making can diagnose troubled worlds and prefigure new ones.

Chairs: Richard Ek *(Karlstad University)* & Jarmo Kortelainen *(University of Eastern Finland)*

Monday, 20th June 2022

08:30 – 09:50

Carelia Building Auditorium C1

Fennia lecture

What could Geographers do for shrinking geographies?

Josefina Syssner *(Linköping University)*

For parts of the peripheries, the trends of globalisation, urbanisation and deindustrialisation constitute difficult circumstances. Population decline, escalating dependency ratios, lack of human and financial resources and diminishing commercial and public services form part of the lived experiences in many of these areas. This paper discusses what geographers could do for these territories. The paper suggests that geographers can assist in (a) understanding and demonstrating how resources have been distributed in space over time and (b) why the patterns take the shape they do. Geographers can also demonstrate (c) what it means to live, work, and operate in shrinking, rural territories. Geographers could also (d) make implicit geographical imaginations explicit, and (e) elucidate how shrinkage is dealt with by various policy actors. The paper also suggests that geographers in the Nordic countries could enrich an international research field by (f) providing case studies, or comparative studies from a Nordic context.

Commentary: Petri Kahila *(University of Eastern Finland)*

Chairs: Kirsi Pauliina Kallio *(Tampere University)* & Moritz Albrecht *(University of Eastern Finland)*

Monday, 20th June 2022

10:20 – 11:30

Carelia building Auditorium C1

One Geography … to rule them all

Benjamin Burkhardt *(Leibniz University Hannover)*

Geography has always been an inter- and transdisciplinary endeavor, harnessing and integrating mind maps, knowledge, methods and information from various scientific disciplines. Geographers' unique holistic, systematic and spatial views have promoted the understanding of our environment and of complex human-environmental relations since historic times, including masterminds like Alexander von Humboldt. Geographic knowledge has supported human decisions since historic times, helping humans for instance to find shelters, connections between settlements and trading posts or guided people to natural resources. This includes the use of the multiple benefits that nature provides to humankind (ecosystem services), including for instance the supply of food, clean water, material, energy and recreation opportunities. Ecosystem services are a very powerful concept to bring together our understanding of natural (Physical geography) and societal (Human geography) structures, processes and functions in a spatial manner. It delivers highly applicable information and instruments to help humans to use natural resources smart and sustainably. Such an integrative approach increases our understanding of our strong dependence on functioning and diverse ecosystems and landscapes, which helps to safeguard human well-being.

Ecosystem services assessments should be developed based on sound data, appropriate measurement methods and models and address specific issues in complex dynamic human-environmental systems. One Geography (unifying the multiple geographies) is able to combine simplicity and complexity in order to identify and understand pressing social-ecological issues and to provide decision makers suitable information on how to act based on scientific evidence. Therefore, multi-tiered approaches, considering different methods from biophysical, socio-cultural and economic sciences at different levels of detail and complexity should be further developed and applied. The presentation will show different examples on how geographic methods, with a special focus on ecosystem services maps and models, are applied according to specific needs, data and resource availability. The examples show that studying complex human-environmental systems using the ecosystems services concept is a powerful tool supporting sustainable development. These are all tasks that can excellently be fulfilled by One Geography!

Chair: Timo Kumpula *(University of Eastern Finland)*

Tuesday, 21th June 2022

09:00 – 10:15

Carelia building Auditorium C1

Space & Polity lecture

Towards a reproductive geopolitics

Carolin Schurr *(University of Bern)*

Co-authors: Laura Perler *(University of Bern)*, Nora Komposch *(University of Bern)* & Mirko Winkel *(University of Bern)*

Only a few weeks after Swiss women organized the largest women strike in the country in June 2019, an asylum seeker lost her baby due to lacking access to prenatal care. Women in Mexico marched for their constitutional right to abortion as indigenous and rural women continued to be forced to take contraception in order not to lose social benefits. While Switzerland joined other countries in protecting homosexual people from public discrimination with its vote in February 2020, Swiss lesbian women still have to turn to international sperm banks to become pregnant. All these recent events are examples of what we call "reproductive geopolitics". Linking reproductive life to geopolitics, we start from the assumptions that reproductive technologies are caught up in geopolitics when individuals, states, international organizations, transnational corporations, and religious and nongovernmental organizations define whose reproduction counts as desirable and whose bodies are discarded as disposable. Access to reproductive technologies says much about whose lives count (Butler 2004; Fassin 2007, 2009) in any particular territory. While some have declared "the end of state biopolitics" (Rose 2001) and consider "population control history" (Connelly 2009), this talk takes the example of Mexico to show the disjunctions, continuities, and entanglements between traditional state biopolitics and new modes of reproductive geopolitics. While in Mexico in the past the territorial management of populations was explicitly framed as population politics, in the present the governance of reproduction takes place more implicitly through regimes of health care, migration, and sexual politics. Policies in these regimes continue to manage populations in a territorial fashion, but they do not officially pursue population control. The concept of reproductive geopolitics seeks to make these unperceived population politics explicit.

Commentary: Eleanor Jupp *(University of Kent)*

Chair: Derek Ruez *(Tampere University)*

Tuesday, 21th June 2022

10:40 – 11:50

Carelia building Auditorium C1

Why spatial scale matters in river restoration — understanding nestedness and interdependence of hydrological, geomorphic, ecological, and biogeochemical processes

Lina Polvi Sjöberg *(Umeå University)*

River restoration aims to enhance ecosystem services, increase biodiversity and improve physical integrity of rivers. Although river restoration projects are increasingly more common, monitoring and observations of successful ecological recovery are rare, mostly due to a discrepancy in the spatial scale of the impact and the restoration. Rivers and their ecological communities are products of four river facets—hydrology, geomorphology, ecology and biogeochemistry—that act and interact on several spatial scales, from the sub-reach to the reach and catchment scales.

In this talk, I will discuss how the four river facets do not always affect one another in predictable pathways (e.g., hydrology commonly controls geomorphology), but the order in which they affect each other and should be restored varies depending on large-scale regional controls. Similarly, processes at different spatial scales can be nested or independent of those at larger scales within catchments. Although some restoration practices are dependent of those at higher scales, other reach-scale restoration efforts are independent and can be carried out prior to or concurrently with larger-scale restoration. I will present how this framework can be applied to two contrasting regions—in northern Sweden and in southern Brazil—with different anthropogenic effects and interactions between facets and scales. Rivers in northern Sweden have a strong glacial legacy with lakes and coarse sediment inhibiting significant channel adjustments to the current flow regime. Finally, I will discuss how understanding whether processes are nested or dependent on larger spatial scales is important for planning reach-scale vs. catchment-scale restoration. Thus the most appropriate government agency should be assigned (i.e., national vs. county) to most effectively oversee river restoration at the appropriate scale; however, this first requires a catchment-scale analysis of feedbacks between facets and spatial-scale interdependence.

Chair: Eliisa Lotsari *(University of Eastern Finland & Aalto University)*

Panels

Auditorium M100, Monday

16:15 – 17:45

PANEL: History of cartography of the Nordic countries

*Panel Chair**:** Michael Jones (Norwegian University of Science and Technology)*

The panel will discuss recent research on the history of cartography in Norden and identify gaps in current knowledge where further research might be encouraged. Examples of topics where more research might be undertaken include women in cartography, indigenous cartography (in the Nordic context Sámi cartography), cartography of multicultural places, and colonial cartography (Danish or Swedish colonies in North America, the West Indies, West Africa and India). Also of particular interest are recent theoretical and methodological developments in cartographical history, for example maps as expressions of power, the historical-geographical context of mapmaking, cartography as cultural practice, and the history of cartography in the digital era. Other topics are also relevant.

The point of departure is a recent revival of interest in the history of cartography of the Nordic countries, seen in books and articles published in recent years both in the Nordic languages and in English. Nordic cartographers and cartographical topics are also referred to in recently published volumes of The History of Cartography (University of Chicago Press), vol. 4 Cartography in the European Enlightenment (2020) and volume 6 Cartography in the Twentieth Century (2015).

This panel session is organized on behalf of Norsk Geografisk Tidsskrift–Norwegian Journal of Geography, which has recently published special issues containing articles on the history of cartography of the Nordic countries.

Panelists:

Kimmo Katajala *(University of Eastern Finland)*
Anne C. Lien *(Norwegian Mapping Authority & University of Bergen)*
Stig Roar Svenningsen *(Royal Library Copenhagen)*
Anders Wästfelt *(University of Stockholm)*

18:00 – 19:00

Reception for the Panel History of cartography of the Nordic countries *Sponsored by the Norwegian Journal of Geography and Taylor & Francis*

Auditorium F100, Tuesday

16:30 – 18:00

PANEL: A conversation on the state of Nordic tourism geographies

Organizers: Edward H. Huijbens (Wageningen University & Research) & Dimitri Ioannides (Mid-Sweden University)

The organizers invite all interested to a session to interrogate the current state and to date contributions of Nordic tourism geography. Tourism studies is by now an established field of research in all the Nordic countries and world-wide. Several fields of inquiry have emerged within tourism studies globally and this session will ask what and how Nordic geography scholarship has contributed.

The emerging themes and findings of the session will be summarized by a designated secretary and published by the session organizers in a Nordic journal of tourism and/or geography.

Auditorium M100, Wednesday

PANEL: Socio-spatial theory in Nordic Geography

Organizers: Erik Jönsson (Uppsala University) & Henrik Gutzon Larsen (Lund University)

Based in a forthcoming edited volume on socio-spatial theory in Nordic geography, this series of three panel discussions will engage with various prominent themes within, and beyond, the geography discipline in the Nordic countries.

The first two panels are built around shorter presentations of book chapters and discussions with and between the chapter authors. The series of panel sessions is thereafter concluded with a more interactive discussion on the current shape and intended purpose of the Geography discipline in Norden. Drawing together scholars from Norway, Denmark, Finland and Sweden the panels should together allow for a vibrant discussion on the past, present, and possible future state of Nordic geography, and how space is made sense of within various sub-disciplines therein.

Part 1: 09:00 – 10:35

Chair: Henrik Gutzon Larsen *(Lund University)*

Panelists:

Jouni Häkli *(Tampere University)*
Marcus Mohall *(Uppsala University)*
Pär Wikman *(Uppsala University)*
Dieter K. Müller *(Umeå University)*
Anssi Paasi *(University of Oulu)*
Kirsten Simonsen *(Roskilde University)*

Part 2: 10:45 – 12:15

Chair: Erik Jönsson *(Uppsala University)*

Panelists:

Peter Jakobsen *(Uppsala University)*
Erik Jönsson *(Uppsala University)*
Henrik Gutzon Larsen *(Lund University)*
Ari Lehtinenm *(University of Eastern Finland)*

Part 3: 13:15 – 14:45

Chair: Peter Jakobsen *(Uppsala University)*

Open discussion with panelists and guests on socio-spatial theory in Nordic Geography.

Schedule of Sessions

Monday, 20th June 2022

Metria Lobby, Monday

Poster Session

12:45 – 18:00

- **Perspectives of Regional Identification Processes in Styria** *Sabine Hostniker (University of Graz)*
- **You Are Never Alone With the Chicken Dinner! Understanding Chicken Circulation in Southeast Europe** *Danko Simić (University of Graz)*
- **Geodiversity in freshwater ecosystems across scales – a conservation perspective** *Maija Toivanen (Oulu University)*
- **Long-term changes of the flood and river ice regimes** *Karoliina Lintunen (University of Turku)*

14:15 - 14:30 and 16:00 - 16:15

The authors will be present during the coffee breaks to discuss their work.

Auditorium M101, Monday

Session 20: No austerity, new austerities, Nordic austerities? Comparative geographies of health and social care in pandemic times

Chair: Ed Kiely (University of Cambridge)

12:45 – 14:45

- **Introduction: Quiet Austerities – Locating austerity in Nordic and Northern European contexts** *Sander van Lanen (University of Groningen), Ida Norberg (Stockholm University) & Ed Kiely (University of Cambridge)*
- **Organized abandonment, austerities, and disabled people in British Columbia during the age of COVID** *Lawrence Berg (University of British Columbia)*
- **The affective geographies of the fraying welfare state: a comparative approach** *Eleanor Jupp (University of Kent)*
- **Buying time: Austerity, mental health care and the commodification of the future** *Ed Kiely (University of Cambridge)*

Session 18: Housing in Crises: A European Perspective, COVID-19 and Beyond

Chairs: Defne Kadioglu (Malmö University) & Myrto Dagkouli-Kyriakolglou (Malmö University)

14:30 – 16:00

- **Conceptualising and resisting evictions in the COVID-19 crisis: Lessons from Scotland's Tenants' Union** *Meg Bishop (University of Edinburgh)*
- **Grappling with housing de/financialization. Scholar-activist experiences from Germany** *Tabea Carlotta Latocha (Goethe University Frankfurt am Main)*
- **Unsettled housing systems, social reproduction squeeze and violence in Thessaloniki** *Nikolaos Vrantsis (Uppsala University)*
- **"Batti il 5!". Grassroots strategies against the administrative invisibilization of Rome's housing squatters beforehand during the pandemic** *Margherita Grazioli (Gran Sasso Science Institute)*

16:15 – 17:45

- **Moving out and moving in – Understanding housing instability in Sweden** *Karina Villacura (Malmö University)*
- **The influence of selected building properties on the evacuation route choice strategy** *Dajana Snopková (Masaryk University), Laure De Cock (University of Gent) Ondřej Kvarda (Masaryk University), Vojtěch Juřík (Masaryk University) & Lukáš Herman (Masaryk University)*
- **Spatial patterns of Airbnb in major cities: are professional hosts special?** *Kristóf Gyódi (University of Warsaw)*
- **Asylum seekers and refugees unofficial tent camps as manifestations of housing crises** *Rebecca Frilund (Northumbria University)*
- **Gentrification in Dudelange: the production of housing and stages of social change (1980 – 2019)** *Mădălina Mezaroşa (Luxembourg Institute of Socio-Economic Research) & Antoine Paccoud (University of Luxembourg)*

Auditorium M102, Monday

Session 43: Multidisciplinary understanding of Forest Dynamics

Chair: Topi Tanhuanpää (University of Eastern Finland)

12:45 – 14:45

- **Finnish Ecosystem Observatory (FEO) – operationalizing remote sensing analyses for biodiversity monitoring** *Petteri Vihervaara (Finnish Environment Institute)*

- **Detecting individual fallen trees with airborne laser scanning** *Einari Heinaro (University of Helsinki)*
- **State-of-the-art computer vision methods enable deadwood detection from RGB UAV imagery approach** *Janne Mäyrä (Finnish Environment Institute)*
- **Aerial image time series in defining site specific deadwood profiles** *Topi Tanhuanpää (University of Eastern Finland)*

14:30 – 16:00

- **A single Vs multi-sensor UAS-based approach for European Aspen detection in boreal forest** *Anton Kuzmin (University of Eastern Finland)*
- **The species richness of European aspen epiphytic lichens: What are the most crucial environmental parameters, and how to find suitable habitats for them with remote sensing techniques?** *Ida Palmroos (Finnish Environment Institute)*
- **Outdoor heat stress at preschools during an extreme summer in Gothenburg, Sweden - Preschool teachers' experiences contextualized by radiation modelling** *Oskar Bäcklin (University of Gothenburg)*

Sessions 44: Land cover changes in (sub-) arctic regions

*Chairs**:** Mariana Verdonen (University of Eastern Finland & Timo Kumpula (University of Eastern Finland)*

16:15 – 17:45

- **Effects of climate change on the distribution of palsas across the circumpolar permafrost area** *Oona Könönen (University of Oulu)*
- **Long-term monitoring of active layer and degradation of permafrost in Finland** *Mariana Verdonen (University of Eastern Finland*
- **Comparison of three different methods to survey the volume body of landscape structural elements** *Alexander Störmer (University of Hannover)*
- **Eye in the sky: The use of Unmanned Aerial Systems to unveil the impacts of landcover change in the subarctic tundra** *Miguel Villoslada (University of Eastern Finland)*

18:00 – 19:00

- **Effects of different reindeer grazing practices on land cover and ecosystem carbon exchange in a sub-arctic high-elevation peatland** *Sari Juutinen (University of Eastern Finland)*
- **Seasonal and inter-annual landcover dynamics in selected drained lake basins on Yamal, Siberia** *Helena Bergstedt (b.geos)*
- **Arctic lake drainage in Western Siberia 1961 – 2021, impacts to landcover change and reindeer herding** *Timo Kumpula (University of Eastern Finland)*

Auditorium M103, Monday

Session 12: From centralization to decentralization? Reevaluating space and scale in sustainability transitions

Chairs: Maija Halonen (University of Eastern Finland) & Irene Kuhmonen (University of Jyväskylä)

12:45 – 14:15

- **The rural in sustainability transitions – regime shift or reproduction?** *Irene Kuhmonen (University of Jyväskylä), Tuomas Kuhmonen (University of Turku) & Annukka Näyhä (University of Jyväskylä)*
- **Towards a typology of local ownership of energy systems and energy transition processes: A review** *Johanna Liljenfeldt (Uppsala University), Elin Slätmo (Nordregio) & Louise Ormstrup Vestergård (Nordregio)*
- **Change that lasts? Fostering social innovations in local livelihoods in rural North-Eastern Germany** *Sunna Kovanen (Brandenburg Technical University of Cottbus Senftenberg)*
- **Sustainability in natural resource extraction in Sub-Saharan Africa** *Oliver Daniel Tomassi, (University of Turku)*

14:30 – 16:00

- **"Greening" cognitive empire: The European Green Deal as political foreclosure of alternative world ecologies** *Diana Vela-Almeida (Norwegian University of Science and Technology), Vijay Kolinjivadi (University of Antwerp), Tomaso Ferrando (University of Antwerp), Marcella Vechioni (University of Antwerp), Gert Van Hecken (University of Antwerp), Brototi Roy (University of Antwerp) & Hector Herrera (University of Antwerp)*
- **A new, green North or old extractivism in new clothes?** *Jakob Donner-Amnell (University of Eastern Finland)*
- **Multi-scalar bargaining for the European aim of sustainable industry** *Erja Kettunen-Matilainen (University of Turku)*
- **Regional sustainability transition through forest-based bioeconomy? Development actors' perspectives on related policies, power, and justice** *Maija Halonen (University of Eastern Finland), Annukka Näyhä (University of Jyväskylä) & Irene Kuhmonen (University of Jyväskylä)*

Session 30: Forests and capital in the urbanizing Nordics

Chairs: Eija Meriläinen (University of College London), Ville Kellokumpu (University of Oulu), Heikki Sirviö (University of Helsinki) & Ari Lehtinen (University of Eastern Finland)

16:15 – 17:45

- **Recovering consequential urban-rural interdependencies in Finland's contested forests** *Eeva Berglund (Aalto University)*
- **From greenwashing pulpwood capitalism to anti-capitalist bioeconomies** *Janne Säynäjäkangas (University of Jyväskylä) & Ville Kellokumpu (University of Oulu)*
- **Regional differences in promotion of different forest-based businesses in Finland** *Emmi Salmivuori (University of Eastern Finland)*
- **Anxious architectures of sustainability: Deconstructing the urban imaginary of wood construction** *Heini-Emilia Saari (London School of Economics and Political Science)*

Session 3: From global pandemic to sustainable transformation

Chair: Antti Mäenpää (University of Vaasa)

18:00 – 19:00

- **The Faroese model of (sustainable) destination marketing: Volunteering glorification, staying with locals, and experiencing gratitude** *Weronika Lis (Nicolaus Copernicus University), Mirek Dymitrow (Lund University) & Elżbitea Grzelak Kostulska (Nicolaus Copernicus University)*
- **Paradoxes of Norway's Energy Transition: Polarisation and Justice** *Marius Korsnes (Norwegian University of Science and Technology), Bradley Loewen (Norwegian University of Science and Technology), Ragnhild Freng Dale (Western Norway Research Institute), Markus Steen (SINTEF) & Tomas Moe Skjølsvold (Norwegian University of Science and Technology)*
- **Sustainable transformation via mobilisation of stakeholders: Introducing stakeholder analysis from GRETA project** *Antti Mäenpää (University of Vaasa), Seija Virkkala (University of Vaasa), Åge Mariussen (University of Vaasa), Juuso Jääskeläinen (University of Vaasa) & Jerker Johnson (Regional Council of Ostrobothnia)*

Auditorium M107, Monday

Session 37: Farming, farmers, and food: transformation towards sustainable and resilient agricultural livelihoods

Chair: Pontus Ambros (Uppsala University & University of Helsinki)

12:45 – 14:45

- **Untangling the global-national-local interactions in the context of commercial land appropriation in Ethiopia: Implications for women's food production and rural livelihoods** *Frankline Ndi (Örebro University)*
- **The more labelled, the more resilient? The role of place-branding intangibles in Italian peripheral areas** *Giulia Urso (Gran Sasso Science Institute)*
- **Exploring diversity indices in the context of agricultural research; a case study of agricultural production diversity within EU countries of the Baltic Sea Region** *Pontus Ambros (Uppsala University & University of Helsinki)*
- **Making quiet the new loud? A preliminary enquiry into an emerging field of food self-provisioning studies** *Milla Suomalainen (University of Helsinki)*
- **Organic Farming and New Food Values: The Case of Direct-Sales Network** *Maija Usca (Institute of Agricultural Resources and Economics)*

14:30 – 16:00

- **Last harvest? - earthly effects of the development of global integrated local agriculture** *Anders Wästfelt (Stockholm University)*
- **How do Sustainable Agricultural Industries Evolve? – An Actor-Centered Approach to the Emergence of the Danish Wine Industry** *Anika Zorn (Friedrich Schiller University Jena & Susann Schäfer (Friedrich-Schiller-University Jena)*
- **Privilege, power and social (in)justice in Berlin's community food spaces** *Ophélie Véron (University of Sheffield)*
- **Sustainable Urban Farming at the Turku University Campus** *Leena Erälinna (University of Turku)*

Session 1: Into the Blue: Connecting the diverse in water geographies

Chairs: Moritz Albrecht (University of Eastern Finland) & Jani Lukkarinen (Finnish Environment Institute)

16:15 – 17:45

- **Industrial rhythm of a river in a post-productivist society** *Jarmo Kortelainen (University of Eastern Finland) & Pertti Rannikko (University of Eastern Finland)*

- **Media narratives of Blue Economy investment and Marine Spatial Planning governance in the UK, 2010-2021** *Gordon Winder (Ludwig-Maximilians-University Munich)*
- **Red herrings all the way down: Environmental territorialisation and politics of knowledge in the Baltic Sea herring value chains** *Jani Lukkarinen (Finnish Environment Institute)*
- **To scale or not to scale? Blue bioeconomy development in Europe through the example of Norwegian seaweed aquaculture** *Moritz Albrecht (University of Eastern Finland)*

18:00 – 19:00

- **The Transboundary Water Management – Comparing Policy Translations of The Water Framework Directive in The International Basin Districts of the Oder River and the Torne River** *Aleksandra Ibragimow (Poznan University), Eerika Albrecht (University of Eastern Finland) & Moritz Albrecht (University of Eastern Finland)*
- **What, where, and why do residents experience in the urban riverscape? Insights from the PPGIS survey** *Tomasz Grzyb (University of Warsaw)*

Auditorium F100, Monday

Session 15: Developing earthly attachments in terrestrial crises

Chair: Edward H. Huijhens (Wageningen University & Research)

12:45 – 14:45

- **Queering Gaia Planetarianism and potentials for re-weaving more-than-human entanglements** *Michael Haldrup (Roskilde University)*
- **Posthumanist earthly attachments and practice theoretical solutions** *Joni Vainikka (University of Helsinki)*
- **Exploring the Role of Environment on Handcrafting: Experimenting with Wool and its More-than-Human Relations** *Berilsu Tarcan (Norwegian University of Science and Technology)*
- **Bordering climate neutrality and entangled care** *Tarmo Pikner (Tallinn University)*
- **Grounding tourism in the Anthropocene** *Edward H. Huijbens (Wageningen University & Research)*

Session 4: Exploring contemporary governance of society, land-use and tourism in Arctic regions through a spatial lens

Chair: Dorothee Bohn (Umeå University)

14:30 – 16:00

- **Geographies of public funding for Arctic tourism: A longitudinal comparison of path development in Finnish and Swedish Lapland** *Dorothee Bohn (Umeå University) & Doris A. Carson (Umeå University)*
- **Investigating the intersection of overtourism and land-use conflicts in the periphery** *Andreas Back (Umeå University), Anna Zachrisson (Umeå University) & Linda Lundmark (Umeå University)*
- **Efficiency and democracy: local governance dilemmas on the Finnish periphery** *Sarolta Németh (University of Eastern Finland) & Matti Fritsch (University of Eastern Finland))*

Session 38: Health and well-being from nature

Chairs: Riikka Puhakka (University of Helsinki) & Kati Pitkänen (Finnish Environment Institute)

16:15 – 17:45

- **Associations between neighbourhood characteristics, self-reported and accelerometer measured physical activity and depressive symptoms - Northern Finland Birth Cohort 1966** *Marjo Seppänen (University of Oulu), Nina Rautio (Oulu University Hospital & University of Oulu), Markku Timonen (University of Oulu), Soile Puhakka (University of Oulu & Oulu Deaconess Institute Foundation), Mikko Kärmeniemi (University of Oulu & Oulu Deaconess Institute Foundation), Jouko Miettunen (Oulu University Hospital & University of Oulu), Tiina Lankila (Oulu University Hospital & University of Oulu), Vahid Farrahi (University of Oulu), Maisa Niemelä (Oulu University Hospital & University of Oulu) & Raija Korpelainen (Oulu University Hospital, University of Oulu & Deaconess Institute Foundation)*
- **The multidimensionality of urban nature: A mixed-methods study on how to enhance the integration and well-being of immigrants in Finland** *Miriam Tedeschi (University of Turku) & Hanna Heino (University of Vaasa)*
- **Adolescents' outdoor recreation and perceived well-being effects – a study in the city of Lahti, Finland** *Riikka Puhakka (University of Helsinki), Katherine Irvine (The James Hutton Institute) & Sofia Kaipainen (University of Helsinki)*
- **How the elderly and the youth of Turku gain eudemonia from nature?** *Johanna Jämsä (University of Turku), Nora Fagerholm (University of Turku) & Salla Eilola (University of Turku)*

18:00 – 19:00

- **Wellbeing from nature as a skillful practice: exploring both recreation at seas and recreation in urban and semiurban** *Neva Lepoša (Swedish University of Agricultural Sciences)*

- **Geodiversity supporting human health and wellbeing** *Janne Alahuhta (University of Oulu), Helena Tukiainen (University of Oulu) & Raija Korpelainen (University of Oulu, Medical Research Center Oulu & Oulu Deaconess Institute)*
- **Using green spaces from inner city to nearby wilderness areas - user and use characteristics, motivations and wilderness attitudes along an extended recreational opportunity spectrum** *Berit Junker-Köhler (Norwegian Institute for Nature Research) & Vegard Gundersen (Norwegian Institute for Nature Research)*

Auditorium F101, Monday

Session 28: Shrinking regions as welcoming spaces: Opportunities and challenges of attracting migrants for revitalizing rural Regions

Chair: Marlies Meijer (Wageningen University & Research)

12:45 – 14:45

- **Planning to meet challenges in shrinking rural regions: Towards innovative approaches to local planning** *Aksel Hagen (Innlandet Norway University of Applied Sciences) & Ulla Higdem (Innlandet Norway University of Applied Sciences)*
- **Spaces of solidarity and geographies of learning: Rural practices of solidarity in the here and now through "Folkbildning" by Swedish labour movements solutions** *Zinaïda Sluijs (Uppsala University)*
- **What makes a place 'sticky' for highly mobile people?: the case of Joensuu** *Ágnes Németh (University of Eastern Finland)*
- **Mayors as Welcoming Agents. Doing action research in times of Corona** *Marlies Meijer (Wageningen University & Research, & Utrecht University)*
- **Welcoming spaces for migrants as a challenge for local development policy (case study of Lubelskie Voivodeship)** *Marta Pachocka (Warsaw School of Economics), Dominik Wach (Warsaw School of Economics), Ewa Jastrzębska (Warsaw School of Economics), Paulina Legutko-Kobus (Warsaw School of Economics) & Joanna Zuzanna Popławska (Warsaw School of Economics*

Session 16: Localising welfare. Public facilities, social equity and community building

Chairs: Ebba Högström (Blekinge Institute of Technology) & Lina Berglund-Snodgrass (Swedish University of Agricultural Sciences)

14:30 – 16:00

- **Understanding socio-economic resilience in the context of Covid-19: Examining people and community responses to the latest capitalist crisis** *Thomas Hastings (Queen's Management School)*

- **Public meeting places as local welfare facilities for enhancing social capital** *Christine Benna Skytt-Larsen (University of Copenhagen) & Trine Agervig Carstensen (University of Copenhagen)*
- **Schools as a neighbourhood service** *Oskar Rönnberg (University of Helsinki)*
- **Wellbeing of Future Generations as local governance principle** *Mel McCree (Bath Spa University)*

Session 8: Nordic craft-beer geographies (and beyond)

Chair: Richard Ek (Karlstad University)

16:15 – 17:45

- **Go pro or go home. The geographical and social imaginations of homebrewing and its connection to the Nordic craft brewing sector** *Christopher Olsson (Örebro University)*
- **Revitalizing place-based commercial heritage: the dissonance between cultural and commercial values following the renaissance of lambic beers in Belgium** *Arie Stoffelen (KU Leuven)*
- **Place-Brewing: Breweries, Hops and Magic** *Richard Ek (Karlstad University)*

Auditorium F103, Monday

Session 17: The Politics of Parks and Recreation

Chair: Erik Jönsson (Uppsala University)

12:45 – 14:45

- **Forbidden meetings within the borders of city planning: meetings between men in Stockholm 1880-1950** *Thomas Wimark (Uppsala University)*
- **Same, Same but Different? The 'right' kind of gardening and the negotiation of neoliberal urban governance in the post-socialist city** *Bianka Plüschke-Altof (Tallinn University), Lilian Pungas (Friedrich Schiller University Jena), Helen Sooväli-Sepping (Tallinn University) & Anni Müüripeal (Tallinn University)*
- **Recreation, parks and ecosystem services. Exploring a diversity of urban green in Warsaw** *Marta Derek (University of Warsaw), Sylwia Kulczyk (University of Warsaw), Tomasz Grzyb (University of Warsaw) & Edyta Woźniak (Polish Academy of Sciences)*
- **Multifunctionality in urban parks: Definitions, drivers and implications for management** *Shelley Kotze (Gothenburg University)*
- **"The People's park is bigger, more freely located, more beautiful and – our own park": Hegemony, greenspace, and class struggle in turn of the century Norrköping** *Erik Jönsson (Uppsala University)*

14:30 – 16:00

- **When Apple came to town: the struggle over the meanings of public space and the public in Stockholm** *Hoai Anh Tran (Malmö University)*
- **Does outdoor recreation behaviour during the COVID-19 associate with green infrastructure proximity and availability? - Cross-site analysis of Nordic cities** *Nora Fagerholm (University of Turku), Karl Samuelsson (University of Gävle), Salla Eilola (University of Turku), Matteo Giusti (University of Gävle), Kamyar Hasanzadeh (Aalto University), Anna Kajosaari (Aalto University), Silviya Korpilo (University of Helsinki), Marketta Kyttä (Aalto University), Liu Yu (Aalto University), Søren Præstholm (University of Copenhagen), Christopher Raymond (University of Helsinki), Tiina Rinne (Aalto University), Anton Stahl Olafsson University of Copenhagen) & Stephan Barthel (University of Gävle)*
- **Foreseen consequences for recreational use of establishment of a national park in urban setting** *Vegard Gundersen (Norwegian Institute for Nature Research), Berit Junker Köhler (Norwegian Institute for Nature Research) & Rose Keller (Norwegian Institute for Nature Research)*

Session 29: Messy smart cities: Comparative perspectives and methodological challenges

Chairs: Lorena Melgaço (Lund University) & Chiara Valli (Malmö University)

16:15 – 17:45

- **Tracing Brazilian (social) smart cities - on conceptualization, implementation, and practices** *Lorena Melgaço (Lund University) & Camila Freitas (Lund University)*
- **Pilots and digital platforms: insights into public capacity to plan and govern smart mobility towards sustainable urban mobility** *Kelsey Oldbury (Swedish National Road and Transport Research Institute)*
- **Knowledge gap, system maturity and end-user practises in the deployment of energy applications in Smart Tampere and Smart Tartu** *Antti Roose (University of Tartu)*
- **Spatial-temporal analysis of retail and services using Facebook Places data** *Jiří Hladík (Masaryk University)*

Tuesday, 21th June 2022

Auditorium M101, Tuesday

Session 19: Mobilising, producing and contesting transport and mobility from below

Chair: Chiara Vitrano (Swedish National Road and Transport Research Institute)

13:00 – 14:30

- **"Bouncing between the buses like a kangaroo": Efficient transport, exhausted workers** *Chiara Vitrano (Swedish National Road and Transport Research Institute) & Wojciech Kębłowski (Vrije Universiteit Brussel & Université libre de Bruxelles)*
- **The freedom and unfreedom of the bus: the struggle over transit in metro Atlanta's Clayton County and the limitations of the right to mobility** *Marcus Mohall (Uppsala University)*
- **Fair but Limited: The Insurgence of Informal Transit Practices in Beirut as Social Innovation** *Carine Assaf (KU Leuven)*
- **Negotiating emerging affordances in the urban and peri-urban environments: Recreational mobilities during the pandemic** *Neva Leposa (Swedish University of Agricultural Sciences) & Mattias Qviström (Swedish University of Agricultural Sciences)*

Session 10: Literary geography

Chair: Frode Boasson (Norwegian University of Science and Technology)

14:45 – 16:15

- **Peter Dürrfeld's *Linie 4 og andre noveller* (1984) and Memories of the Copenhagen Tram** *Adam Borch (Abo Akademi University)*
- **Literary Disruption: Two Approaches Linking Literary Spatiality and Geographies with Public Transport as Public Space** *Zeynep Correia (Abo Akademi University) & Jason Finch (Abo Akademi University)*
- **Literary Geographies: The beach as a critical topos** *Knud Ove Eliassen (Norwegian University of Science and Technology)*
- **Decolonizing the neoliberal university and the politics of knowledge production – filmmaking as research strategy and feminist teaching method** *Anders Lund Hansen (Lund University)*

16:30 – 18:00

- **The Redemption of Landscape: The Ghost of the Holocaust Returns to the Heimat** *Adam Lundberg (Uppsala university)*

- **The Geographical Unconscious. Mapping Unmappable Space in Amalie Skram's novels** *Anders Malvik (Norwegian University of Science and Technology)*
- **Winged geographies of literature and citizen science** *Elle-Mari Talivee (Estonian Academy of Sciences)*

Auditorium M102, Tuesday

Session 42: Peatlands and environmental change

Chairs: Antti Sallinen (University of Eastern Finland & Finnish Environment Institute) & Franziska Wolff (University of Eastern Finland)

13:00 – 14:30

- **UAS-SfM-derived elevation models to evaluate changes in the surface flow paths and water accumulation for peatland restoration monitoring** *Lauri Ikkala (University of Oulu), Hannu Marttila (University of Oulu), Anna-Kaisa Ronkanen (Finnish Environment Institute), Jari Ilmonen (Metsähallitus Parks and Wildlife Finland), Maarit Similä (Metsähallitus Parks and Wildlife Finland), Sakari Rehell (Metsähallitus Parks and Wildlife Finland), Timo Kumpula (University of Eastern Finland) & Björn Klöve (University of Oulu)*
- **Monitoring peatland water table depth with optical and radar satellite imagery** *Aleksi Räsänen (Natural Resources Institute Finland) & Santtu Kareksela (Metsähallitus Parks and Wildlife Finland)*
- **Detecting peatland vegetation patterns with multi-temporal field spectroscopy** *Aleksi Räsänen (Natural Resources Institute Finland), Tarmo Virtanen (University of Helsinki) & Yuwen Pang (University of Helsinki)*
- **Investigation of ecological and spectral parameter to optimize classification of very high-resolution UAV-images for selected Aapa mires in North Karelia, Finland** *Franziska Wolff (University of Eastern Finland), Tiina Kolari (University of Eastern Finland), Teemu Tahvanainen (University of Eastern Finland) & Timo Kumpula (University of Eastern Finland)*

14:45 – 16:15

- **Accelerated vegetation succession but no hydrological change in a boreal fen during 20 years of recent climate change** *Tiina Kolari (University of Eastern Finland), Pasi Korpelainen (University of Eastern Finland), Timo Kumpula (University of Eastern Finland) & Teemu Tahvanainen (University of Eastern Finland)*
- **Detection of Sphagnum increase over aapa mires by Landsat images** *Antti Sallinen (University of Eastern Finland), Tiina Kolari (University of Eastern Finland), Aniko Toth (University of New South Wales), Nick Murray (James Cook University), Lars Granlund (University of Eastern Finland), Franziska Wolff (University of Eastern Finland), Kimmo Tolonen (University of Eastern Finland), Timo Kumpula (University of Eastern Finland) & Teemu Tahvanainen (University of Eastern Finland)*

- **Simulation modelling in carbon storage, biodiversity and ecosystem services (BES) assessments of boreal peatland forests** *Parvez Rana (Natural Research Institute Finland), Artti Juutinen (Natural Research Institute Finland), Anne Tolvanen (Natural Research Institute Finland), Kyle Eyvindson (Natural Research Institute Finland) & Anna Laine-Petäjäkangas (Geological Survey of Finland)*

Session 2: Hydrogeography: fluvial and coastal processes

Chairs: Petteri Alho (University of Turku) & Eliisa Lotsari (Aalto University & University of Eastern Finland)

16:30 – 18:00

- **Underwater photogrammetry as bedload measurement approach in river systems having low turbidity** *Eliisa Lotsari (Aalto University & University of Eastern Finland)*
- **Sub-arctic Fluviodiversity: towards a new framework for high-latitude rivers** *Mikel Calle Navarro (University of Turku)*
- **The controls of short-term meander change – a field approach** *Linnea Blåfield (University of Turku)*
- **The impacts of ice-covered and open-channel flow on sediment load at sub-arctic river – modelling based on photogrammetrically enhanced sediment transport calibration data sets** *Finland Virpi Pajunen (University of Eastern Finland)*
- **On the uncertainty of estimating potential evapotranspiration under climate change** *Ernesto Pastén-Zapata (University of Eastern Finland) & Eliisa Lotsari (Aalto University)*

Auditorium M103, Tuesday

Session 14: Sustainable transformation through the lens of rural urban divide and synergies

Chairs: Brita Hermelin (Linköping University), Daniel Keech (University of Gloucestershire) & Margareta Dahlström (Karlstad University)

13:00 – 14:30

- **Spatial justice, sociocultural sustainability, and the green transformation – exploring the urban-rural differences in pro-environmental attitudes and behaviour** *Mikko Weckroth (Natural Resources Institute Finland)*
- **Inside out – the intersection between internal operationalization and external collaboration in municipal SDG localization** *Venus Krantz (Linköping University) & Sara Gustafsson (Linköping University)*
- **What does the bus mean? Municipal views on public transport values in Swedish planning** *Ida Andersson (Örebro University)*
- **Searching for the dialogue in Swedish planning** *Moa Tunström (Karlstad University)*

- **Actors and roles within a place-based development intervention – empirical case from a village in in northern Sweden** *Brita Hermelin (Linköping University)*

14:45 – 16:15

- **I have a garden on the internet! Searching for the farmer in a remotely controlled farming enterprise** *Ernst Michael Preininger (University of Graz)*
- **Arctic Circularity Peripheral Regions in the high north and Circular Economy** *Rannveig Hjaltadottir (North University)*
- **Rationalities of public transport. A case study of the contemporary history of transit corridors** *Jens Portinson Hylander (The Swedish Road and Transport Research Institute)*
- **Regional distribution of additional housing requirements to promote resilient development - The example of the Leipzig-West Saxony region** *Thorben Sell (Friedrich Schiller University Jena) & Anna Dunkl (Leibniz Institute for Regional Geography)*

16:30 – 18:00

- **A living lab methodology for sustainability transformation** *Kristina Trygg (Linköping University)*
- **Collaborative governance and sharing resources in a multi-sited community** *Karin Skill (Lindköping University)*
- **Using living labs to strengthen rural-urban linkages and transition to economies of well-being: reflections from a European multi-actor project** *Daniel Keech (University of Gloucestershire)*
- **Landscape resource analysis - Applying a collaborative method to identify and communicate a variety of values in forest areas** *Magareta Dalström (Karlstad University)*

Auditorium M105, Tuesday

Session 35: Racism and far right in times of crises: the political ecology of the far right

Chair: Sonja Pietiläinen (University of Oulu)

13:00 – 14:30

- **Strategic Whiteness: How Ethnonationalism is Shaping Land Reform & Food Security Discourse in South Africa** *Lisa Santosa (University of Minnesota, Twin Cities)*
- **Periphery, Discontent and Exclusive Regional Identities. The Example of SMEs in East Thuringia, Germany** *Matthias Hannemann (Friedrich Schiller University Jena)*
- **The far-right on ice: National identity, whiteness and masculinity in the visual politics of Izborskii Club in Russia** *Sonja Pietiläinen (University of Oulu)*

14:45 – 16:15

- **On the relation between far-right support, populism, and climate change denial** *Kirsti M. Jylhä (Institute for Futures Studies)*
- **Heteronormativity and Claims to Cheap Fuel as a Rural Right in Sweden** *Julia Lagerman (Uppsala University)*
- **The imagined homogenous, patriarchal, and industrial far-right community** *Kjell Vowles (Chalmers University of Technology)*

Session 31: Nordic Geography Education: Educational continuum from school geography to higher education and continuous learning

Chairs: Sanna Mäki (University of Turku) & Minna Tanskanen (University of Eastern Finland)

16:30 – 18:00

- **Perspectives on geography education: Current state and future challenges** *Gabriel Bladh (Karlstad University), Tine Béneker (Utrecht University), Martin Hanus (Charles University) & Sirpa Tani (Helsinki University)*
- **Geography's three problems seen through the prism of one educational challenge** *Rene Brauer (University of Eastern Finland)*
- **Taking back geography: The changing content of geography in Norwegian education** *Erlend Eidsvik (Western Norway University of Applied Sciences)*
- **Dealing with misconceptions and conceptual change in geography teacher education: a case of cartography course** *Martin Hanus (Charles University)*

Auditorium M106, Tuesday

Session 9: Post-COVID19: whither the borderless world?

Chairs: Paul Fryer (University of Eastern Finland) & Joni Virkkunen (University of Eastern Finland)

13:00 – 14:30

- **Post-COVID cross-border relations in the Pamir mountains** *Paul Fryer (University of Eastern Finland)*
- **Quarantining the 'Other', Policing the Landscape: COVID-19 and the Stifling of Dissent in Azerbaijan** *Karli-Jo Storm-Närväinen (University of Eastern Finland)*
- **Blending in? Re-Patriates from former USSR in Finland and Germany** *Bernhard Köppen (University of Koblenz-Landau), Stefan Bloßfeldt (University of Koblenz-Landau), Florian Johann (University of Koblenz-Landau), Virpi Kaisto (University of Eastern Finland), Jarmo Kortelainen (University of Eastern Finland) & Tuulia Reponen (University of Eastern Finland)*

- **Whither the security of Europe? The spatial-temporal creation of the asylum subject in international refugee law and the making of imperial nation states** *Kolar Aparna (University of Helsinki)*

14:45 – 16:15

- **Labour market integration during a pandemic? The impact of the COVID-19 pandemic on the social integration of highly skilled refugees in Sweden** *Ioanna Blasko (Uppsala University)*
- **Urban-rural inter-municipal migration during the COVID-19 pandemic in Finland** *Urszula Ala-Karvia (University of Helsinki)*
- **The most common reasons for study migration on the example of Slovak students in Brno** *Ondrej Mysak (Masaryk University)*
- **Cross-border commuting in the Bavarian-Czech borderlands - An essential asset for regional development and its public (under-) representation on the Bavarian side** *Stefan Bloßfeldt (University of Koblenz-Landau)*
- **Racing Away From Pandemic: Effects of Covid-19 Measures on the Habits and Behaviours of Attendees at Motoring Event** *Jakub Kura (Masaryk University)*

16:30 – 18:00

- **How COVID-19 affected the cross-border mobilities of people and functional border regions in the Nordics. A case study using Twitter data** *Håvard Wallin Aagesen (University of Helsinki), Oleksandr Karasov (University of Helsinki) & Olle Järv (University of Helsinki)*
- **The Finnish-Russian borderland as a lived space** *Virpi Kaisto (University of Eastern Finland)*
  - **Post-pandemic borders: CBC and the Finnish-Russian external EU border** *Minna Piipponen (University of Eastern Finland)*
  - **Geopolitics and the Scales of Finnish-Russian Cooperation: From Selective Engagement to Joint Strategic Planning** *Joni Virkkunen (University of Eastern Finland)*

Auditorium M107, Tuesday

Session 40: Nordic legal geography

Chairs: Michael Jones (Norwegian University of Science and Technology) & Päivi Rannila (Tampere University)

13:00 – 14:30

- **Nordic legal geographies – past and present** *Michael Jones (Norwegian University of Science and Technology & Päivi Rannila (Tampere University)*

- **Gender, work and legal practice interlaced in early modern rural landscape** *Elisabeth Gräslund Berg (Stockholm University)*
- **International law, grazing lands conventions and the nationalization of minorities** *Olof Stjernström (Nord University)*
- **The possible, permissible and desirable as analytical tool** *Nina Toudal Jessen (Copenhagen University)*
- **Carceral riskscapes and working in the spaces of mental health care** *Virve Repo (University of Turku)*

14:45 – 16:15

- **Property, planning and scale** *Roger Westin (Malmö University)*
- **Power and ownership rights over landscapes as property** *Siiri Pyykkönen (University of Turku)*
- **Sharing of costs and benefits from natural resource utilization under the 'green shift'** *Katrina Rønningen (Ruralis)*
- **A just green transition of rural areas – the Nordic perspective of value creation and local benefits** *Anna Karlsdottir (Nordregio & University of Iceland) & Elin Cedergren (Nordregio)*
- **Landscape Perspectives for a Sustainable Climate Change Transition** *Edith Lalander Malmsten (University of Stockholm)*

Session 45: Beyond numbers and algorithms – deep-diving into the platform-mediated gig economy

Chairs: Natasha Webster (Stockholm University) & Qian Zhang (Stockholm University)

16:30 – 18:00

- **Reflections on the divisions of social reproductive labour in Airbnb households** *Maartje Roelofsen (Open University of Catalonia)*
- **An Appendage to The Machine: Corporealising The Gig Economy** *Olivia Butler (Uppsala University)*
- **Going Local: Ethnographic investigation of spatio-temporal factors in the Danish context of digital platform labor** *Konstantinos Floros (IT University Copenhagen) & Kalle Kusk Gjetting (Aarhus University)*

Auditorium F100, Tuesday

Session 46: Current developments in tourism geographies

Chairs: Malin Zillinger (Lund University & Mid Sweden University) & Jan Henrik Nilsson (Lund University)

13:00 – 14:30

- **Domestic and international tourism during the pre-vaccination times of COVID-19? Empirics of travel in Finnish tourism regions** *Tommi Inkinen (University of Turku)*
- **The biopolitical production of a whole country as a tourist area. Tourism and short-term rentals during the pandemic in Greece** *Myrto Dagkouli-Kyriakoglou (Malmö University)*
- **Coastal tourism perspectives as seen by inhabitants and enterprises** *Anu Printsmann (Tallinn University)*
- **Relict boundary as a tourist attraction/destination: A case of the Bohemian-Moravian historical land boundary** *Petr Marek (Masaryk University)*
- **Traceless Lofoten tourism** *Rose Keller (Norwegian Institute for Nature Research)*
- **Interdisciplinary analysis of ecological and social complex feedbacks and relations linked to coastal tourism: the case of Biosphere Reserves** *Liliana Solé Figueras (University of Turku)*

14:45 – 16:15

- **ICTs and the geographies of tourism** *Malin Zillinger (Lund University & Mid Sweden University)*
- **Digitalizing tourism mobility – building a common framework for an ecosystem** *Maria Hakkarainen (University of Lapland) & Minni Haanpää (University of Lapland)*
- **Urban ecosystem services and tourism** *Jan Henrik Nilsson (Lund University)*

Auditorium F101, Tuesday

Session 11: The urban and the rural -(two) stories of multiplicity

Chairs: Per Göransson (Karlstad University) & Sofia Billebo (Karlstad University)

13:00 – 14:30

- **Spatial re-organization of creative work: new geographies of 'old' coworkers and the(ir) boundaries of sharing** *Malte Höfner (University of Graz)*
- **Beyond the city life: aspirations and trade-offs in the quest for a sustainable everyday life** *Ulrika Åkerlund (Karlstad University)*
- **A translocal sense of place? Finns' translocal place-making in the UK** *Evi-Carita Riikonen (University of Eastern Finland)*
- **rUrban (human) biographies of the polarizing wolf return -early notes from the field** *Sofia Billebo (Karlstad University)*
- **Walking with non-humans: Exploring meaningful encounters during excursions to recreational landscapes** *Oskar Abrahamsson (University of Gothenburg)*

14:45 – 16:15

- **Choirographies: Mapping the Geographies of Choirs in Sweden** *Per Göransson (Karlstad University)*
- **Place identity in urban-rural contexts: Applying the environmental phycology approach to Arab residents of rural localities in Israel** *Ilan Shdema (Ben-Gurion University of the Negev)*
- **The landscape approach: lessons for planetary urbanization** *Tauri Tuvikene (Tallinn University)*
- **Digital agencies as means for "urbanization" for rural youth?** *Ville-Samuli Haverinen (University of Eastern Finland)*

Auditorium F103, Tuesday

Session 34: Varieties of Nordic neoliberalisms: Changing urban political economies in Northern Europe

Chairs: Lina Olsson (Malmö University) & Özlem Çelik (University of Helsinki)

13:00 – 14:30

- **The role of Finnish land-use planning legislation in the ordering of neoliberal environmental governance** *Uula Saastamoinen (Finnish Environment Institute)*
- **The neoliberalisation of spatial planning in Denmark – a 30-year perspective** *Kristian Olesen (Aalborg University)*
- **Political Institutions, Local Governance, and Land-Use Changes: A Comparative Study of Norway and Sweden** *Katarzyna Szmigiel-Rawska (University of Warsaw), António F. Tavares (University of Minho) & Emanuel Wittberg (Linköping University)*

14:45 – 16:15

- **Design, Everyday Experiments and Nordic Neoliberalism** *Guy Julier (Aalto University)*
- **Finance, Capital Accumulation, and the Production of the Built Environment in Sweden** *Maja Stalevska (Uppsala University)*
- **Light Rail Transit as Spatial Fix: Regulatory and Accumulative Strategies in the Transit-Oriented Neoliberal City in Sweden** *Lina Olsson (Malmö University)*
- **Solutions in search of a problem. Translating BIDs into the Nordic countries** *Chiara Valli (Malmö University) & Kristian Olesen (Aalborg University)*

16:30 – 18:00

- **How does the struggle to define homes value drive transformation of the post-crisis national housing finance? The case of Sweden** *Anetta Proskurovska (Luxembourg Institute of Socio-Economic Research)*
- **Problematizing urban segregation – a genealogy of the question of vulnerable urban areas in Denmark** *Martin Severin Frandsen (Roskilde University) & Jesper Visti Hansen (Roskilde University)*
- **Neoliberal discourse and the state-driven gentrification of Danish housing association areas** *Matthew Howells (Aalborg University)*
- **Renoviction, Class, and Contested Urban Redevelopment in a Swedish Neighborhood** *Miguel Martínez (Uppsala University) & Christoffer Berg (Uppsala University)*

Wednesday, 22th June 2022

Auditorium M101, Wednesday

Session 21: Analysis of flows, dynamics, and accessibility

Chairs: Ossi Kotavaara (University of Oulu) & Olli Lehtonen (University of Eastern Finland)

09:00 – 10:35

- **Spatiotempora l Logics of Urban Bike Commuting** *Radim Liskovec (Masaryk University) & Ondřej Mulíček (Masaryk University)*
- **The 15-minute countryside: shifting daily urban systems and the dependability of public transportation in rural Netherlands** *Ate Poorthuis (KU Leuven)*
- **New databases to analyze dynamic population – case of North Karelia, Finland** *Antti Petteri Hiltunen (University of Eastern Finland)*
- **Understanding cross-border mobilities of people: Insights from social media data in case of the Greater Region of Luxembourg** *Olle Järv (University of Helsinki)*
- **Flow of Ukrainians to Poland - labour migration and refugees** *Konrad Czapiewski (Institute of Geography & Spatial Organization PAS) & Tomasz Komornicki (Polish Academy of Sciences)*

10:45 – 12:15

- **Polycentric spatial vision in planning practice: between normative narratives and specific institutional frameworks** *Jiří Malý (Institute of geonic of the CAS) & Marek Lichter (Masaryk University)*
- **Location optimisation of biogas reactor(s) – Combined network accessibility potentials of incoming and outcoming flows** *Ossi Kotavaara (University of Oulu)*
- **ARIFi – a model for a fairer consideration of accessibility and remoteness in regional and municipal policy** *Simo Rautiainen (University of Eastern Finland)*
- **Supply and demand of European forest resources** *Anita Poturalska (University of Oulu)*
- **Mapping the balance between supply and demand of grains globally** *Terhi Ala-Hulkko (University of Oulu)*

Session 39: 'Autonomous' geographies

Chair: Ilkka Pyy (University of Eastern Finland)

13:30 – 14:45

- **Governing cities, governing selves: Compassionate individuals and autonomous projects** *Derek Ruez (Tampere University)*

- **Statues and sprays: Graffiti as a spatial practice of resistance against dominant discourse** *Jozef Lopuch (Masaryk University) & Vendula Svobodová (Masaryk University)*
- **Towards non-ableist geographies of visual impairment: The methodological difficulties in the research of visually impaired people's urban experience** *Pavel Doboš (Masaryk University), Hana Porkertová (Mendel University in Brno) & Robert Osman (Masaryk University)*
- **A shift for hybrid planner? Real estate politics in the city of Joensuu** *Ilkka Pyy (University of Eastern Finland)*

Auditorium M103, Wednesday

Session 6: Geographies of marginality and territorial stigmatization in an era of policy schizophrenia

Chairs: Kristian Nagel Delica (Roskilde University) & Troels Schultz Larsen (Roskilde University)

09:00 – 10:35

- **Under the Long Shadow of Territorial Stigma: Upward Social Mobility and the Old Neighbourhood's Taint** *Anthony Miro Born (London School of Economics and Political Science)*
- **Moving Targets: The Destructive Disassociation of People and Place in a Berlin Neighborhood** *Defne Kadýoðlu (Malmö University)*
- **Urban policing: stigmatisation, profiling and militarisation** *Lasse Koefoed (Roskilde University)*

10:45 – 12:15

- **Site effects as state effects: The struggles over the reconfiguration of the state through the lens of the ghetto list** *Kristian Nagel Delica (Roskilde University) & Troels Schultz (Roskilde University)*
- **Aesthetics of the (un)desirable: Visualizing and shaping future Danish public housing areas** *Iben Holck (Roskilde University)*
- **Selling the 'ghetto': territorial stigmatization and privatization of non-profit housing in Denmark** *Bjarke Skærlund Risager (Roskilde University)*

13:15 – 14:45

- **Green neighborhood identity against territorial stigma in high-rise suburbs in Tampere, Finland** *Antti Wallin (Tampere University)*
- **Waste as a Resource: Discourses Around Waste in a Stigmatized Area in Sweden** *Kim Roelofs (Malmö University)*

Auditorium M105, Wednesday

Session 31: Nordic Geography Education: Educational continuum from school geography to higher education and continuous learning

Chairs: Sanna Mäki (University of Turku) & Minna Tanskanen (University of Eastern Finland)

09:00 – 10:35

- **Geographical competences in Europe for lifelong learning, from school education to higher education** *Rafael de Miguel González (University of Zaragoza)*
- **Geography education: making workers or fostering active citizens?** *Marika Kettunen (University of Oulu)*
- **Exploring the gap between academic geography and school geography in the context of a competencies-based curriculum** *Yujing He (University of Helsinki)*
- **Digital school-going environments as equalizers of geographies of education?** *Päivi Armila (University of Eastern Finland)*

10:45 – 12:15

- **Didactic choices and sustainability issues** *Andreas Grahn (Mälardalen University)*
- **Attuning to geostories: Learning encounters with urban plant** *William Smolander (University of Helsinki) & Noora Pyyry (University of Helsinki)*
- **Environmental education through Geography? Barriers and enablers of pro-environmental behavior in a school context** *Anssi Huoponen (University of Eastern Finland)*
- **Development of climate change discourse at Finnish upper secondary textbooks and curricula 1985–2019** *Paava Ikonen (University of Helsinki)*

13:15 – 14:45

- **How to teach geographers about landscape in a virtual environment: Opportunities and limitations of online teaching and learning** *Iwona Markuszewska (Adam Mickiewicz University)*
- **Organizing a geography field course remotely during the pandemic** *Heli Kainulainen (University of Helsinki)*
- **Learning ladder of critical geomedia literacy** *Panu Lammi (University of Helsinki), Tua Nylén (University of Helsinki), Virpi Hirvensalo (University of Helsinki), Laura Hynynen (University of Helsinki) & Petteri Muukkonen (University of Helsinki)*
- **Self-assessment of skills in learning and teaching geoinformatics - case of Geoportti tool** *Tua Nylén (University of Helsinki), Nora Fagerholm (University of Turku), Eliisa Lotsari (University of Eastern Finland & Aalto University), Niina Käyhkö (University of Turku), Jussi Nikander (Aalto University), Vesa Arki (University of Turku) & Risto Kalliola (University of Turku)*

- **Research plan: Design- based study in geography education in nonformal learning environment** *Noora Kivikko (University of Helsinki)*

Auditorium M107, Wednesday

Session 41: Biopolitics and the geographies of tourism

Chair: Maartje Roelofsen (Open University of Catalonia)

09:00 – 10:35

- **Narratives of cross-border animal mobility in the transportation of animals by air** *Lucia Gräschke (University of Eastern Finland)*
- **'Nothing beats a beach holiday.' Mass tourism consumption as biopolitical force in a post COVID-19 European Union** *Harald Buijtendijk (Breda University of Applied Science) & Eke Eijgelaar (Breda University of Applied Science)*
- **The Island 2.0: Biopolitical experiments in 'COVID-free' tourism spaces** *Claudio Minca (University of Bologna)*
- **Between threats and privileges: the biopolitics of tourism in crisis** *Dominic Lapointe (University of Quebec in Montreal)*

Session 13: COVID-19, second homes and the development of Zoom-towns

Chairs: Olga Hannonen (University of Eastern Finland), Kati Pitkänen (Finnish Environment Institute) & Dieter Müller (Umeå University)

10:45 – 12:15

- **Emergent spaces of rurality in Covid-19 crisis: rural-urban interactions and politicised mobilities** *Tarmo Pikner (Tallinn University), Kati Pitkänen (Finnish Environment Institute) & Raili Nugin (Tallinn University)*
- **Uncovering multi-locality and multi-local living in (rural) Finland** *Kati Pitkänen (Finnish Environment Institute), Anna Strandell (Finnish Environment Institute), Antti Rehunen (Finnish Environment Institute) & Kimmo Nurmio (Finnish Environment Institute)*
- **Unraveling Finnish media discourses on remote work during COVID-19 pandemic** *Juha Halme (University of Eastern Finland)*
- **Location independence and mobilities: conceptual perspectives on digital nomadism and remote work travel** *Olga Hannonen (University of Eastern Finland)*

13:15 – 14:45

- **From Temporary Refuge to Savior for Rural Communities: On the Rapidly and Radically Shifting Roles of Second Homes during the COVID-19 Pandemic** *Dieter Müller (Umeå University)*
- **Using electricity data for second home research: prospects and challenges** *Janika Raun (University of Helsinki), Pasi Okkonen (University of Helsinki), Olle Järv (University of Helsinki), Manu Rantanen (University of Helsinki) & Torsti Hyyryläinen (University of Helsinki)*
- **Second home tourism and crisis communication in Sweden** *Lena Grip (Karlstad University), Fredrik Hoppstadius (Karlstad University) & Ulrika Åkerlund (Karlstad University)*

Auditorium F100, Wednesday

Session 24: Advances in GIS and open-source approaches

Chairs: Eliisa Lotsari (University of Eastern Finland) & Nora Fagerholm (University of Turku)

09:00 – 10:35

- **Pilot study showing opportunities and challenges of digital 3D geovisualizations in participatory urban planning** *Salla Eilola (University of Turku)*
- **3D PPGIS data: the new spatial analytical prospects** *Kamyar Hasanzadeh (University of Turku)*
- **A GIS-based approach for exploring the factors affecting conflict intensity in Africa** *Helena Tukiainen (University of Oulu)*

Session 23: Future health geography and geospatial health

Chair: Olli Lehtonen (University of Eastern Finland)

10:45 – 12:15

- **Rural to urban migration among elderly - consequences for lifestyle, health and well-being** *Ivar Svare Holand (Nord University)*
- **How the opportunities to do sports vary spatially and between socio-economic groups, case Helsinki and Jyväskylä** *Marisofia Nurmi (University of Helsinki)*
- **Spatial patterns of register data derived wellbeing in Sweden** *Gijs Westra (Uppsala University)*
- **Multi-local set challenge for provision of public health services** *Olli Lehtonen (University of Eastern Finland)*

Auditorium F101, Wednesday

Session 25: Climate mobilities

Chairs: Päivi Lujala (University of Oulu) & Eeva-Kaisa Prokkola (University of Oulu)

09:00 – 10:35

- **Environmental Change, Framing and Displacement: Knowledge, Politics and Voices of the Survivors** *Md Nadiruzzaman (Hamburg University)*
- **A place-based framework for assessing resettlement capacity in the context of displacement induced by climate change** *Päivi Lujala (University of Oulu)*
- **Border imaginaries and politics in the "problem" and "solution" narratives of climate migration in the European North** *Eeva-Kaisa Prokkola (University of Oulu)*
- **A case study in conflicting moral geographies over asylum seekers in Finland** *Tuulia Reponen (University of Eastern Finland)*
- **Critical pedagogies of climate mobility** *Kirsi Pauliina Kallio (Tampere University)*

Session 36: Lively terrains and matters of care in socioecological transformations

Chair: Tarmo Pikner (Tallinn University)

10:45 – 12:15

- **Encounters, enchantment, and eventual learning: a qualitative analysis of the new Finnish curriculum for basic education** *Raine Aiava (University of Helsinki), Heikki Juhana Sirviö (University of Helsinki) & Noora Pyyry (University of Helsinki)*
- **The street and the shelter: landscapes of interspecies care in transnational animal rescue and rehoming** *Nora Schuurman (University of Turku)*
- **Product care stories – unfolding citizen' agency in circular economy** *Taru Peltola (University of Eastern Finland & Finnish Environment Institute) & Kati Pitkänen (Finnish Environment Institute)*

Auditorium F103, Wednesday

Session 45: Beyond numbers and algorithms – deep-diving into the platform-mediated gig economy

Chairs: Natasha Webster (Stockholm University) & Qian Zhang (Stockholm University)

09:00 – 10:35

- **Digital Capital; Doing Digital Discipline** *Mathilde Dissing Christensen (Cardiff University)*

- **Global platforms and regional intermediaries | Intersecting networks of the music and the finance industry** *Björn Braunschweig (Friedrich Schiller University Jena)*
- **Platform Ruralism: A call for conceptualizing the platform economy in rural contexts** *Qian Zhang (Stockholm University) & Natasha Webster (Stockholm University)*

Abstracts

Session 1 Into the Blue: Connecting the diverse in water geographies.

Chairs: Moritz Albrecht (University of Eastern Finland) & Jani Lukkarinen (Finnish Environment Institute)

Auditorium M107, Monday

Industrial rhythm of a river in a post-productivist society *Jarmo Kortelainen (University of Eastern Finland) & Pertti Rannikko (University of Eastern Finland)*

The presentation examines the ways how a river shapes and is shaped by surrounding communities and historically changing societies. It presents a case study on Jänisjoki which is a peripheral transboundary river crossing the Finnish-Russian border and flowing to Lake Ladoga in Russia. Inspired by actor-network-theory, the study approaches water body as a hydro-social network and argues that the material river as an aquatic system plays an active role in shaping the characteristics of local communities and broader societies. The Jänisjoki industrialized from the end of the 19th century when metal and forest industries extended their hydro-social networks deep into the river basin. The watershed afforded industries with hydropower, floating routes and process water, and new power stations, mills, floating equipment, and industry-dependent settlements emerged in both downstream and upstream locations. The yearly hydrological rhythm was transformed to an industrial one as the hydro-social networks started to control the pulse of water flow and blocked the migration routes of salmon and trout. After the mid 20th century, most of the social components (people, mills, localities etc.) of hydro-social networks have deindustrialized, but the river itself still flows in accordance with the industrial rhythm. Currently, there are seven hydro-power plants operating along Jänisjoki: four on the Finnish side and three on the Russian side. On both sides, they are owned by electric power companies, with no or very thin connection to local communities. The Jänisjoki and its shores are no longer a working environment for people but increasingly a post-productivist landscape of leisure and recreation. The industrial rhythm prevails, however, and possesses a serious challenge for developing new and more locally connected hydro-social networks around tourism and recreation.

Media narratives of Blue Economy investment and Marine Spatial Planning governance in the UK, 2010-2021 *Winder Gordon (Ludwig-Maximilians-University Munich)*

This paper reviews print media narratives of Marine Spatial Planning and Blue economy in the UK during the period 2010 to 2021. It reports qualitative analysis of texts gathered from UK print media using the Lexis Nexis database. Local and regional newspapers as well as trade journals picked up these themes, but the coverage was decidedly local and specialist rather than national in scope. However, analysis reveals rather different narratives at work when reporting the Blue Economy than those used when covering Marine Spatial Planning. Reports of the Blue Economy highlighted investment, cluster building, and growth in regional economies. In contrast, Marine Spatial Planning coverage focused on governance issues, contestation, and, later, failed conservation initiatives. By relating these media narratives and media geographies to theorized

roles for media in societal transformation projects, the paper aims to better understand conceptualizations of marine governance at work in UK society.

Red herrings all the way down: Environmental territorialisation and politics of knowledge in the Baltic Sea herring value chains *Jani Lukkarinen (Finnish Environment Institute) & Helena Valve (Finnish Environment Institute) & Riina Toivanen (Finnish Environment Institute)*

Baltic Sea is one of the world's most eutrophicated marine regions, and the existing territorial governance frameworks, such as the EU's Water Framework Directive, have proven inadequate in dealing with the complexities of the trans-scalar environmental challenges and conflicting stakeholder perspectives (Söderberg, 2016). The spatial and temporal frames regarding environmental, social and economic aspects of governance differ greatly adding to the governance challenge (Tynkkynen, 2015). In essence, the territorial governance logics are in constant quarrel with different networked and topological power relations that materialise in diverse livelihoods and modes of production that are only sporadically linked to topographies of governance (Allen, 2009). In this paper, we take the value claims and production networks regarding Baltic sea herring (Clupea herangus membras) as a starting point of analysis regarding knowledge claims of integrating environmental, societal, and economic goals of environmental governance. Herring accounts for 90 % of Finland's commercial fish catch, but only 3 % of it ends into food production. By detailed empirical analysis of the herring value-chains, we identify bottlenecks of environmental innovations and actions. Further, we follow how value creation is embedded to geographically specific networks – and on the other hand, how certain aspects get abstracted into general standards and regulations (Birch, 2012). By doing so, we aim to provide more diverse understanding of blue economy, where focus on topological relations provide alternatives for narrow extractivism–environmental protection dichotomy (Winder & Le Heron, 2017).

To scale or not to scale? Blue bioeconomy development in Europe through the example of Norwegian seaweed aquaculture *Moritz Albrecht (University of Eastern Finland)*

Despite marginal capacities in Europe, seaweed aquaculture has come to occupy a very prominent space in the political narrative for a more sustainable and just future through European (Blue) Bioeconomy development. Yet, set in perspective to other key bioeconomy sectors, the recent policy and scientific prominence of the sector is not that much about its current importance in a European bioeconomy production system but is largely based on its assumptive claims for future sustainable development potentials. As most bioeconomy policy narratives development is framed predominantly on an extreme growth of the sector paired with upscaling efforts in production and resource utilization. It neglects the dominant mismatch between bioeconomy policy narratives promising sustainable solutions and local benefits with the experienced challenges, criticism, and outcomes of large-scale bioeconomy developments. Additionally, while there is a green, often SME focused rhetoric in policy, the suitability of this approach for remaining small with high ecological credentials is questionable. Utilizing the Norwegian Seaweed farming sector, the study evaluates the potentials and challenges of alternative, small-scale approaches within (green)growth-oriented policy and production frameworks. Seaweed farming in Norway is assessed through an assemblage conceptualization and, informed by in-depth qualitative empirical work allows to reconnect aspects of policy design and translation with the heterogenous spatial processes at the sites of implementation and

distribution (e.g. markets). This allows to shed light on the multiple spatial ontologies and contrasting paradigms which shape current sector development in Norway and Europe and provides a rather critical perspective on its future (un)sustainable development. Based on interviews with active Norwegian seaweed farmers the study accredits a "scale or die" positionality for most producers. Entrenched in (trans)national policy strategies the socio-economic and political framework neglects the possibilities for (some) producers to stay small, local and resource "wise" yet preys on their first mover experience to develop the sector for future large-scale developments, potentially to be dominated by incumbent aquaculture industries. Hence, while this aligns with business plans of some Norwegian seaweed entrepreneurs, the current Norwegian and affiliated EU (blue)bioeconomy policy design and spatially variegated translations of its policies jeopardize a more sustainable and locally embedded seaweed sector development while still in its naissance.

The Transboundary water management – comparing policy translations of the water framework directive in the international basin districts *Ibragimow Aleksandra (Adam Mickiewicz University in Poznań)*

The European Union's Water Framework Directive introduced a new approach to the system of water management in Europe by nominating the river basin district as the basic unit in water management. While its transboundary character aims to better manage natural resources, its design and implementation carries several challenges due to its weak integration of various bordering effects related to administrative boundaries that strongly affect the directives' implementation. Based on a comparative document based case study the presentation will scrutinize the effects on the implementation processes of the directive and aims to draw attention to identify the differences that derive from various sociospatial settings during the first and second cycle of water management plans from 2009 to 2015 and from 2016 to 2021. By thematically comparing biophysical characteristics, cross-border cooperation, cultural and administrative bordering processes the study displays a mismatch between the directives aims for transboundary governance and the actual governance processes which are hampered by a variety of conflicting bordering processes.

What, where, and why do residents experience in the urban riverscape? Insights from the PPGIS survey *Grzyb Tomasz (University of Warsaw)*

Beyond parks and forests, river ecosystems play a key role in strengthening human-nature bonds in urban areas. A broad palette of benefits and harms that impact on dwellers' physical and mental well-being while accessing nature has been identified. Treating the urban area as a complex social-ecological system, these benefits fall within the Cultural Ecosystem Services (CES) framework, while several negative experiences are analysed using Ecosystem Disservices (EDS) approach. This research aims to identify spatial patterns of CES and EDS delivery along the Vistula River in Warsaw, Poland, using PPGIS data. Survey participants were asked to identify several spatial locations, routes of areas, mark them on a map, and respond to a set of questions concerning their markers. The online questionnaire based on the Maptionnaire software was prepared and distributed among members of ca. 300 neighbourhood and district Facebook groups in November and December 2021 who actually spend their time along the river. Participants were asked to assess the benefits they experienced in the particular place using the Likert scale with reference to 12 statements regarding various CES. They were also inquired to

identify what disturbs them along the river; EDS patterns were revealed using the mix of quantitative data and free comments made by participants. 462 Warsaw residents provided information on 998 places or routes along the river where they prefer to spend their free time. Although the city centre attracts more residents, they perceive the riverscape of the city outskirts as more beneficial to them. Hierarchical clustering revealed three main bundles of CES: mind-connected (energy, spirituality, heritage, education), activity-connected (active recreation, aesthetics, maintenance for future, nature observation), as well as place-connected (social interactions, passive recreation, place attachment, sense of home). Another six main groups of EDS were identified: safety issues, gatherings, riverine wilderness, quality of river, shortcomings of amenities, and trade-offs between users. The study contributes to the existing body of knowledge on the benefits and harms provided by urban riverscapes by (1) simultaneously assessing multiple CES and EDS by urban residents; (2) recognising bundles between these services.

Session 2 Hydrogeography: fluvial and coastal processes.

Chair: Petteri Alho (University of Turku)

Auditorium M102, Tuesday

Underwater photogrammetry as bedload measurement approach in river systems having low turbidity *Eliisa Lotsari (Aalto University / University of Eastern Finland)*

A thorough understanding of the climate change impacts, and related defrosting sedimentary systems, on northern seasonally frozen rivers is presently lacking. In order to predict these changes in river systems, process-based analysis of the sediment transport is crucial during different hydrological conditions. Bedload transport has been one of the most difficult parameters to measure from both ice-covered, and open channel conditions. One solution for verifying the bed load transport in both ice-covered and open-channel conditions in rivers with low turbidity could be photogrammetric analyses. This presentation relates to the HYDRO-RDI Network, where the research group of University of Eastern Finland has been implementing underwater drone measurements for detecting bedload transport and defining river bed topography during different ice-cover and open-channel flow conditions. In addition to applying these data sets for understanding sediment transport processes at present hydrological conditions, these data will also enhance calibration of morphodynamic models. We will present the approaches experimented at subarctic Pulmanki River for these photogrammetric measurements, and show the preliminary results of bedload / particle motion detection from under-water video data sets.

Sub-arctic Fluviodiversity: towards a new framework for high-latitude rivers *Mikel Calle Navarro (University of Turku)*

Arctic and Sub-Arctic environments are among the most threatened ecosystems by global warming. Nevertheless, scientific research in this environment is scarce compared to temperate areas, which exacerbates our incapability to deal with the effects of climate change. In particular, the important role of hydrological processes is quite often undervalued. In high latitudes, rivers are in charge of evacuating the high amount of flowing water often coming from a combination of heavy rains and the melting process of the snow cover, glaciers or even permafrost that occurs during spring and early summer months. However, these processes are experiencing

heavy changes due to a warming climate. Therefore, since river dynamics is closely related to timing, magnitude and frequency of these hydrological events, these rivers are inevitably one of the landscape elements more prone to adjust (or change). But rivers are quite diverse, e.g. from hydrological (magnitudes of peak discharges, minimum discharge or seasonal variability) or geomorphological perspectives (channel slope, morphology or sediment size). In this sense, it is expected that perturbations caused by climate warming develop different adjustments in rivers with different hydro and geomorphological characteristics. In this context, the aim of this work is to test a new bottom up method to characterize fluviodiversity at regional scale in Sub-arctic environments and use it to provide an adequate framework to understand local river changes. In order to achieve this aim, Teno River Watershed, a 16k sq km catchment area draining towards the Barents Sea, was selected to: i) first perform a mesoscale systematic segmentation of the river channels, ii) use the segments to gather local characteristics (geological framework, valley characteristics, channel geometry, channel confinement, morphological pattern, geomorphic activity), iii) then, apply a clustering algorithm that provides an objective way of grouping rivers in different types, and finally iv) to analyse the patterns and trends of change at each resulted river types. Thus, this work is intended to contribute to understand high latitude rivers and its fluviodiversity as well as to assess regional environmental problems and provide a step forward in minimizing the effects of climate change in Sub-arctic environments.

The controls of short-term meander change - a field approach *Linnea Blåfield (University of Turku)*

Previous studies have shown that meander bends follow certain developmental phases from a straight reach towards a neck cut-off. The meander planform types are classified into simple symmetric, simple asymmetric, compound symmetric and compound asymmetric. The curved channel shape and the transverse bed slope induce a distinctive three-dimensional flow field and an unevenly distributed sediment transport pattern, intensifying the sinuosity by time. The spatial patterns of the fluvial and geomorphological processes, however, vary according to the planform type. Thus far, the newest technology has not been used to investigate and model the meandering river processes and sediment connectivity over various planform types to a large extent. In this study, we collect orthoimages over a clear watered, highly dynamic river reach containing 13 meander bends, which all differ from each other by shape and size, at three occasions using a remotely controlled drone. Based on the images, we form topographical models over the area using Structure-from-Motion. We measure the flow field cross-sectionally using Acoustic Doppler Current Profiler during different discharges, concurrently with the photogrammetric surveys. We also collect data on sediment characteristics, and water level changes and slopes. This dataset is used in a Computational fluid dynamic model including morphology. Based on the model, Structure from Motion and sediment samples, we analyse the effects of planform type and bend geometry on the flow characteristics and morphological development of meander bends during one hydrological year.

The impacts of ice-covered and open-channel flow on sediment load at sub-arctic river – modelling based on photogrammetrically enhanced sediment transport calibration data sets *Virpi Pajunen (University of Eastern Finland)*

The ongoing climate change is prone to alter the seasonal hydrology and the duration of ice-covered conditions in Northern rivers. Projected changes include shorter ice-cover periods,

increased annual precipitation and more intensive storm events. These changes influence the river flow conditions and sediment transport as rain events and runoff wash particles from the surrounding catchment area resulting in magnified suspended sediment loads in the rivers. In this study, the impacts of changing river flow conditions on annual and seasonal sediment loads are estimated with hydro- and morphodynamic model. The seasonal channel forms, material transport and morphodynamics are investigated by applying photogrammetric analyses (of under- and above water morphodynamics) and a variety of fluvial measurements (such as flow velocity, discharge, material transport and river ice characteristics). A low-cost shallow-water-AUV (Autonomous Underwater Vehicle) is used for photogrammetric analyses of ice-covered and open-channel forms and sediment transport to enhance the model. The model will be further tested against the traditional mechanic model (i.e. Helley-Smith), and applied at minimum and maximum ice-cover conditions. Photogrammetrically enhanced sediment transport models may improve the predictions of river flow conditions and sediment loads in the future.

On the uncertainty of estimating potential evapotranspiration under climate change

Ernesto Pastén-Zapata (University of Eastern Finland) & Eliisa Lotsari (Aalto University)

Evapotranspiration is an important process in the water balance. Its estimation is limited by the potential evapotranspiration (PET), which is the maximum evapotranspiration that can occur when the availability of water is unlimited. PET is an important parameter used, among other applications, in hydrological models. There are several methods available to estimate PET based on different climate variables, such as temperature, wind speed and relative humidity, among others. Climate models often project different change directions for such variables. Furthermore, the reliability of the climate model projections varies for each variable. Therefore, the uncertainty associated to the estimation of PET can be large, considering the full range of possibilities available for its estimation. This study assesses this uncertainty by employing ten methods to estimate PET for ten different locations across Europe, capturing different climate and physical conditions. An ensemble of sixteen Euro-CORDEX climate models is used to assess projected PET changes. Different bias correction and machine learning methods are employed to reduce the biases in the climate model outputs when compared to the reference climate. To maintain a consistent and sufficiently large reference dataset, a pseudo-reality experiment is setup where each climate model acts as reference to train the correction methods. The uncertainty of the projected PET is compared to the reference-climate-PET using a set of evaluation metrics. Results from this study are useful for hydrologists as well as other areas where evapotranspiration plays an important role, such as in agriculture. Overall, this analysis provides a detailed understanding of the uncertainty associated to the estimation of PET for climate change impact studies.

Session 3 From global pandemic to sustainable transformation.

Chair: Antti Mäenpää (Vaasa University)

Auditorium M103, Monday

The Faroese model of (sustainable) destination marketing: volunteering glorification, staying with locals and experiencing gratitude *Weronika Lis (Nicolaus Copernicus University)*

The case that constitutes the subject for this paper is a voluntourism project organized in the Faroe Islands that has gained worldwide attention. Unskilled volunteers were called to perform maintenance works while popular hiking trails remained closed for regular tourists. Thousands applied to build and mark trails in exchange for bed and board, while the idea was a successful marketing campaign for the Faroe Islands. Our study is anchored in theories on tourism destination image management and consumer behavior. Literature suggests that there is a growing number of tourists who make their travel choices based on the assessed sustainability of a place. This has informed the development of the broader concept of the destination image: an interpretation of reality within the tourist's mind, based both on rationality and emotionality. It is evidenced that there is a connection between destination image and travelers' purchases. Therefore, planning and implementing certain activities might lead to the creation of a destination image perceived as sustainable by potential visitors and improvement of a tourist destination's competitiveness. This is an important part of development plans to align with tourist demands. We show how the voluntourism project is used within marketing and sustainability promotion. Our case adds value to studies on local authorities' influence over the sustainable destination image and its competitiveness. In a broader perspective, it provides insights into research on the successful maintenance of supply and demand within tourism. Our findings help update the discussion on what this Faroese model might offer the civil society and tourism industry. Based on data gathered from quantitative (survey) and qualitative (participatory observation and interviews) methods, we discuss the Faroese model of destination image creation (DIC) and sustainability promotion (SP). We argue that engaging tourists in physical work, showing them gratitude, and inviting local people to participate: a) emphasizes Faroese values: respecting nature, a small community (DIC); b) instills a perception of the Faroe Islands as environmentally friendly (DIC); c) fosters more engaged tourists and reflective tourist behaviors (SP). We find that the Faroese model can be adopted by destinations threatened by overtourism that seek ready sustainable tourism solutions.

Paradoxes of Norway's Energy Transition: Polarisation and Justice *Marius Korsnes (Norwegian University of Science and Technology), Bradley Loewen (presenting) (Norwegian University of Science and Technology), Ragnhild Freng Dale (Norwegian University of Science and Technology), Markus Steen (SINTEF) & Tomas Moe Skjølsvold (Norwegian University of Science and Technology)*

Norway's shifting landscape of energy systems exemplifies paradoxes of a just energy transition in controversies surrounding oil and gas (O&G) and renewable energy resources. The transition to renewables and stricter climate policies means many of the resources figured into the long-term plans of the oil and gas sector may turn into so-called 'stranded assets'. Simultaneously, Norway's expansion of renewable energy production has been controversial, particularly concerning onshore wind power. Drawing on sociotechnical perspectives for a just energy transition, this article presents an in-depth analysis of Norway's O&G and onshore wind power developments and controversies. Our analysis shares a common theme to humanise and

integrate different approaches to transition, which helps explore the social and economic dimensions of tensions that underpin the apparent paradoxes. Through the cases, we build on the connection between dependency on oil and gas and opposition to energy transition processes, feeding into broader debates surrounding Norway's energy system and how notions of just transitions are of particular importance in carbon-intensive regions. The cases point to polarisation concerning future directions of Norway's energy system based on decarbonisation of the O&G sector, on the one hand, and expansion of renewables, on the other. The controversies, in turn, reveal different framings of just transition. In terms of sector needs for restructuring petro-maritime industries (e.g., offshore O&G, offshore wind), the controversies risk being kept out of sight while the scope of just transition is limited to the sector, with potentially minimal impact to society at large. In terms of societal needs, renewable energy controversies revealed by onshore wind installations are on the doorsteps of communities themselves and call attention to the broader societal aspects (e.g., engagement, acceptance) of a more holistic just energy transition that meets the highest of climate targets. Despite the widespread interest in avoiding conflict and increasing public acceptance, controversies are seen as a necessary element for uncovering issues of justice in possible transition pathways.

Sustainable transformation via mobilisation of stakeholders. Introducing stakeholder analysis from GRETA project *Antti Mäenpää (University of Vaasa)*

In order to implement sustainable transformation, inclusive policy is needed and all type of stakeholders should be encouraged and mobilised in order to reach these goals. Challenges of green transformation relate to landscape, regime and niche level (ref. Geels 2009) meaning individual regions, industries, helices and indeed even individual stakeholders. In the paper, we will discuss how stakeholders from different helices (companies, universities, public organisations and NGOs) in green energy sector response to European green deal. Stakeholders' position towards sustainable transition is analysed (Mitchell et al 1997) based on their urgency (will to act), legitimacy (reason to act) and power (ability to act). The paper refers to results of interviews and analysis with environmental experts on sustainable transition processes and institutional dynamics in six regions across Baltic Sea, made in an on-going BSR project, GRETA (Green Transformation! A policy tool for Regional Smart Specialization). According to the findings, the regional contexts of stakeholders towards sustainable transition vary, but some general features on stakeholders can be found in BSR. For instance, public organisations seem to act fast and companies and other helices need to follow close behind. Companies seem to lack especially legitimacy, which can be gained by publicprivate cooperation. Based on our discoveries we see that stakeholder analysis is one tool for regional policy makers and developers, which gathers data on the regional green transformation process and also offers a way to engage stakeholders and show them some indications on the direction, where the region is going. This can also be used for gaining better understanding on a broader, European level, since the analysis is fairly easy to use and could be applied to several types of industries.

Session 4 Exploring contemporary governance of society, land-use and tourism in Arctic regions through a spatial lens.

Chairs: Dorothee Bohn (Umeå University) & Doris A. Carson (Umeå University)

Auditorium F100, Monday

Geographies of public funding for Arctic tourism: A longitudinal comparison of path development in Finnish and Swedish Lapland *Dorothee Bohn (Umeå University)*

Since the late 1950s, the Structural and Investment Funds (ESIF) represent the main instruments for realizing the European Union's economic and social policies, which seek to promote sustainable growth and the reduction of disparities between EU member countries. Considerable subsidies for development projects as well as for private firms have been allocated to the stimulation of tourism in the EU's sparsely populated Arctic areas. Nevertheless, only limited research attention has been given to how such public funding has shaped tourism destination pathways from an evolutionary and longitudinal perspective. This study examines public funding provisions in Finnish and Swedish Lapland, which are the Arctic areas of the EU, through the lens of Evolutionary Economic Geography (EEG). Specifically, we map out financial support for tourism projects over three funding periods between 2000 and 2020 in a comparative manner to identify what kind of development initiatives have received public funding (e.g. grants for private firms, public infrastructure, human capital development, or organization building), as well as to visualize the geography of these activities. The EEG focus assists in clarifying whether path creation is encouraged through public funding in new locations that lack economic activity or funding initiatives have continued to concentrate spatially and thematically, leading to increasing tourism path dependence and selfreinforcing destination structures. The data is amended by interviews with stakeholders from funding bodies to determine the goals of public agencies and their perceived input to destination development. This paper contributes to a better understanding of the role of the public sector in developing Arctic tourism destinations and the sector's footing in sustainable regional development.

Investigating the intersection of overtourism and land-use conflicts in the periphery *Andreas Back (Umeå University)*

Over the past few decades the phenomenon of overtourism has been an increasingly common topic for tourism research, media attention and tourism planning, primarily relating to the densely populated tourism destinations of the world, such as Amsterdam, Barcelona or Venice. However, overtourism is a subjective concept that relates to equally subjective estimations on the capacities and traits of tourist destinations, and the local preconditions for sustainable tourism. While the exact definitions of overtourism vary, the general picture is that of tourism-induced overcrowding, causing deterioration of locals' quality of life and visitors' experiences. However, as evidenced by reports on crowding, overuse, and conflicts relating to tourism in the Nordic periphery, overtourism does not seem to be limited to urban areas. Using data from interviews with tourism planners on changing tourism flows during the covid-19 pandemic, we explore overtourism in a peripheral setting. The paper shows that rapidly changing tourism flows pose planning challenges for destinations in sparsely populated areas in the intersection of overtourism and land-use conflicts.

Efficiency and democracy: local governance dilemmas on the Finnish periphery *Sarolta Németh (University of Eastern Finland)*

The study examines how in local government and decision-making the different objectives and conditions of efficiency and democratic accountability can be constructively linked. The authors first use a short theoretical literature review to characterize the different elements of local governance according to whether they are subordinated to the efficiency or accountability goals, and then they use a practical example, the case of a shrinking rural town, Lieksa, to offer a deeper understanding of their interactions and possible matching in a particular context. The authors seek to answer (1) what considerations local decision-makers (should) have when balancing between effectiveness and democratic accountability in the implementation of the municipal development strategy and (2) what a remotely located, territorially disadvantaged small town can achieve in the face of diminishing resources by merely renewing its governance and municipal management processes. The study uses empirical material (interviews and focus group discussions) and research results compiled in relation to the Lieksa case study under the international research project RELOCAL, funded by the EU under its Horizon2020 programme (2016-2021). Lieksa's example suggests that the efficacy and fruitfulness of development actions and municipal decision-making are inseparable from and conditioned also by their accountability and legitimacy. When properly and proportionately combined, their different mechanisms can be complementary and mutually reinforcing. In tackling complex socio-economic problems such as Lieksa's, it is important to consider potential side effects of, as well as the positive / negative interactions between different interventions that are likely to occur under particular and volatile circumstances. Therefore, local governments and their leaders, in addition to result-oriented problem solving, need to pay more attention to the improvement and renewal of their municipal management and governance processes as required by the uncertainty and changes in external factors. For this, municipal leaders need to engage in continuous and reflective learning with different local stakeholders and residents to find optimal responses to complex socio-economic challenges such as "shrinking" or finding a workable balance between governance tools serving efficiency and democratic participation.

Session 6 Geographies of marginality and territorial stigmatization in an era of policy schizophrenia.

Chairs: Kristian Nagel Delica (Roskilde University) & Troels Schultz Larsen (Roskilde University)

Auditorium M103, Wednesday

Under the Long Shadow of Territorial Stigma: Upward Social Mobility and the Old Neighbourhood's Taint *Anthony Miro Born (London School of Economics and Political Science)*

In recent years, a burgeoning number of studies have shed light on the lived experience of territorial stigma. However, the vibrant academic discourse on the stigma of place focuses almost exclusively on residents living in marginalised neighbourhoods: it either overlooks or simplifies the lived experience of 'moving out' and 'up'. Building upon 43 biographical interviews with individuals who experienced upward social mobility and were raised in stigmatised neighbourhoods in Germany, this article argues that the experience of exiting from the symbolic bottom of the urban structure is a more complex and conflictual one. In particular, this work

sheds light on how former residents learn to relate to the symbolic baggage of having once lived in a notorious neighbourhood. By analysing the three prevailing coping strategies they engage in, the article shifts attention to the prolonged and lasting impact of territorial stigmatisation.

Moving Targets: The Destructive Disassociation of People and Place in a Berlin Neighborhood *Defne Kadıoğlu (Malmö University)*

Territorial stigma has been part of the discussion around state-led or state-enabled gentrification for quite some time. While critical scholars seem to agree that stigma is important in that it normalizes displacement, there is still disagreement on how exactly territorial stigma functions to drive and/or justify gentrification. I want to focus on two aspects. First, there is a need to reemphasize the importance of the local state in producing the structures that enable -increasingly financialized- gentrification (Bernt 2012; Celik 2021). Second, there is a need for nuancing the relationship between territorial stigma and gentrification. With reference to Schultz Larsen and Delica (2021), who find that stigmatization and de-stigmatization take place on different political scales, I suggest that strategies of stigmatization and de-stigmatization can also take place on the same scale and can be driven by the same political actors. While this seems contradictory, it is not: territorial stigma is part of the movement of capital and correlates with cycles of dis- and reinvestment (Kallin and Slater 2014; Kallin 2017). It is crucial not only to justify interventions but to construct the symbolic and material structures that enable the extraction of value. To understand how stigmatization and de-stigmatization can be applied on the same scale of government, it is still analytically and empirically useful to make a distinction between the stigmatization of residents and the stigmatization of territories (Loyd and Bonds 2018; Pinkster 2020). Both clearly overlap; however, at the onset of a gentrification process, or attempts to fuel gentrification, residents remain stigmatized while their neighborhoods are reimagined as potentially 'different' (Kallin 2017). Departing from the actions and discourses of a Berlin district government-, I will in specific suggest that territorial and racial stigmatization produce 'moving targets' in that residents and the places they inhabit are selectively associated and disassociated from each other. I finally argue that scholars need to take these nuances and discursive movements seriously if they are to discern -and ultimately challenge- the structures that enable gentrification.

Urban policing: stigmatisation, profiling and militarisation *Lasse Koefoed (Roskilde University)*

This paper takes its starting point in recent laws on urban politics in relation to vulnerable residential areas in Danish cities. The paper is based on empirical research on the encounters between the everyday urban police and ethnic minorities living in vulnerable neighbourhoods in Copenhagen. It is developed around three interrelated discussions. First stigmatisation that involves categorisation of different types of people the police meet in their everyday professional work and the everyday use of derogatory representations of specific areas or places in the city. Secondly racial profiling that implies that somebody is stopped and searched more often by the police while standing, walking, or driving in the city. It relates to the differential economy of stopping and can be understood in the context of discrimination and prejudice. Thirdly militarisation of the police force and securitisation of public space that gives priority to performance of security of specific spaces through heavy armament and differential technologies of violence experienced in encounters with the police. The paper is based on empirically material from in depth interviews with police officers, street workers and young people with minority backgrounds.

Site effects as state effects: The struggles over the reconfiguration of the state through the lens of the ghetto list *Kristian Nagel Delica (Roskilde University) & Troels Schultz (Roskilde University)*

This paper dissect how the policy innovation the Danish ghetto list, has been thought, shaped, developed and implemented in the nexus between the political and the bureaucratic field over the past three decades. We argue that social, symbolic, material struggles in and over physical space – especially concerning the neglected, and stigmatized territories – are intrinsically linked and entails struggles over the reconfiguration of the state. Policies directed toward territorial stigmatization and stigmatized territories are not only directed toward dealing with these spatial policy problems but also at one and the same time directed toward changing or preserving the relations and structures of the of the given policy field within the state or bureaucratic field in Bourdieu's terminology (1994; 2012). We contend, that in order to more fully comprehend the formation of spatial policies, we need to take into consideration both the structure of the specific policy-field, and how this in its own right generates principles of policy making (Wacquant 2005; Bourdieu 2005; Dubois 2014; Schultz Larsen 2014). Applying this logic to the case of the formation of the Danish ghetto list serves two interlinked purposes: firstly, it enables us (contra much research in the state-space nexus in urban studies), to bring in the state, the bureaucratic field, in an empirical analysis of urban transformation and struggles over the reconfiguration of the urban and the state. Secondly, it provides us with a fundament to explain the sudden proliferation of policy schizophrenia in the field of Danish housing policies (Delica & Schultz Larsen 2021).

Aesthetics of the (un)desirable: Visualizing and shaping future Danish public housing areas *Iben Holck (Roskilde University)*

Through a document- and image analysis and ethnographic interviews and field observations with professional actors, I will present how looking at aesthetic dimensions in visualizations of potential and speculative futures for Danish public housing areas on the governments so-called "ghetto list" can grasp different aspects of territorial stigmatization and de-stigmatization in the current top-down, gentrification projects in the areas. Inspired by the idea of the Danish welfare state as an aesthetic laboratory (Kjældgaard 2019) in which politics and art evolve and shape each other, I apply an understanding of aesthetics as not neutral but processes of universalisation of dominant subjects' experiences (Tolia-Kelly 2016). The "ghetto-legislation" is structured around five political citizen categories primarily based on ethnicity and class markers, and the goal of the law is to change the resident composition according to this categorization system in selected public housing areas. The main tool to this is privatization of large parts of the public housing. Interdisciplinary research has pointed to how increased neoliberal privatization is changing the focus of architecture from functional to experiential to attract capital investment (Klingmann 2007), making new techniques for representations such as CGI renderings central, as affective sensory experiences are used to appeal to customers and clients (Degen et. al. 2017). In the presentation, I pay particular attention to how the dominant role of ethnicity in the governmental "strategy against ghettoization" and privatization as virtue in both the political legislation and current urban planning schemes become embedded as aesthetic relations shaping and being shaped by the work of professionals. By doing different readings of architectural renderings, models, drawings, and urban space designs produced for the areas, I discuss how notions of aesthetics come to play a role in de-contextualizing and de-historicizing the (re)-making of the public housing areas as the visualizations simultaneously becomes visible,

bounded representations of bodies, behaviours, buildings, physical appearances and values in the desired futures of the areas and invisible erasures of other bodies and all of that which is being moved out of the visualisations.

Selling the 'ghetto': territorial stigmatization and privatization of non-profit housing in Denmark *Bjarke Skærlund Risager (Roskilde University)*

The past two decades have seen increasing efforts to privatize non-profit housing areas in Denmark, with a 'rightto-buy' scheme for tenants-cum-owners, facilitation of third-party take-over of housing or take-over of land for private development, and efforts to inject private capital into the areas in general. Meanwhile, many areas have been subjected to increasing territorial stigmatization, designations ranging from 'problem' areas at risk of 'ghettoization' to 'hard ghettos'. Both of these processes culminated, so far, with the so-called 'Ghetto Law' from 2018 with which so-called 'hard ghetto areas' are now required to reduce the proportion of non-profit family housing to maximum 40%, primarily by privatizing housing and land and private new-build. The 'Ghetto Law' is, in Denmark, an unprecedented political activation of territorial stigma whereby a both intensified and bureaucratized stigmatization process is justifying a large-scale neoliberal release of non-profit housing and land onto the forprofit market. Previous research on the Danish case has mostly treated the question of territorial stigmatization and housing privatization separately, presumably because early privatization mostly failed, while early 'ghetto' policies were less fixated on privatization. This changes with the 2018 legislation as privatization of the 'ghetto' de facto becomes inevitable. I argue that this calls for a reconsideration of the connections between the territorial stigmatization and privatization of the 'ghetto' as these have developed over that past two decades. From rereading policy proposals, debates, and evaluations from the 2002–18 period in the context of the current 'Ghetto Law', a gradually developing mutual dependency between stigmatization and privatization appears. Stigmatization has, from early on, been part of the justification for privatization, while privatization failures has been followed by increased stigmatization justifying new privatization measures. This is not an argument for a simple causal understanding giving explanatory precedent to either stigmatization or privatization but an argument about the complexity of neoliberal urban and social policy in the 21st century welfare state.

Green neighborhood identity against territorial stigma in high-rise suburbs in Tampere, Finland *Wallin Antti (Tampere University)*

In this presentation, I examine meanings given to nature in two in 1960s high-rise suburban estates in Tampere Finland. In Finland, the housing stock (forest suburbs, metsälähiöt) of this state-sponsored housing policy is widely subject to symbolic devaluation in public discourse, including the two neighbourhoods in fast-growing Tampere (considered as a sustainable city), where this ongoing case study research focuses. Data includes archive material, documents, and interviews. In contrast to territorial stigmatisation, the analysis is interested in how nature has been historically used to construct neighbourhood identity and in meanings residents give to nature during the pandemic. As an analytical tool, I use the concept of "green affect" Jennifer Mack recently introduced and reflect it with long debates of territorial stigmatisation and neighbourhood identity. I will argue that 1) the territorial stigmatisation of these neighbourhoods has been historically produced in a relation to social and urban development. 2) A counter-narrative of a green neighbourhood identity was constructed using the natural

elements of the neighbourhoods. 3) During the pandemic, for the residents the importance of nature has grown significantly as a place of everyday recreation and emotional retreat. By this research, my goal is to give a new understanding to previously stigmatised green high-rise suburbs and more widely about the emotional importance of green urban form.

Waste as a Resource: Discourses Around Waste in a Stigmatized Area in Sweden *Kim Roelofs (Malmö University)*

Since the 1990s, Sweden has used area-based initiatives to solve complex urban problems which negative effects become visible in stigmatized urban areas. This paper explores initiatives focussing on waste in the context of the post-war residential area of Gårdsten, Gothenburg, to show how discourses around waste become a resource for both municipality and residents to deal with urban inequality and stigmatization. I argue that the municipal housing company that owns most of the housing stock in Gårdsten uses problems connected to littering, recycling and waste collecting to construct a well-defined neighbourhood problem that can be effectively targeted with local initiatives aiming at destigmatization of the area. At the same time, I show how residents use discourses on waste and litter to deflect neighbourhood stigma onto those that they see as their littering neighbours. These residents explain the neighbourhood's stigma by blaming it on certain parts of the population and maintaining their own respectability. Thus, discourses around waste serve both residents and the municipality as a strategy to construct a clearly defined problem for the neighbourhood that explains why the neighbourhood is stigmatized and unattractive for potential middle-class residents. By focusing on the littering of the neighbourhood, the causes for its stigmatization are emphasized while at the same time these causes create a concrete way for destigmatizing the neighbourhood through "cleaning it up". These conceptualizations around waste stress the individual responsibility of the poor for their life circumstances and obscure structural causes for urban inequality. In this way, these discourses contribute to the further stigmatization and marginalization of poor residents.

Session 8 Nordic craft-beer geographies (and beyond).

Chairs: Richard Ek (Karlstad University)

Auditorium F101, Monday

Go pro or go home. The geographical and social imaginations of homebrewing and its connection to the Nordic craft brewing sector *Christopher Olsson (Örebro Universitet)*

The paper seeks to investigate the links between the Nordic craft brewing sector and the homebrewing scene as it is a connection missing in the literature on Nordic craft beer. By drawing on the notion of geographical and social imaginations the paper aims to highlight how the craft brewing sector and the homebrewing scene are interrelated, how geographical and social imaginations influence homebrewers decision to start businesses, and in what ways homebrewing contribute to the craft beer sector. While often highlighted for its experimental take on flavors and ingredients, craft beer production also reinterprets social dimensions of elsewhere as collective symbolism and stories of specific beer styles are reinterpreted through the local perspective. In that way, a Wallonian Saison or a British mild can be produced anywhere and still invoke tradition and notions of place but tweaked to the local context. Thus, craft beer production relates on community and the social embeddedness of place, a social

terroir (Sjölander-Lindquist et al. 2019). International homebrewing forums like “milk the funk” further affirms and amplifies the meaning and notion of place while pushing the idea of experimentation. Through these types of forums most people interested in brewing yeast now knows about the small towns of Voss and Hornindal in western Norway as the forum contributed to a popularization of traditional Norwegian farmhouse brewing. Just as the number of craft breweries has grown exponentially over the last ten years the number of homebrewers has surged and the Swedish association of homebrewers report an increase in memberships, from a handful to over 2000. Common imaginaries within the homebrewing scene are to scale up production and go professional. My hypotheses are that the increase in craft breweries, and the demand for craft beer, is both preceded and followed by an increase in homebrewing, that in turn is: expanding the sector, pushing notions of experimentation, as well as creating opportunities for supporting businesses, such as ingredient suppliers, mobile canning operations and software developers. To fully understand the craft brewing sector I argue that we need to understand its connection to the homebrewing scene.

Revitalizing place-based commercial heritage: the dissonance between cultural and commercial values following the renaissance of lambic beers in Belgium *Arie Stoffelen (KU Leuven)*

Craft beer brewing is a ‘glocal’ phenomenon illustrative for post-Fordist production and consumption patterns. However, the global appeal and consumption of local, place-based products also results in challenges, such as an extremely competitive marketplace and questions about the authenticity of the ‘craft’ behind the beer. This paper investigates the intricacies related to the revitalization of commercial products that have recently been assigned with cultural heritage values in the context of post-Fordist consumption, using lambic beers as the object of study. No beer illustrates the glocal craft beer world, and its associated tensions, as much as the lambic beers (such as gueuze and kriek). Lambic beers are beers of spontaneous fermentation that are only produced in the Zenne river valley near Brussels in Belgium. After being almost wiped out by the 1990s, lambic brewing has made a spectacular recovery in recent years, not in the least because of the global appeal of the cultural values assigned to this local, place-based product. As such, while strictly speaking not produced in a Nordic country, the entanglements between local production and global consumption – including a very substantial demand from Scandinavia, especially Sweden – were at the basis of the sector’s salvation. However, now that the sector is not anymore at immediate risk of disappearing, managing the balance between the product’s outspoken cultural (heritage) values and commercial values brings challenges. Alongside governance complexities, different interpretations among involved actors of what constitutes ‘tradition’ in lambic beer brewing, and how this tradition can be commodified for the global market, have made it unclear where cultural values stop and economic values begin. Heritage dissonance, in this case, revolves around the struggles to safeguard the sector’s agency in the context of the sector’s post-Fordist embedding. It threatens the cohesion within the sector and the creation of a unified response to future challenges that the globalization of the craft beer market will undoubtedly bring. This case study provides insights relevant also to the Nordic craft beer sector, which can expect similar (although likely, less pronounced) challenges between the local and global embedding of its products and production networks.

Place-Brewing: Breweries, Hops and Magic *Richard Ek (Karlstad University)*

Handcraft breweries are more and more regarded as valuable place-bounded assets. For instance, within the tourism and hospitality industry, they increasingly become important ingredients in place branding material. This is for a reason. Craft breweries are generally engaged in the community, culture and economy of their localities. Further, craft breweries often narrate and depict themselves as engaged in place-bound natural objects and resources, particularly hops, which often are given almost mystical or magical capacities. Magic hops and magic places inflate into each other, narratively speaking. It thus becomes interesting to a bit more systematically unfold how handcraft breweries present themselves as place-bound and place-making actors. In this paper, a content analysis of marketing material is unfolded in order to approach this topic. In more detail, I combine a discursive methodology, an ontological perspective on place as always already unfolding, and, insights from object-oriented ontology in order to unravel place-brewing as a narrative within a cultural imagination of nature and place.

Session 9 Post-COVID19: whither the borderless world?

Chairs: Paul Fryer (University of Eastern Finland) & Joni Virkkunen (University of Eastern Finland)

Auditorium M106, Tuesday

Post-COVID cross-border relations in the Pamir mountains *Paul Fryer (University of Eastern Finland)*

The north-eastern Pamir Mountains, comprising the ethnic Kyrgyz-inhabited area of rural Murghab district of the Mountainous Badakhshan Autonomous Province of Tajikistan, has long been associated with the Pamir Highway, an ancient Silk Road trade route that was popularised in the nineteenth century at a time of the 'Great Game' and the British and Russian Empires' scramble for influence in the region. Though administratively attached to Tajikistan in Soviet times, the region has relied on its Pamir Highway link to southern Kyrgyzstan for its basic needs. After the collapse of the USSR in 1991, when a 'hard' border was erected between the newly-independent republics, uncertainty developed over the future of the region and the transport corridor. Established economic links along the Highway to the Kyrgyz city of Osh were weakened during a period of instability (the Tajik Civil War), which resulted in the condition of the Highway deteriorating. The region was re-orientated towards distant Dushanbe, the national capital, causing great hardship in the region and initiating a steady out-migration of young people. Only recently has the relationship with Kyrgyzstan been re-affirmed, partly supported by an increase in foreign tourism along the Pamir Highway. In this paper, I examine the cross-border relations between Murghab and Kyrgyzstan that have emerged since 1991 and ask how has the local community been rebuilding the links to the outside world? What new opportunities have inhabitants found that make the most of their place in a border region? How has the COVID epidemic affected these cross-border links? Research for this paper was conducted in Murghab and Osh in the summers of 2017 and 2019.

Quarantining the 'Other', Policing the Landscape: COVID-19 and the Stifling of Dissent in Azerbaijan *Karli-Jo Storm-Närväinen (University of Eastern Finland)*

As a country categorized by Freedom House as 'Not Free' (2021), Azerbaijan can hardly be considered a beacon of democracy among its former Soviet peers. Rather, since 1991, Azerbaijan has developed a reputation for stifling public dissent and political opposition both within and outside of its borders. This paper examines the ways that public health measures crafted in response to the global COVID-19 pandemic have been utilized by state officials to further stifle alternative viewpoints in the country. Examples include arrests of opposition figures for alleged violations of quarantine procedures and using quarantine regulations to make surveillance of government critics simpler and more effective (i.e. confining individuals to their homes, allowing officials to better control/monitor internet and telephone usage). Such measures are part of larger tradition in Azerbaijan of 'policing the body' (cf. Longhurst 2005, Mayer 2004, Smith 2009) in order to better police the symbolic-technical landscape. Dissidents in Azerbaijan are frequently forcibly and opaquely detained, incarcerated, admitted into psychiatric institutions, subjected to travel bans, surveilled within public as well as private spaces, and frequently suffer bodily harm whilst in custody. Policing the individual body in this way allows for officials in Azerbaijan to better control the narratives offered up for public consumption both within and outside of the country's political borders. Policing the individual body, then, effectively allows for the policing and/or sanitizing of the territorialized body politic and its symbolic representations 'at home' and 'abroad'. Overall, this paper seeks to further theoretical and methodological discussions of what I refer to as "symbolic-technical landscaping" (a term stemming from Paasi's (1996, 2009, 2012, 2020) discussions of "landscapes of control" in border(land) governance), using the Azerbaijani case as an apt illustration of such phenomena. Discussions of bodily policing in Azerbaijan help to illustrate the far-reaching, multi-scalar, power-laden, and elite-driven nature of symbolic-technical landscapes across space-time and during the contemporary global health crisis.

Blending in? Re-Patriates from former USSR in Finland and Germany *Köppen Bernhard (Universität Koblenz-Landau), Stefan Bloßfeldt (University of Koblenz-Landau), Florian Johann (University of Koblenz-Landau), Virpi Kaisto (University of Eastern Finland), Jarmo Kortelainen (University of Eastern Finland) & Tuulia Reponen (University of Eastern Finland)*

Ethnic return migration is a specific, yet relevant phenomenon in global migration and interesting for geographical migration studies, population geography and cultural geography. In total, there are about 40 countries which have implemented repatriation legislation or programmes. For Germany and Finland, so called Spätaussiedler and Ingrians/Paluumuuttaja, having re-migrated namely after the fall of the "iron curtain" are particularly striking examples of this kind of migration. With our study, we want to contribute to scholarly knowledge on integration by exploring how first and second generation re-patriates in Germany and Finland perceive their situation in society and their ethno-national identity in a comparative perspective. It is framed within the broader discourses on citizenship, integration and assimilation and multiculturalism. It is assumed that the specific configuration for Spätaussiedler and paluumuuttaja, in between 'official' ethnicity based citizenship and quite 'ordinary' everyday challenges of immigrants, is a particular challenge for identity and self-attribution of the concerned re-patriates. By using the comparative perspective by conducting interviews with repatriate immigrants, we will be able to generate knowledge on integration, which can be potentially generalized. Thus, our work will be relevant for the debate on migration and the process of integration and assimilation.

Whither the security of Europe? The spatial-temporal creation of the asylum subject in international refugee law and the making of imperial nation states *Aparna Kolar (University of Helsinki)*

In this paper we ask the questions how asylum law scripts the subject seeking asylum and what spatiotemporalities are produced from asylum laws in light of the securitisation of Europe's borders. The current international legal system relating to refugee protection came to existence many years before the adoption of the 1951 Refugee Convention . However, asylum seekers became 'problems' by the creation of modern nation-states and from the perspective of the security concerns of European imperial powers . In fact, states for their own convenience and security-related incentives, established restrictive rules and legal measures at domestic and international levels to control the cross-border movements of people . In tracing the contours of the security concerns of colonial powers we gesture to the inherent raciality of asylum law, drawing from Da Silva's transparency thesis and Mayblin's Asylum after empire . We argue that geneologies of securing Europe's borders scripts the subject of asylum simultaneously as affectable "I" whose difference is already apriori a threat to the ethical life of transparent subjects in the shifting contexts of post war EU integration producing legal geographies of transparency and affectability. We then ask whither the security of Europe where, as posed by Cesaire , humanism is made to the measure of the world.

Labor market integration during a pandemic? The impact of the COVID-19 pandemic on the social integration of highly skilled refugees in Sweden *Ioanna Blasko (Uppsala University)*

Globalization has often been associated with increased immigration, the movement of asylum-seekers, and flows of refugees. But in order for a globalization process to be successful and for a borderless world to be created, people on the move need to participate in and be integrated into receiving societies, not simply be permitted to enter. This includes highly skilled refugees, who are often those furthest from the labor market in receiving countries, even though they have the potential to assist countries in dealing with the increasing shortage of skilled professionals and help workplaces gain perspectives from other parts of the globe. This paper focuses on the labor market and workplace integration of highly skilled refugees in Sweden during the COVID-19 pandemic. In recent years, and especially during the pandemic, it has become increasingly difficult for asylum-seekers to enter Sweden. Furthermore, while Sweden has remained more open than other countries, the pandemic has had an effect upon existing integration processes through, for example, the impact it has had on the types of integration initiatives being offered, opportunities to network, and the possibility for workplace socializing. Although workplaces are increasingly opening up, it is unclear what long-lasting effects the pandemic may have on integration processes within the country. A globalizing world demands, however, not only that asylum-seekers are able to cross borders, but also that integration processes within receiving countries are effective in creating an integrated society and labor market as well as diverse workplaces that encourage and foster connections between people with different types of knowledge and backgrounds. The discussion presented here is based on document and text analyses, observations, and semi-structured interviews with highly skilled refugees, employers who hire highly skilled refugees, and representatives of integration initiatives aimed at helping refugees enter the labor market.

Urban-rural inter-municipal migration during the COVID-19 pandemic in Finland *Urszula Ala-Karvia (University of Helsinki)*

Some countries, e.g., Japan, has recorded an increase in inter-municipal migrations from urban to rural regions during COVID-19 pandemic. While it is still too early to discuss the long-term effects on urban-rural migrations, the proposed talk seeks for any exceptions or new patterns in inter-municipal migration in Finland during the COVID-19 pandemic years. As for the first time in half-a-century, the population of City of Helsinki decreased, the talk aims to answer a question of whenever COVID-19 has brought a rural renaissance.

The most common reasons for study migration on the example of Slovak students in Brno *Ondrej Mysak (Masaryk University)*

Educational migration is one of the main components of migration as such. There are a huge number of places in the world where students from all over the world go. These places are characterized by the presence of large and popular universities attracting foreign students. Foreign students can provide a variety of advantages to the host country, such as a high level of education of the population in the territory, or the consequent presence of multinational companies that often employ university graduates. A variety of economic, social, and societal reasons lead foreign students to choose universities abroad. There are a number of push and pull factors in the actual process of deciding whether a student chooses to study abroad. The size of these factors also depends to some extent on the individual case, but in some context, they can be well generalized. My aim, in the example of Slovaks studying in the city of Brno, is to point out the motives and reasons for choosing to study abroad, as well as the push and pull factors that influence potential students during the course of choosing a place of study. In fact, Slovak students make up a relatively large share of the total number of university students in Brno, in some faculties even absolute numbers of Slovak students exceed Czech ones. The reason for this high number of Slovak students in Brno is a common history, in the recent past existence of a common state, or almost no language barrier. A questionnaire survey was chosen as a research method in which students were questioned about the main reasons for their choice of study abroad, as well as what reasons led them to study in the Czech Republic, more specifically in Brno. The results show that the main reasons for studying abroad, for example, are the higher perceived quality of education compared to universities in the home country, or a higher choice of courses. The motives of study can be divided into those of an economic and non-economic character, for example those linked to better living conditions being considered economic factors.

Cross-border commuting in the Bavarian-Czech borderlands - An essential asset for regional development and its public (under-) representation on the Bavarian side *Stefan Bloßfeldt (University of Koblenz-Landau)*

In recent years, cross-border commuting has mostly served as an indicator to analyze European integration in cross-border metropolitan areas such as the Greater Region or the Oresund Region. However, it also represents a phenomenon that invokes questions about the integration in predominantly rural border regions such as the one between the German federal state of Bavaria and the Czech Republic. Here, cross-border commuting only became possible after the fall of the Iron Curtain. Ahead of the accession of the Czech Republic to the European Union, the influx of Czech cross-border commuters was publicly debated as a potential threat for the labor

market on the Bavarian side. Then, public interest seemingly faded away and only increased again during the pandemic. Unilateral and uncoordinated border closures had caused significant problems for Czech cross-border commuters and their Bavarian employers. Suddenly, a changed significance of cross-border commuting became visible. Consequently, this contribution traces and compares the discursive representation of cross-border commuting in local editions of Bavarian newspapers from 2006 to 2021. It focuses on the administrative districts of Tirschenreuth and Cham which, compared with other German administrative districts, have the highest share of cross-border commuters in relation to their regular workforce. A quantitative content-analysis of all the respective issues underscores the lacking representation of cross-border commuting in the public debate at the local level and points to the pandemic as a turning point for public awareness. Consequently, a more qualitative approach focuses on the recent discourse concerning cross-border commuting during the pandemic. Overall, the findings help to explain the ad-hoc character of the border closings during the pandemic. They also point to the rather ambivalent trajectory of cross-border integration in the Bavarian-Czech border region.

Racing Away From Pandemic: Effects of Covid-19 Measures on the Habits and Behaviours of Attendees at Motoring Event *Jakub Kura (Masaryk University)*

Since March 2020, life in the Czech Republic has been affected by the Covid 19 pandemic and measures to prevent the spread of the disease. Lockdowns and other measures affected people's daily lives and subsequently impacted tourism and events. By 2020, tourist numbers were down, events were cancelled, and motorsport events were no exception. The turnaround came in 2021 when events were held again, but they were not the same as before. Sanitary measures were taken, access was restricted, the number of participants was limited. Life seemed to be back to normal, but normal was not the same as before. This is exactly the case with the Barum Czech Rally Zlín, which is the subject of this article. It is one of two international events held annually in the Zlín region, and the only major sports tourism event of its kind. Given the geographical location of the region, the motor sport event also plays an important role in attracting tourism to the region, as it attracts numerous visitors from other Czech regions and from abroad. Researchers have shown that without the rally, most of these visitors would have no reason to come to the Zlín region. Since the 2020 edition of the Barum Czech Rally Zlín was cancelled and the event was held again in 2021, it provided a unique opportunity to study how pandemic measures affect visitors and their habits and behaviours. Thus, my aim is to investigate how the pandemic changed the behaviour of visitors in the Zlín region during the rally by comparing data from before and after the Covid edition, collected through questionnaires. First, I examine behaviour during the rally, as measures may have changed choice of accommodation, participation in accompanying events, or even the length of stay in the Zlín region. Second, I focus on other aspects of the visit such as other tourist activities besides the rally and expenditures during the visit. Finally, I show that visitors to the rally are very loyal, as they did not let hygiene measures prevent them from visiting the rally and maintained their habits wherever it was possible.

How COVID-19 affected the cross-border mobilities of people and functional border regions in the Nordics. A case study using Twitter data *Håvard Wallin Aagesen (University of Helsinki), Oleksandr Karasov (University of Helsinki) & Olle Järv (University of Helsinki)*

Our societies consist of constant mobilities of people and interactions that transcend nation-state borders for tourism, migration and increasingly due to transnational people whose daily life practices are not confined to only one fixed country. In Europe, cross-border mobilities and interactions of people further contribute to producing new functional border regions (regions from different countries forming one functioning system) – a key issue towards balanced and sustainable spatial cohesion within the EU. In particular, the Nordic countries have prime examples of well-connected transnational regions.

However, transnational phenomena are fragile to global disruptions and prone to rebordering by nation-states in times of emergency. Global crises, such as the COVID-19 pandemic, affect both the functioning of our societies and the daily lives of people. Yet, we have little knowledge of how it affected functional border regions and cross-border interactions. Stemming from the notion by Vincent Kaufmann that mobility can be used as a tool to understand society and social phenomena, and the potential of social media data to reveal cross-border mobilities from the literature, we consider 1) mobilities of people beyond country borders as an indicator to define and understand functional border regions; and 2) use big data approach to quantify cross-border mobilities.

In this paper, we study mobilities between the five Nordic countries by using Twitter data. We use a three-year baseline to show how COVID-19 changed temporal dynamics (weekly, monthly) and spatial patterns of cross-border mobility flows at various spatial scales. We further analyze how given changes affected the delineation of functional border regions.

By reflecting on our research outcomes against applied cross-border measures by the case study countries and comparing with other available sources, we discuss the feasibility of the proposed methodology to monitor cross-border mobilities and functional regions relevant to regional studies and planning and in times of crises. We further propose how this information can be used to evaluate short- and long-term impacts of social, economic, and political factors on cross-border phenomena. Finally, we address how the proposed methodology and obtained knowledge can enhance cross-border planning and decision-making in the case of the Nordics.

The Finnish-Russian borderland as a lived space *Virpi Kaisto (University of Eastern Finland)*

The Finnish-Russian borderland has undergone dramatic changes since the collapse of the Soviet Union in 1991. New international border crossing points have been established and the borderland is transforming from two isolated national territories into a transition zone, where the “other” society and culture is ever more present. This paper discusses the Finnish-Russian borderland as a lived space: a material territory that people live through meanings that they associate with the physical space and its objects. This approach emphasizes human spatiality — the relationship between people and space/place — and allows examining how people’s practices and mobilities are intertwined with meanings they attach to the border and the borderland. Our study is based on ethnographic fieldwork that we conducted in 2017 and 2018 in two Finnish (Imatra and Lappeenranta located in South-East Finland) and two Russian border towns (Svetogorsk and Vyborg in North-West Russia). We carried out interviews and observations and focused on people that had crossed the Finnish-Russian border permanently (migrants) or temporarily (second-home owners and tourists). We will present results of the

study and discuss, among other things, how people's stories are essential to how they experience the borderland.

Post-pandemic borders: CBC and the Finnish-Russian external EU border *Minna Piipponen (University of Eastern)*

The Finnish-Russian CBC has evolved since the beginning of the 1990s, as well as its institutional frameworks and instruments for implementation and funding. From getting to know each other the cooperation has developed to jointly managed and funded three cooperation programmes of this external EU border. They have chosen and implemented objectives of consecutive programming periods, and the actors of funded projects have focused on their jointly specified targets to address the social, economic and cultural challenges of the border region on the grassroot level. This paper asks, how COVID19 has shown in the Finnish-Russian CBC and what kind of expectations are there of the post-pandemic work? The three CBC Programmes "South-East Finland – Russia", "Kolarctic" and "Karelia" emphasised the meaning of functioning partnerships and trust, as well as, CBC as a channel for concrete grassroot-level cooperation in general, when they participated in the recent All-Russia Forum in St. Petersburg in October 2021. This study scrutinises how pandemic has tested cooperation and partnerships, and how existing partnerships have been maintained? Has the pandemic somehow changed the expectations of the future work? Or, are there other current conditions than the pandemic that do so, and have maybe been shadowed by COVID19? The paper focuses on how the programme level actors in Finland elaborate the maintenance of cooperation and expectations of the future work. The study employs public media discussions and interviews of programme level actors as its main research material. This paper is also an initial part of a broader research that aims to scrutinise the past thirty years of cross-border cooperation across the Finnish-Russian border.

Geopolitics and the Scales of Finnish-Russian Cooperation: From Selective Engagement to Joint Strategic Planning *Joni Virkkunen (University of Eastern Finland)*

EU's restrictive measures and the five principles on Russia make the overall setting for Finland's Russia policy. Russia has weakened Finland's security by violating the international law and having employed military force in its neighbouring areas. At the same time, Finland's dedication to regional and cross-border cooperation with its Russia illustrates "active, pragmatic and solution oriented" to its neighbour that, while strongly supporting the EU's sanction regime, it at the same time actively advocates dialogue and cooperation in matters of joint interest. The issues that are in Finland's interests are, also, in the interest of the EU. Despite the evolving political conflict and impacts of Covid-19, cooperation and (selective) engagement with the Russia Federation continued. For the border regions and subnational actors located next to border, the border spanning institutions such as the Euregio Karelia and the related activities of cross-border trade, tourism, cultural exchange, and joint strategic planning are of clear interest. Strong historical and cultural ties, long-standing trade relations and intensive cross-border encounters between people are often presented as 'natural' basis for cross-border cooperation. In this paper, I will look at the regional rationales for regional and cross-border cooperation in Finnish border regions during the EU-Russia conflict. The paper is based on interviews, regional strategic documents and field notes conducted in different national and local events, as well as consultations, of regional and cross-border cooperation.

Session 10 Literary geography

Chair: Frode Boasson (Norwegian University of Science and Technology)

Auditorium M101, Tuesday

Peter Dürrfeld's Linie 4 og andre noveller (1984) and Memories of the Copenhagen Tram
Adam Borch (Abo Akademi University)

I propose to do a paper focused on a collection of short stories by Danish author Peter Dürrfeld (1942-) entitled Linie 4 og andre noveller (1984). All stories in the collection evolve around the Copenhagen tram network which had closed twelve years earlier, in 1972. In the collection, Dürrfeld creates intimate links between the city's trams and memories of childhood and adolescence (positive and negative). In reading Dürrfeld's collection, I examine the connections between memory and place, in particular those which are no longer visibly present, and the role literature can play in shaping such connections. In doing so, the paper engages with, for example, work on geography and memory (Hoelscher & Alderman 2004; Jones 2011), memory and place (de Nardi et al. 2021) and literary representations of buried cities (Finch and Norrman 2021). The contemporary significance of understanding how Copenhagen's tram network is (and was) remembered is underlined not only by the number of publications looking back on the network (Søeborg 2015; Hansen 2019; Jørgensen 2019), but also by the plans to reintroduce a ligh-trail network in the city in 2025.

Literary Disruption: Two Approaches Linking Literary Spatiality and Geographies with Public Transport as Public Space *Zeynep Correia (Abo Akademi University) & Jason Finch (Abo Akademi University)*

This paper offers two complementary engagements with literary texts and actual urban spaces. We propose a critical realist approach to literature, to explore how literary pieces depict public transport as public space in intra-urban and inter-urban relationships (www.putspace.eu), as both artistic (literature) and urban mediating realities. Aligned with this approach, which resonates with theories of socially produced space such as that of Lefebvre (1974), we describe an encounter between the relational literary geographies of Hones (2014) and place-led branches of literary studies including Deep Locational Criticism (Finch 2016). Regarding the emergence of public transport as public space, we argue that a structured and differentiated ontology is needed to comprehend the world and its complex reality, which exist independently of our knowledge about them. Literary narratives have the potential to guide us towards a structural understanding of the social relations between agents. They form the conditions of possibility for agents, and "among those conditions of possibility are the stories that agents are told, the narratives, the discursive traditions" (Harre and Bhaskar, 2005). Deep Locational Criticism functions together with critical realism since both negotiate between discursive and non-discursive structures. Spatial literary studies and literary geographies practiced by geographers need not compete, and a practice of reading texts and non-textual places alongside each other, as proposed by Deep Locational Criticism, points to how they can find common ground. Two case studies are offered, both concerning waterborne public transport grasped as a staging of public space. One is the depiction of US riverboat travel of the recent past in Mark Twain's 1883 memoir Life on the Mississippi. Another focuses on multiple depictions of ferry travels in Istanbul using a collection of fictional short stories: Ferry Timetables, edited by

Murathan Mungan. We believe shedding light on the emergence of public transport as public space will lead to novel insights and redefinitions in spatial terms that will inevitably lead to new imaginings, representations and practices.

Literary Geographies: The beach as a critical topos *Knut Ove Eliassen (Norwegian University of Science and Technology)*

Beaches are on the order of the day, ecologically, politically, and economically. Once the very image of pristine nature, beaches along the pacific rim have become hotspots of marine pollution, while the Mediterranean shores provide the stage sets of the drama of migration, and property prices along the coasts soar as the world's population resettles along the world's increasingly privatized shorelines. The complex predicament referred to as the Anthropocene have made apparent that beaches are nothing if not nature-culture-hybrids, spaces were biotopes and cultural practices meet, intersect and blend. Whether the issue at stake is production, pastime or pollution, the topicality of the beach remains unquestionable. From the Schevening beach of the Golden Age of Dutch painting (Bouhours, Diderot) by way of the pioneering sun worshippers of mid-war Mediterranean tourism (Mann, Fitzgerald) to the plastic beach of the 21st century (Calvino, Poix), the beach is a well-established topos in the Western literary canon. Drawing on the concept of the literary topos as developed by 20th literary and critical theory (E. Auerbach, R. Barthes, E.R. Curtius, Michel Foucault, etc.), the paper will present, discuss, and analyze, how certain clusters of topoi lifted from the cultural history – literature, visual arts – have had a profound impact on how modern "the beach" has been used, shaped, and experienced – and commercialized. The paper's aim is to provide a rough sketch of the complexities that inform the Western notions – in the plural – of the beach, and how they have had and still have immediate consequences on the ways our life worlds are organized, and thus, eventually also will affect our future. If the beaches of the world are steeped in cultural history, they are also a part of the global political economy that has since long been mapped and explored by literature.

Decolonizing the neoliberal university and the politics of knowledge production – filmmaking as research strategy and feminist teaching method *Anders Lund Hansen (Lund University)*

Lately we have seen a growth in calls to decolonise the university and increasing awareness of how universities are part of reproducing specific forms of knowledge and knowledge production while marginalising others. Likewise, there is a growing critique of the ways creativity and learning are often treated as an exchange value in the neoliberal university. Yet, how can we as white, middle class, cis-hetero and able bodies who are practitioners of research and teaching in (relative) privilege Scandinavian universities contribute to this discussion? Standing on the shoulders on generations of critical (pedagogical) research and praxis (e.g. Han & Laughter 2019; Berg 2004; Revelles-Benavente and Ramos 2017; Simonsen 2004; Spivak 1993), we aspire to contribute towards the process of more (self) critical understandings of uneven geographical, social and cultural developments in academia and beyond. In this essay we scrutinize how the integration of visual methods and feminist approaches to mutual learning praxis in humanities and social sciences research and teaching potentially can contribute to freeing the individual from the neoliberal managerial crisis and decolonizing the university. We discuss how a (re)integration of "human value" into an alternative, caring and just university may be one

element in a transformative university. We explore how these methods can be potential tools to destabilise a unidirectional perspective on what constitutes relevant learning and knowledge production, and support the acknowledgement of more plural, embodied and situated forms of knowledge production.

The Redemption of Landscape: The Ghost of the Holocaust Returns to the Heimat *Adam Lundberg (Uppsala university)*

Continuing on theoretical developments in the wake of the humanistic turn in geography and the spatial turn in the humanities, this paper investigates contemporary art which critically re-enact and anchor the past in place, by using authentic or historically symbolical materiality and by employing mnemonic and geographical aesthetics. The monumental three-channel video installation *Malka Germania* (2021) by Israeli artist Yael Bartana re-imagines the memory landscape of Berlin, as part of Bartana's exploration of possible redemption between people, place and time. By fusing actual and alternative fictional realities of the German-Jewish experience, as a way to offer "critical scrutiny of collective expectations of political or religious salvation", she recreates Jewish Europe as something like a dream-scape (or nightmare). In one scene, street signs in German are exchanged for Hebrew ones, reminding of the power of street names as a decolonial and reparative practice. The new names are chosen carefully: *Street of Revenge, Way of Redemption*, and so on. In another scene, Israeli soldiers in contemporary-looking uniforms zoom across the Wannsee lake in a speedboat with the Haus der Wannsee-Konferenz looming in the background. Later, we see Malka (the protagonist) walking along train tracks through a forest, evoking the death trains of the Holocaust. When she arrives at a station, a group of 'Germans' stands there, waiting for something. Next, they are on the move, reminiscent of the forced death marches camp inmates were forced into, but also the long march of shame Germans took, when those remaining in the Eastern Territories attempted to return to the German Heimat in the final days of World War II, as all-too-vividly described in Walter Kempowski's 2006 novel *Alles Umsonst*. *Leben oder Theater?* as German-Jewish painter Charlotte Salomon asked in her series of work before being murdered in Auschwitz, aged 26. According to Bartana it could be both life and theatre. Her method of choice (and invention), the pre-enactment method, aims at changing both past, present and future by showing different alternatives of the same three dimensions. That is, essentially asking: what if X/Y/Z was, is, and will become? Can these questions lead to the alternative version becoming the real?

The Geographical Unconscious. Mapping Unmappable Space in Amalie Skram's novels *Anders Skare Malvik (Norwegian University of Science and Technology)*

Many research projects have spent considerable time and resources on mapping toponyms extracted from large collections of digitized books. The impressiveness of such projects notwithstanding, the assumption that a frequency list of toponyms can represent literary geographies is not unproblematic. An obvious challenge is that fictitious placenames in literature cannot be given coordinates on a map. Another is the fact that spaces in literature are rarely explicitly described as such. On the contrary, literary space is most often implied through actions, reflections and sensations that unfold in a text (Tygstrup 1999). Indeed, literary geographers working with quantitative material are trapped in what Sara Luchetta calls the binary of cartographic reduction and narrative complexity (Luchetta 2018: 8). This binary is not viewed as a problem, however, but as a productive dialectic that literary geographers should

embrace. As Taylor et al. emphasizes, “[a] full appreciation and understanding of texts, places and spaces depend on an ongoing interplay between generalization and detailed inquiry.” (Taylor et al. 2018:11). But how do we successfully conduct such interplay? In this paper, I argue that shifting the quantitative material from toponyms to “unmappable spatial entities” in literary texts (the street, the door, the city, etc.), will ease the methodological interplay between generalization and detailed inquiry. Using the collected novels of Norwegian writer Amalie Skram (1846–1905) as my example, I will develop the idea that there is a “geographical unconscious” to be uncovered from the accumulation of unmappable spatial entities in literary texts. Building on Fredric Jameson’s notion of a “political unconscious”, I will trace how unmappable spatial entities in Skram’s novels (such as doors, rooms, streets, etc.) amount to symbolic structures that negotiate real social and political antagonisms over access to space. Jameson, Fredric. 2009 [1981], The Political Unconscious. London & New York: Routledge. Luchetta, Sara. 2018. “Literary Mapping: At the Intersection of Complexity and Reduction.” In Literary Geographies 4(1). Taylor, Joanna E., Donaldson, Christopher E., Gregory, Ian N., and Butler, James O. 2018. “Mapping Digitally, Mapping Deep: Exploring Digital Literary Geographies.” In Literary Geographies 4(1). Tygstrup, Frederik. 1999. “Det litterære rum.” In Passage 31/32.

Winged geographies of literature and citizen science *Elle-Mari Talivee (Estonian Academy of Sciences)*

Probably the most authentic example of winged geography is Selma Lagerlöf's geography book for children, Nils Holgerssons underbara resa genom Sverige (1906–1907). This fascinating book takes a bird’s-eye view of Swedish geography and history and awakens the reader’s empathy for the life of migratory birds. Migratory birds are like indicators – fiction texts also demonstrate their importance in how humans perceive the cycle of the year. Rachel Carson published her Silent Spring in 1962 which observed spring being silent due to birds disappearing, and her book draws our attention to what our world would be like without birdsong. Migratory birds are indicators of climate change: changes in their migratory patterns and species ranges are visible even to those who are not birdwatchers. Perhaps to contribute to the green transition, we should imagine ourselves on a map of migratory birds. Ecocritical study of literature on birds and the activities of birdwatchers seem to be both dependent on winged geography. Since 2021, I have been interviewing hobby ornithologists involved in citizen science within the project EnviroCitizen (https://www.envirocitizen.eu/) which aims to research how to encourage environmental citizenship. In addition, I have tried to find out if and which (kind of) book has sparked or influenced interest in birds. In my presentation, I will give a brief overview of the early research findings on interviews asking also whether and which kind of role fiction can play in developing an interest in nature. In addition, I will map (also spatially) the history of Estonian ornithology and as a background, I will introduce some examples from Estonian nature writing. *The first part of the title is borrowed from Winged Geographies, a network to connect everyone who is interested in the historical and contemporary relationships between humans and birds.

Session 11 The urban and the rural -(two) stories of multiplicity

Chairs: Per Göransson (Karlstad university) & Sofia Billebo (Karlstad university)

Auditorium F101, Tuesday

Spatial re-organization of creative work: new geographies of 'old' coworkers and the(ir) boundaries of sharing *Höfner Malte (University of Graz)*

Only ten years ago, a lot of research was carried out on self-employed and creative work to explain the urban phenomena of boundaryless work mainly re-locating in Coworking Spaces. Recently and not least because of Covid-19, there seem to be other trends such as rural coworking, co-living, remote co-workation, often decorated by the buzzword of sharing without explaining what it means or may contain. This work approaches creative work focusing on community-led work patterns, where sharing is explicitly conceived as a social practice, thus including all kind of Collaborative Workspaces (CWS). The work focusses on spatial re-organization of coworkers who have left their former (urban) collaborative workspaces. To assess their professional alteration towards their multi-sited work arrangements, we ask the following questions: What connects or separates them to their previous working environment? Are they still in contact with former deskmates or hosts from the city? What happens to the established embeddedness in the past when former coworking members leave? Which connections remain in the new and now dislocated spaces of their professional past? To answer these questions, follow-up interviews were conducted with ex-members of CWS in the medium-sized City of Graz, Austria. Exploring their professional alterations, they were asked to portray their current work-life arrangements addressing still existing connections to and networks of their (ex-)peers. In doing so, the interviewees' current positions have been juxtaposed with the ones emanating from their narratives in 2015/16. We argue that overcoming the breeding phase of self-employment, the former coworkers' connectedness to the urban diminishes with their increasing age and professional maturity in favor of the rurban. Revealing whether sharing emerges only out of economic threat to overcome precarious work at a particular stage of life, we raise the question if sharing – formerly anchored in routines of urban CWS – incorporates other socio-spatial spheres of life during professional maturity. We illustrate the possible tensions between practices of sharing and their interrelated effects on being-divided of/from (old) space(s).

Beyond the city life: aspirations and trade-offs in the quest for a sustainable everyday life *Ulrika Åkerlund (Karlstad University)*

For the past three years, out-migration from Sweden's capital city has exceeded its in-migration, and among these counter-urbanizing migrants young families are overrepresented. The relocation patterns among families has been linked to the life cycle and "trigger events", but also the context of place in relation to families' everyday life preferences. However, all migrations imply that some things which might be valued are left behind and cannot be replaced in the new context. This paper is based on biographic interviews with families (parents) who have moved out from one of the three major cities in Sweden; Stockholm, Gothenburg and Malmö, to smaller settings in the urban hierarchy. The aim is to understand how families who have moved out from big cities value and re-value places and place-based resources in their organization of everyday life. The results show that the migration decision among these families is strongly

based upon considerations of the childrens' well-being, and described in terms of environmental and social safety, increased living space and less everyday stress from e.g. daily commuting and the hectic lifestyle in big cities. However, the parents' needs and preferences, such as well-paid and interesting jobs or social networks and activities have often been re-evaluated in the migration decision. Quality-of-life aspects of the everyday form the basis for the decision, yet trade-off considerations are quite rational and pragmatic.

A translocal sense of place? Finns' translocal place-making in the UK *Evi-Carita Riikonen (University of Eastern Finland)*

When one embarks on a migration trajectory, one faces the multiplicities of places: on one hand, one's existing ideas of one's familiar dynamics, abilities, environments, cultural surroundings, knowledge and atmosphere in specific places and on the other hand, the less familiar ones in new place(s). Hence, one needs to create a way to balance between the 'heres' and 'theres' in one's life. My research looks at the ways Finns in the UK balance their simultaneous co-presences in Finland and in the UK and in the process, develop a translocal sense of place, which I understand as a processual way of developing an understanding of several interconnected, subjectively important places. While the concept of 'transnational' has been applied extensively in migration studies and in Human Geography, the 'translocal' lens enables a more nuanced way to study the everyday experiences of migrants who are often linked to locals in their sending countries, rather than to the level of nation-states. These linkages between co-presences in several 'locals' in different countries generate subjectively perceived power landscapes: competing narratives of power related to the ways one participates in several places, maintains their meaningfulness, and positions oneself in relation to them. In other words, one needs to establish a culture of (dis)connectedness to several co-presences in one's everyday translocality. My research shows that a translocal sense of place develops through processes of generating and regulating (dis)connectedness between several co-presences. In my study, (dis)connectedness is negotiated, generated and regulated through both physical and emplaced mobilities: return visits, flows of material culture, imagined spacetimes and dealing with disruptions to one's everyday places. One is then able to make decisions about the (dis) continuities of co-presences and negotiate one's sense of Self in relation to them in different phases of one's translocal migration trajectory.

rUrban (human) biographies of the polarizing wolf return -early notes from the field *Sofia Billebo (Karlstad University)*

Ever since the wolf returned to Swedish landscapes it has caused strong and polarized emotions. The issue is many times described as a conflict between the rural and the urban. Further dispersal of wolves into more diverse landscapes and peopled landscapes will have impact on how this social and highly politicized conflict will evolve in the future. Modernity and urbanization have relocated a large number of humans into cities. Parallel, the rural has also undergone vast changes in land use and has become intensified and more technology dependent. Additionally, in the recent past the main way of living took place in a completely different setting, namely the rural. This setting enables interesting analyses of the gap as well as linkages between these rural and urban spatialities. It also stresses the importance in refiguring the classic categories of nature, wilderness, city and their actual location in space. This paper investigates how urban (human) biographies illuminate the wolf return issue. By addressing

coeval contemporaneity in relation to the spatial categories of rural and urban, conclusions can be drawn on how the contemporary rural and contemporary urban has linkages and divisions that becomes polarizing and causes social- and (identity) political conflicts among people and places. Experiences and phenomenological time is highlighted as crucial in understanding how issues of nature conservation becomes a multiple conflict. Not only a conflict of access of material space but also a conflict of belonging and exclusion.

Walking with non-humans: Exploring meaningful encounters during excursions to recreational landscapes *Oskar Abrahamsson (University of Gothenburg)*

There has been argued that the (post)modern society, where more people than ever before dwell in densely populated areas, suffers from an "extinction of experience"; i.e. interactions between humans and non-human living organisms have decreased over time. This separation may consequently lead to an emotional detachment from more-than-human living beings and their habitats, which is problematic in times of biodiversity loss and climate change. At the same time, especially in the Nordic countries, we see a strong desire for spending time outdoors, in 'natural' environments. Not least has this been evident during the Covid-19 pandemic, where green spaces became a haven for leisure. This presentation aims to explore and distinguish various meaningful encounters between humans and non-humans in the context of recreational walking in green environments, characterized by seemingly low human impact. The perspective is the human point of view. Theoretically, the presentation draws on phenomenological and relational understandings of body-space encounters with an emphasis on bodily, lived experiences of space, where the so called "new walking studies" recently have contributed with empirical insights. Departing from this embodied ontology of walking, walking interviews together with recreational walkers were conducted between June to October 2021. Respondents were sampled through various Facebook-groups and organizations. Each person volunteering to participate did chose a place of interest to walk in (it could either be a place visited before by the respondents, or a place never visited). The interviews were audio recorded and completed with photographs and field notes. Recordings were thereafter transcribed, coded and thematically analyzed. The results exhibit humans' meaningful encounter with non-humans during recreational walks, and how walkers make sense of these encounters through various categorizations and understandings of 'nature'. Interestingly, while names on species seem unimportant among many interviewees, embodied proximity between humans and non-humans prompts meaningful moments. These moments of lived experiences "in presence" hold deep emotional qualities. In a wider context, the findings provide an empirical comprehension for humans' everyday desires of encountering environments less impacted by humans. Lastly, methodological reflections concerning walking interviews for inquiries on body-space relations are discussed.

Choirographies: Mapping the Geographies of Choirs' in Sweden *Per Göransson (Karlstad University)*

The geographies of choirs' has seldom received attention in either the geography of religion or in music geography and even less so in a Swedish/Nordic context. In 2020 there were 4391 choirs and 78.170 choir members in the 13 dioceses and 1329 parishes Church of Sweden. This is one of the few institutions that are found in almost all of Sweden. These sacral choirs are mostly organised under the Swedish Church Singing Association [Sveriges kyrkosångsförbund] with ca

70,000 members. The second largest choir association, the Swedish Choir Association [Sveriges körförbund] involved 282 predominantly secular choirs and 11.297 members in 2020. Choir activities are therefore not limited to the Church of Sweden. In all, an estimated 600.000 choir participants were active in Sweden. Choirs are anything but marginal to the geography of contemporary Sweden. As a recurrent event in the life of individuals, choir participation provides a sense of belonging and (existential) meaning. Additionally, a classic perception has been that urban areas are equated with the realm of secular whereas rural areas have mostly been associated with tradition and realms of the sacral. Yet, to the extent that contemporary western societies can be characterized as post-secular, choirs straddle the in-between spaces of the sacral and secular. Thus, beyond the primary objective of mapping the geographies of choirs in Sweden, this research would also spill over to the wider academic debate on post-secular(ism). In this paper/presentation, the geographies of choirs' are mapped out. The Swedish Choir Association, the second largest choir association in Sweden, will be the object of study. As a first step, a survey of this association will be conducted. GIS mapping will be used to provide an overall picture of the geographies of choirs, using data on choirs and choir membership from 2020. The concept of Choirographies is deployed as a triad of place, identity and capital to the better to provide nuanced perspectives on the geographies of choirs in contemporary Sweden.

Place identity in urban-rural contexts: Applying the environmental phycology approach to Arab residents of rural localities in Israel *Shdema Ilan (Ben-Gurion University of the Negev)*

This paper fucuses on the emotional bonding of people and their places of residence as reflected in urban-rural contexts. This issue bears contemporary importance given the environmental crises and increased diversity of populations. Specifically, it addresses place identity, one of the deeper markers of emotional bonding between people and their living environments. Commonly in geography, place identity refers to identity people relate to places, but the increased diversity of populations and lifestyles requires an individual-based shift. Hence, the current study follows a recent trend in geography to adopt the environmental-psychology approach to place identity referring to identity of people rather than places. Relaying on mixed methods, 25 in-depth interviews and 210 questionnaires, the study looks at the constriction of place identity of Arabs residents of rural localities in Israel as rural-urban process in the globalized world. Core findings disclose that place identity of Arabs in Israel is constructed as a combination of urban-rural dynamics: processes of urbanization within the Arab localities and exposure to cities in the region within the political Israeli context.

The landscape approach: lessons for planetary urbanization *Tauri Tuvikene (Tallinn University)*

While the term 'landscape' consistently appears in the argumentation of planetary urbanization, it remains an empty and under-conceptualized signifier in this theory. Written by scholars who study landscape, this paper refines the planetary urbanization approach by adding the 'landscape perspective'. By examining selected issues where landscape helps to unpack contemporary processes of extended urbanization in a more nuanced way, explicitly addressing the urban/non-urban bias, offering analytical frameworks and tools for understanding models and representations of spaces, and incorporating multi- and inter-scalar perspectives, the article offers analytical frameworks and tools by elaborating six concepts: peri-urbanization, political ecologies, representations, communities, place practices, and stewardship. We argue that

bringing landscape approach into dialogue with planetary urbanization enables this theory to be better grasped and refined.

Digital agencies as means for "urbanization" for rural youth? *Ville-Samuli Haverinen (University of Eastern Finland)*

Our presentation is based on a research project Capturing Digital Social Inequality (DEQUAL, Academy of Finland, 2020¬-¬2024) that deals with digitalization and young people's different digital agencies in the contemporary Finnish information society. Digitalization has been introduced as an imperative that, for example, can tackle inequalities caused by kilometers: digital tubes are claimed to bring issues that are usually connected with urban youth cultures also available for young people of remote rural areas. Moreover, digitalization has been imagined equalizing schooling and leisure possibilities of youth from different regions because "all" can participate in many communal acts also from a geographical distance. The informants of our research are gathered among Finnish youth born in 2005 and 2006. Our data consists of a quantitative data set collected via an electric questionnaire (n= ca. 350) and thematic group and individual interviews. Our quantitative data shows regional differences in our young informants' digital agencies and orientations: youth of remote regions - despite the belief that they benefit from digitalization more than maybe the others – report a lower interest in digital life than those living in urban environments. For them, the significance of digital agencies as maintainers of social connection is also lesser than for the others. From our qualitative data (interviews and netnographic observations) we trace the socio-cultural circumstances as a mechanism that creates and maintains these differences.

Session 12 From centralisation to decentralisation? Reevaluating space and scale in sustainability transitions

Chairs: Maija Halonen (University of Eastern Finland) & Irene Kuhmonen (University of Jyväskylä)

Auditorium M103, Monday

The rural in sustainability transitions – regime shift or reproduction? *Irene Kuhmonen (University of Jyväskylä), Tuomas Kuhmonen (University of Turku) & Annukka Näyhä (University of Jyväskylä)*

The current socio-economic system is characterised by dependency on fossil inputs and economic growth. Its manifestations include widespread sustainability challenges, such as climate change and biodiversity loss, as well as intense centralisation of many functions of the economic system. The calls for a sustainability transition are at the same time also calls for a radical reorganisation of the social system, which entail changing the whole metabolic basis of the social system. From here we set out to ask, if such a radical transformation could imply changes in the centralisation-decentralisation continuum. These changes could take place due to the changing value of decentralised natural resources and affect the dynamics of peripheralisation and rural-urban divide. To explore these questions, we selected 10 cases that have relevance both in terms of the sustainability transition as well as hold potential in terms of rural livelihoods. The cases represent the food system, the energy system, and the forest-based

sector. We conducted 60 interviews with experts and stakeholders related to these cases. Our findings indicate that at this point, sustainability transition is not seen as a radical, systemic transformation, but rather as a substitution process, where the key unsustainable energy and material flows are replaced with more sustainable options; thus implying regime reproduction instead of a regime shift. Such manifestations that hold the most significant potential from the viewpoint of rural areas are struggling for their legitimacy. Thus, the hegemony of the current socio-economic systems and centralisation processes still surrounds the debates concerning sustainability transition.

Towards a typology of local ownership of energy systems and energy transition processes: A review *Johanna Liljenfeldt (Uppsala University), Elin Slätmo (Nordregio) & Louise Ormstrup Vestergård (Nordregio)*

Local and citizen ownership has been highlighted by the European Commission as an important element for the energy transition within the EU. There are also research findings which indicate that promoting citizen, or "local", ownership can be beneficial for supporting energy transition in several different ways. Local ownership has, for example, the potential to improve local socioeconomic effects from energy projects and access to affordable energy as well as facilitate development of knowledge, skills, social capital and a sense of empowerment in a community, which ultimately can promote public acceptance of new energy infrastructure. On a broader level, local ownership is also thought to improve democratic values, legitimacy and justice in energy systems and transition processes. However, local ownership processes and models do not by default result in these positive outcomes. Rather, there is a necessity to study how transition processes and ownership models are structured in order to enable, for instance, full access to ownership potential for marginalized groups. Moreover, from a research perspective, the idea of local ownership as a contributor to energy system change is still underexplored as concerns the definition of the concept, how such ownership can be created, and what its effects are on the sustainability of energy systems. Through a review of existing scientific literature on the topic of local ownership of energy systems and energy transition processes, our aim with this study is thus to bring clarity to these questions. Throughout, the idea of local ownership is explored both as actual ownership and as a more emotive "sense of" ownership. In the study, we discuss and problematize how "the local" in local ownership can be understood, how local ownership can be motivated, what forms of local ownership can be identified as well as what opportunities or drawbacks the different ownership approaches may entail in relation to energy systems and energy transition processes. The results are summarized as a typology that compares central aspects (such as organizational forms, modes of participation and geographical and temporal characteristics) of the identified local ownership approaches.

Change that lasts? Fostering social innovations in local livelihoods in rural North-Eastern Germany *Sunna Kovanen (Brandenburg Technical University of Cottbus Senftenberg)*

Local social innovations have been considered as seeds of a systemic transformation towards post-fossil economies. However, studies rarely discuss the possibilities of such transformation in peripheric rural areas, where alternative niches tend to remain scattered compared to urban centres, and where relative shrinkage of the existing economy and services is often considered as a more urgent threat than global environmental concerns. The concept of (social) innovation has also been criticised for not providing answers to the stability and continuity of the emergent

livelihoods or services in these regions, while focusing on change as the value in itself. Furthermore, the positive image of participatory transformation tends to bypass the necessity of and conflicts related to exnovation, i.e. conscious downscaling or dismantling of unsustainable policies and industries. In the light of these debates, this presentation reflects the experiences of experimenting with and establishing socially innovative livelihoods and services in a rural region in Germany within the ongoing project "region4.0". It is a collaboration between higher education organizations, economic development institutions and regional service providers in the region of North-Eastern Brandenburg, established in the end of 2019 and funded by the German Federal Ministry of Education and Research. The individual livelihood experiments contribute to a joint regional strategy in order to generate a broader transformation towards collaborative regional economy. The local experiments themselves as well as the regional strategy process have been supported by research in a form of an internal evaluation and an analysis of the external governance context. The presentation asks, how can the local innovative experiments on sustainable livelihoods be rooted into the regional economy on a long-term, and what are the limits of such a transformation? What kind of challenges are connected with bridging local experimentation and regional strategic coordination? Finally, based on these experiences, the presentation takes a critical look to the academic discussion on structural change via innovation and asks, how do the mundane understandings and processes of innovation in the practical experiments inform and challenge the innovation theory.

Sustainability in natural resource extraction in Sub-Saharan Africa *Oliver Daniel Tomassi, (University of Turku)*

Transitioning towards sustainable development has become one of the main contemporary global discourses driving domestic and international policy. Consequently, increased attention has been devoted to achieving environmental and socio-economic sustainability throughout all stages of production global value chains. Sub-Saharan Africa plays a key role in global value chains as it greatly contributes to them through its natural resources. However, less emphasis has been dedicated to achieving sustainability at this stage of the global value chain. Truly, natural resource extraction is in most cases unsustainable by definition, as most reserves are depleted at a much faster rate than they are produced. In fact, natural resource extraction has been more closely associated with a resource curse rather than sustainability. This is a particularly important challenge in Sub-Saharan Africa, as natural resources are critical to many countries. However, expectations of prosperity and sustainable development resulting from the discovery and exploitation of natural resources have seldom been met. Natural extraction often only marginally benefits local citizens, as the value creation of production occurs elsewhere. Some of the outcomes of such process include scant employment creation, environmental degradation and land dispossession, making it challenging for natural resource extraction to become a sustainable industry. In this presentation, I discuss how policy in different Sub-Saharan African countries is addressing sustainability in relation to natural resource extraction. This policy analysis is complemented by an empirical study addressing how sustainability policies are implemented on the ground and what kind of impact they have, if any, in shaping livelihood strategies. In this presentation I also focus on the conceptual development of sustainability and its contextualization in Sub-Saharan Africa. In my broader Ph.D. dissertation, emphasis is placed on the challenges faced by the communities affected by natural resources. More specifically, this research analyses what challenges and learning processes, including adaptation strategies, emerge from a transformation in land use in favour of natural resource extraction. By doing so,

this study also aims at empirically assessing whether sustainable practices and livelihoods are being disrupted or created through the exploitation of natural resources.

"Greening" cognitive empire: The European Green Deal as political foreclosure of alternative world ecologies *Diana Vela-Almeida (Norwegian University of Science and Technology), Vijay Kolinjivadi (University of Antwerp), Tomaso Ferrando (University of Antwerp), Marcella Vechioni (University of Antwerp), Gert Van Hecken (University of Antwerp), Brototi Roy (University of Antwerp) & Hector Herrera (University of Antwerp)*

The recent past has seen an emergence of multiple Green New Deals across geographies as a means to fight against the climate crisis and ecological breakdown. Of these, the European Green Deal- EUGD represents the world's only legally-binding commitment to reduce net domestic reduction in greenhouse gas emissions of at least 55% by 2030 compared to 1990 levels. In this paper we examine how the EUGD fits within a historical continuum of colonial and neo-colonial relations using the framework of ´cognitive empire´. We argue that the EUGD is the newest intervention for the ´greening´ of cognitive empire using four axes: (1) turning ecological crises into profitable opportunities; (2) portraying Europe (EU) as a 'moral' intervener; (3) building on a ´green´ "will to improve"; and (4) securitizing and consolidating EU economic interests. We find how the EU acts in key policy arenas of diplomacy, trade and investment and development aid leads to the ´greening´ of the cognitive empire. We conclude with some reflections on the role of the EU to cede place to other possibilities of building social and ecologically-balanced living worlds.

A new, green North or old extractivism in new clothes? *Jakob Donner-Amnell (University of Eastern Finland)*

A rapid acceleration in the transition towards carbon neutrality is taking place globally. Major actors have made ambitious climate commitments. The costs for key technologies have fallen. Public and private investors focus strongly on technologies aiming at carbon neutrality. While the direction is rather clear, the route, the responses of different actors and the consequences are not. The new realities are reframing the economic conditions for localities. The transition is much dependent on sufficient access to key natural resources and technological capabilities. These are not evenly distributed. Many urban regions have a lot of technological capacity. However, rural and peripheral areas possess a big part of the natural resource potential necessary in a transition (renewable power, minerals, forests, carbon sinks etc.). Therefore, implementing a successful transition is much dependent on well-functioning and accepted cooperation between urban and rural areas. In this context, the Swedish and Finnish regions around the northern part of Gulf of Bothnia are a case in point. Substantially growing carbon neutral energy and industrial production has been considered to change the area into a key industrial hub, creating 100.000 new jobs and requiring a lot of job immigration. However, many challenges are related to the envisioned trajectory. What will it take to ensure that skilled workers will move to the area and settle there? What will it take to ensure that existing population considers the changes following from increasing population and resource use as acceptable? What will it take to ensure that peripheral regions and localities not benefitting from this development can accept it? The northern peripheries differ from each other in natural conditions, resources, present livelihoods, size and structure of population, and cultural identity. It is possible, that only a transition that can be generally accepted in the area can utilize the full

transition potential of the area. National and regional policies aiming at speeding up transition in peripheries need to be well aware of and adjusted to these challenges to succeed. My paper ponders these issues by comparing recent developments in Nordic peripheries with earlier literature on these themes.

Multi-scalar bargaining for the European aim of sustainable industry Multi-scalar bargaining for the European aim of sustainable industry *Erja Kettunen-Matilainen (University of Turku)*

The European Union (EU) has been presented as one of the norm promoters for sustainable development in international arenas following its recent Green Deal and Circular Economy action plan. Within the EU, the process of defining a European aim for sustainable industry is a multi-scalar effort among and between stakeholders such as the European Commission, European Parliament, member states, non-governmental organizations, industry associations and companies. Taking Finland as an example, this paper examines the multi-stakeholder bargaining in selected key industries of the EU Circular Economy: textiles and clothing, plastics, and construction. The aim is to explore the participation of companies in communicating the aims for sustainable industry in the context of the climate goals. The research questions are: (1) What kinds of communication networks and negotiations there are between the multiple stakeholders in defining sustainable industry aims? (2) How are sustainability innovations for a circular economy created, communicated, and put into practice by the industries in the context of the European Green Deal? The study combines approaches on state-market governance and multi-scalar bargaining between firms and governments to analyze the negotiations, communication networks, policy formulation, and industry actions through the lens of a member state's industries targeted in the circular economy plan. Based on published materials and interviews of policymakers and industry representatives, this work-in-progress discovers that there are differences between industries in the form and level of activity. Tentative findings indicate that (1) their communication networks take many forms, such as company-to-industry association, or company-to-member of European parliament, or industry association-to-European Commission, where the Finnish Textile & Fashion is active in promoting innovative solutions developed by domestic companies to treat and produce new fibers from discarded textiles; and (2) they have different kinds of action networks, such as one between the state, municipalities and industry associations, as in the Green Deal agreement on construction plastics among the Ministry of Environment, Finnish municipalities, and seven industry associations related to plastics and construction. The results on the different network constellations and multi- stakeholder activities are expected to contribute to literature on multi-scalar bargaining and policy-making on circular economy in the EU.

Regional sustainability transition through forest-based bioeconomy? Development actors' perspectives on related policies, power, and justice *Maija Halonen (University of Eastern Finland), Annukka Näyhä (University of Jyväskylä) & Irene Kuhmonen (University of Jyväskylä)*

Within the European Union, policies at the EU level and the member states aim at governing the use of forests towards a sustainable bioeconomy. However, such a transition is filled with tensions related to economic growth, ecological integrity, and spatial justice. These tensions produce various and sometimes conflicting policy discourses. The role of these debating

discourses is decisive for both the transition processes as well as for the regions with valuable forest resources. In this study, we explored the forest-based bioeconomy transition discourses in the forest peripheries in East and North Finland. We examined how the regional development actors interpret prevailing forest bioeconomy discourses and how they themselves reproduce associated transition discourse(s). As a research strategy, we used embedded triangulation by contrasting the interviews of development actors to policy documents. The analysis is based on the critical discourse analysis. From the policies, we identified the "You can have it all (if you close your eyes)" discourse as the most hegemonic discourse which strives for sustainable forest bioeconomy based on a biomass-regime. From the interviews, we identified three regional forest bioeconomy discourses: 1) "You can have it all is possible", 2) "You can have it all is dependent on many ifs", and 3) "You can have it all runs into conflicts". The first regional discourse reproduced the hegemonic policy discourse, in which power relations appeared to be vertically unproblematic, and relatively promoted a just transition in forest peripheries. The second regional discourse was an alternative policy discourse and displayed more dependencies on the qualities of economic actors under the biotech-regime. Power relations appeared to be more horizontal and complex, with a random just transition. The third regional discourse raised tensions between the ideological aspirations of the policies and the practical reality in the forest peripheries. Conflicts arise from disharmonies between policy implementation and regional needs, cultural clashes, misrecognition, and undervaluation. Further, the third discourse reflected skewed power relations and the transition appeared to be unjust because the external benefits seemed to be regarded over the regional ones.

Session 13 COVID-19, second homes and the development of Zoom-towns

Chairs: Olga Hannonen (University of Eastern Finland), Kati Pitkänen (Finnish Environment Institute) & Dieter Müller (Umeå University)

Auditorium M107, Wednesday

Emergent spaces of rurality in Covid-19 crisis: rural-urban interactions and politicised mobilities *Tarmo Pikner (Tallinn University), Kati Pitkänen (Finnish Environment Institute) & Raili Nugin (Tallinn University)*

Rural is often presented as dependent from cities. Covid-19 disturbances somewhat reversed the assumption of non-autonomous rural by rendering explicitly visible that cities are dependent on the accessibility of the non-metropolitan and rural spaces. The aim of the article is to understand the emergent relational spaces of rurality in Covid-19 disturbances affecting mobilities and rural-urban constellations. We analysed the ways the unforeseen disruption collided with the rural status quo, and which rationalities and experiences about rurality and its relation to cities merged in the public discourses. In selecting thematic representations and narratives, we focused on situations and tensions entangled to seasonal labour mobilities and to second-home practice generating rural-urban coexistences and differences in Covid-19 settings. The situated discourses and practices were spatially associated to South-Savo region in Finland, and an island Saaremaa and northern coastal villages in Estonia.

Uncovering multi-locality and multi-local living in (rural) Finland *Kati Pitkänen (Finnish Environment Institute), Anna Strandell (Finnish Environment Institute), Antti Rehunen (Finnish Environment Institute) & Kimmo Nurmio (Finnish Environment Institute)*

Research on second homes and multi-locality has for a long proposed that permanent residence is a poor proxy of modern life. Instead, people's lives are divided in-between of multiple places of work, leisure and social relations and people increasingly live multi-local lives . While being based on the assumption that people's lives are tied to where their permanent (registered) residence is located, the various forms of multi-locality have been largely overlooked in the policy and planning. This singular spatial container logic was unprecedentedly challenged by the outbreak of the Covid-19 pandemic. The closure of borders, and travel and mobility restrictions for domestic mobility revealed the various forms of multi-locality and mobility people as well as places and regions depend on in their everyday lives and economies. In this study we identify and quantify different forms and flows of multi-locality targeting especially at Finnish rural areas. We use the framework of multi-locality motives developed in previous studies and adapt it to the Finnish context. Different types of data sources including register data, surveys and statistics are used to quantify multi-locality related to work and education, leisure and tourism, family structures and social needs, ownership and forced multi-locality. In addition, we will model the effect of multi-locality for the redistribution of population and annual time spent between regions. The results of the study reveal patterns of multi-locality related to a range of motives and spheres of live. Moreover, different types of multi-locality are important for rural and urban areas and different types of regions. In particular, rural second homes, long-distance commuting and remote work can have a significant impact on the population redistribution and time-spent. The findings call for better acknowledging, data and monitoring of multi-locality.

Unraveling Finnish media discourses on remote work during COVID-19 pandemic *Juha Halme (University of Eastern Finland)*

Agglomeration of economic activity and migration flows into large urban centres has been a prevalent trend in Finland, which has resulted that many regions are facing a long-running problem of shrinking population and workforce. This development has especially affected regions in northern and eastern Finland, which are losing population to large urban centers in southern Finland. While there is no convincing evidence that this trend would be turning around any time soon, there have been signs of the emerging attractiveness of northern and eastern Finland in Finnish media discourse during last year. The primary reason for this has been the lower rates of infections compared to highly populated areas in southern Finland, but also other reasons such as cheaper living costs, and higher wellbeing are documented. Crucially, advancements in remote-work technology, and high-speed internet connection networks, have provided the means of choosing the place to work more freely. The purpose of this study is to unravel the narratives of people that have chosen to move away from the capital region to work remotely in northern and eastern parts of Finland. In the first phase of the study, the data is collected from news sources such as the National Broadcasting company (YLE) and local newspapers. In the second phase, the study involves carrying out personal interviews to select amount of people that have moved during last year to North and Eastern Finland to work remotely. The focus will be on understanding the motivations and needs of these people choosing to live and work remotely outside of growth centers. The analysis will apply narrative-based methodology. The significance of this research stems from the fact, that the emerging phenomena of people moving out from the growth centers to work remotely is not yet well

understood. This is a highly topical matter as the number of remote workers is expected to grow in the near future, and can be considered as part of the "new normal" in the past COVID-19 world. Therefore, by providing evidence on this trend, this study also feeds to the discussion on local and regional development policy, which can support the remote work possibilities.

Location independence and mobilities: conceptual perspectives on digital nomadism and remote work travel *Olga Hannonen (University of Eastern Finland)*

The paper offers conceptual perspectives on the pre-pandemic and pandemic-driven digital nomadic mobilities. Digital nomadism and work-in-travel lifestyle have been rapidly developing before the pandemic. The outbreak of Covid-19 has intensified discussions on digital nomadism and remote-work-travel. With the mandate to work from home, many office workers were turned into location independent professionals. Employers have come to terms with remote workforces both as a temporary and permanent solution. The state of global lock down and limited international travel have facilitated the development of new travel patterns and lifestyles. Among those are 'remote work travel' or 'workations' and long-term relocation to different destinations both domestically and internationally. Finland, among others, has become a new attractive international destination for a quiet and healthy lifestyle, while domestic 'remote work travel' has been booming since the outbreak of the pandemic. Addressing these pandemic-driven mobility trends and pre-pandemic digital nomadic mobilities, the paper discusses conceptual perspectives as well as how these mobilities can be positioned withing tourism geographies.

From Temporary Refuge to Savior for Rural Communities: On the Rapidly and Radically Shifting Roles of Second Homes during the COVID-19 Pandemic *Dieter Müller (Umeå University)*

For a long time second homes have been an important part of the rural tourism supplies, particularly in the Nordic countries, where second home tourism is an integrated part of many households' multilocal lifestyles. In Sweden this practice has sometimes been challenged in relation to rural houses markets but overall the second home phenomenon has seldom triggered public engagement and loud debate. During the COVID-19 pandemic this has changed and indeed second homes became an intensively debated topic. Still second homes were framed differently at different times and in different places during the pandemic and thus, in this paper it is asked how these changing second home discourses unfolded in relation to space and time. This is done by analyzing discourses on second homes in Swedish new media during the pandemic from March 2020 to September 2021. Preliminary results show that initially second homes and their owners were seen as transmitters of an "urban" disease and thus a challenge to rural health and health care supplies. Later second homes were debated as popular touristic residences providing a domestic alternative to cut-off demand usually looking for experiences abroad. Finally, second homes were understood as residences for multilocal lifestyles enabling rural communities to grow and develop. Departing from this empirical analysis it is argued that these media discourses mirror ideas of the countryside and its functions for modern society that potentially will last far beyond the pandemic.

Using electricity data for second home research: prospects and challenges *Janika Raun (University of Helsinki), Pasi Okkonen (University of Helsinki), Olle Järv (University of Helsinki), Manu Rantanen (University of Helsinki) & Torsti Hyyryläinen (University of Helsinki)*

Second home tourism is a growing phenomenon in the world and recently the global COVID-19 pandemic has significantly increased the number of people working remotely while spending more time in their second homes. Finland and especially the province of South-Savo is an excellent example here. To better understand people and their mobilities behind second home phenomenon and to face the challenges of increased and diversified second home usage patterns, we need to find new data sources and analysis methods to provide better local services for them. Not the least, new insights are needed for having second home tourism both socially and environmentally sustainable. In this study we will exemplify the use of household level electricity data as a prospective source to analyze second home phenomena. Near real time household-level consumption data is collected automatically due to the widespread implementation of smart meters to buildings. The data for the analysis was provided by a local electricity company Suur-Savon Sähkö Oy from the South Savo region. We analyzed the monthly consumption patterns on municipality level before and after Covid-19. The preliminary results indicate the increased usage of electricity during the lockdown periods. We discuss the future possibilities and challenges of integrating consumption related data sources into the analysis of second home research and elaborate on what kind of new and valuable insights it could provide us.

Second home tourism and crisis communication in Sweden *Lena Grip (Karlstad University), Fredrik Hoppstadius (Karlstad University) & Ulrika Åkerlund (Karlstad University)*

During the last decades, events such as climate change, the Covid-19 pandemic, political unrest, and continued increase in global mobility has raised the awareness of the presence of crises, and the need for preparedness on all levels of society. This study emphasize the importance of incorporating second home tourism in crisis communication and preparedness, and the need for specific approaches and methods to develop well suited communication strategies to facilitate a more effective crisis management in rural areas and contribute to a safer society. Second home tourism is important for both destination management and tourism mobility, as it enables broader basis for business development, services and aid in prolonging tourism seasons. Simultaneously, there is often limited public service and infrastructure to cater to the needs of second home tourism development and the vulnerabilities of second home tourism needs more attention. Research on crisis preparedness and communication show that involvement of local actors can make a substantial difference in the event of a crisis. However, the tourism sector in general, and specifically second home tourism, is most often not included in crisis planning, despite their resourcefulness, knowledge and central position in the countryside. The lack of preparedness and collaboration means that opportunities to reduce the vulnerabilities and take advantage of the capacities (knowledge, skills and resources) of domestic and foreign second home owners are lost. New possibilities for crisis communication with social media, apps and digitalization of information can increase the possibility to reach tourists and second home tourists. Be that as it may, there is no one-size-fits-all solution to crisis communication, and the new digital possibilities need to be understood in relation to place-specific conditions and obstacles of the countryside as well as of varying second home tourists, for example bad functioning mobile connections or voluntary digital. In our study we turn to the emerging field of geomedia which highlights how place, technologies and communication are

interwoven. Tourism research has not paid much attention to these kinds of geomedia technologies and how it could inspire place-based and collaborative solutions to crisis communication including also second home tourists.

Session 14 Sustainable transformation through the lens of rural-urban divide and synergies

Chairs: Brita Hermelin (Linköping University), Daniel Keech (University of Gloucestershire) & Margareta Dahlström (Karlstad University)

Auditorium M103, Tuesday

Spatial justice, sociocultural sustainability, and the green transformation – exploring the urban-rural differences in pro-environmental attitudes and behaviour *Mikko Weckroth (Natural Resources Institute Finland)*

Sustainability transformation is one of those social and political processes that have an important spatial dimension to consider. However, while exploring e.g. the geographies of climate change it is often noted that it is impacting the (global) poor more than the rich but it is less frequently acknowledged that in addition to the spatially uneven effects of global warming, significant regional within-country differences also exist in terms of people's climate change views, and thus, their support for pro-environmental and climate change policies. Thus, this paper explores the value based and behavioral foundations and expressions of pro-environmental attitudes and behavior along the urban-rural gradient. Our analysis is founded on empirical findings showing that perceptions of political efficacy show distinct urban-rural and regional (growing vs. declining) differences. In line, we also show that climate change scepticism and concern do exhibit urban-rural differences, where living in a country village is associated with greater climate scepticism and lower concern compared to living in a large city. Also, higher climate change concern and pro-environmental norms are associated with living in a region with constant population growth. We interpretate these results to be reflecting the increasing spatial (urban vs. rural, core vs. periphery, and growing vs. shrinking) differences in contemporary Europe and as such as part of theoretical discussions on the geography of discontent and anti-establishment attitudes. Furthermore, it is argued that the dominant narrative of urbanisation as an inevitable 'global megatrend' paired with city-regional notes claiming all 'thorny problems' (e.g. climate change) at a global scale will be solved by and within cities and city regions are all likely to produce sentiments of both socioeconomic and spatial exclusion. Hence, it is argued that the abovementioned spatial differences are not just a simple consequence of restructuring of spatial economy but also reflect more profound sentiments of fear and concern about potential futures and socio-spatial imaginaries in which certain segments of society are becoming economically, culturally and politically irrelevant. As a conclusion, it is suggested more emphasis would be placed on formulation place-sensitive policies for sustainability transformation.

Inside out – the intersection between internal operationalization and external collaboration in municipal SDG localization *Venus Krantz (Linköping University) & Sara Gustafsson (Linköping University)*

Abstract not published

What does the bus mean? Municipal views on public transport values in Swedish planning *Ida Andersson (Örebro University)*

Almost 10 years ago, Swedish municipalities lost the formal mandate to plan for public transport to 21 newly established regional transport authorities (RKM). Yet, Swedish municipalities continue to incorporate ideas and visions for public transport in their strategic spatial planning, as this paper will illustrate. The creation of the RKM and a regionalization of public transport was motivated in the national legislation by the potential for increased commercialization, effectiveness and marked shares through economics of scale. This represents more volume focused and goal oriented public transport policies, compared to the previous regime integrating public transport in the mandatory comprehensive spatial plans of each municipality. Sufficient to say, this move has created complex - and sometime tense - planning relations between these two levels. The planning mandate of spatial structures relevant for public transport such as roads, residential and commercial areas etc. have remained with the municipalities, while the RKM rule over timetables, routes and overall strategizing for public transport. Often, this challenges the effectiveness of planning for public transport as the RKM and the municipalities do not always agree on what issues and values that should be prioritized. This is especially noted for rural and/or smaller municipalities (see Andersson & Hermelin, 2019; 2020 for overview). This paper investigates what values Swedish municipalities ascribe to public transport in their comprehensive spatial plans, despite lacking a mandate to decide in these matters for almost a decade. These values are discussed in relation to urban-rural dynamics and wider sustainability perspectives, stemming from the Sustainable Development Goals (i.e. SDG 11.2 “to provide safe, affordable, accessible and sustainable transport systems for all”) and EU legislation (i.e. EC 1370/2007, “more numerous, safer, of a higher quality or provided at lower cost”). The paper draws on in-depth analysis of the comprehensive spatial plans in 25 municipalities located in two Swedish counties, Örebro and Östergötland. The paper aims to understand how public transport is perceived in a wider context of spatial planning at the local level, and what points of conflict might arise in the current organization of planning for public transport in Sweden.

Searching for the dialogue in Swedish planning *Moa Tunström (Karlstad University)*

In Sweden, citizen participation in municipal planning through dialogue is often brought forward as key to sustainable transformation, with emphasis on social sustainability, local governance and everyday life perspectives in planning. There are high expectations on new methods and tools for citizen dialogues in planning, and the mandatory public consultation procedure is not always considered sufficient. However, there is a lack of overview on what is actually done in the name of dialogue in Swedish municipalities. This lack of overview is due both to lack of comprehensive research beyond case studies, and lack of documentation in the municipal planning offices. This paper addresses these lacks by presenting results of a comprehensive mapping approach to citizen dialogues in eleven Swedish municipalities 2000-2015, a mapping that makes it possible to discuss both what is done in the name of dialogue regarding methods, and the varying documentation of these practices. The result indicates that what goes on in the

name of citizen dialogue is a diverse practice, and perhaps more traditional than innovative when it comes to method. It is often not about explicit dialogue or citizen influence, but instead the purpose is e.g. to spread or collect knowledge without an explicit connection to the planning and decision-making process. This paper further argues that the absence of a standard for documentation of dialogue processes can hinder the municipalities' institutional learning regarding participatory methods and in the end hinder a developed democratic consultation procedure in planning.

Actors and roles within a place-based development intervention – empirical case from a village in in northern Sweden *Brita Hermelin (Linköping University)*

This paper presents a study of how an initiative for place-based local development plays out for a geographical environment of a rural village. This village is a small-scale settlement in Northern Sweden with around 1000 inhabitants. The investigated initiative aims to achieve sustainable development through a locally based collaborative process engaging various actors. The study presented through this paper explores the ways in which the involved actors represent different roles for change agency and investigates how the resources the different actors contribute with are derived through local and extra-local relations, across rural and urban environments. The results of the paper are summarised into three main points. First, the heterogeneity of actors within the studied place-based development initiative contributes with filling up different roles and together these roles drive place development. Consequently, this makes the tasks for place-based leadership quite demanding. Second, the ways in which the involved actors are integrated into extra-local relations is an important aspect impacting the access to knowledge, social capital, and company networks. Such extra-local relations including rural-urban interconnections influence the direction for visions and strategies for the development intervention. Third, within the Swedish context, municipalities are dominating local actors for place-based development processes. The paper discusses how the municipality through its extensive range of mandates and responsibilities in itself is a heterogenous actor covering different roles for change agency.

I have a garden on the internet! Searching for the farmer in a remotely controlled farming enterprise *Ernst Michael Preininger (University of Graz)*

When trying to specify characteristics of so-called rural areas, the presence of farming and farmers are often recognized as integral - in scientific literature and images in magazines or movies likewise. Significantly, neither deterministic nor constructivist, culture-led understandings of 'rurality' renounce the very idea of this conjunction in principle. Lately, efforts to unlock societal, spatial and technological potentials for intra-urban agricultural production question the exclusivity of this allocation (e.g. community gardening collaborations, utilization of flat roofs or high-tech versions of greenhouses stacked to 'vertical farms'). Despite evidence for fading premises, the directional dependences between 'rural' farms and urban consumers of their produce remain largely in place. However, transformations of 'rural' agriculture are also fueled by societal changes and are currently led by the implementation of digital technologies and algorithmic decision guidance. These developments pave the way for structurally reconfigured forms of farming and raise hopes for a more effective achievement of sustainability goals. Representing a re-modulated agricultural offspring in the fringe of known tech-application opportunities, the Austrian start-up 'myAcker' allows for a glimpse of the shape of farms yet to come. In a game-like embedment, it combines different characteristics of food production

schemes: first, algorithms and Smart Farming Technology (SFT) maximize control over operational processes by proposing actions based on live data. Second, participatory, values-based elements of Alternative Food Networks (AFN) support the company's narrative of sustainability and responsibility by including remote, urban consumers in the decision and work process. The system's conceptual hybridity though dissolves classical responsibilities. There is no actual 'farmer' person or family to be found and speaking with Latour, here, 'smart' tech assumes an 'actant', impacting decision making just like the consumers do. Based on findings contextualized by my dissertation project, I aim to highlight the observation that multi-locality and flat hierarchies in this production scheme resolve classical assignments and dependences. They negatively affect the identification of clear dividing lines between producer and consumer and conquer the necessity for a rural-urban divide. Furthermore, the renouncement of manifold functionalities of family run farms leaves the sustainability narrative somewhat sketchy, raising further questions about current technological transformations in agriculture and so-called rural areas.

Arctic Circularity Peripheral Regions in the high north and Circular Economy *Rannveig Edda Hjaltadottir (Nord University)*

Sustainable transformation through the implementation of circular economy (CE) policies and initiatives implies reorganising industrial systems. Change towards CE thus depends on different types of innovation, including technological, business model, supply chain, policy, and social innovation that need to function in unison as CE innovation bundles. However, supporting diverse types of innovation is challenging for the actors in the innovation systems as most have focused on technological innovations. Moreover, peripheral regions tend to have organisationally thin and relatively weak innovation systems that can struggle to support CE transformation. For example, the High north regions of the Nordic countries are peripheral both in European and national contexts, with low population density, lack of bigger cities to provide agglomeration effects, education levels often lagging on a national level and low levels of innovation. At the same time, the arctic regions have some potential advantages when it comes to CE development, including access to renewable energy, relative streangth in core industries, local clusters, the level of digitalisation is generally good in the Nordics and strong national innovation systems. In addition, research has shown that peripheral regions can use inter-regional cooperation to access knowledge from central regions, thus accessing knowledge and expertise available in the national system. The artic regions also have a long history of cross-border cooperation that can both complement a regional innovation system and, to some extent, compensate for the thinness of the system by accessing competencies in the neighbouring regions. This article combines a theoretical discussion of CE and innovation in peripheral Nordic regions with examples from developing value chains within renewable energy solutions. The discussion focuses on how peripheral regions in the high north can complement their innovation systems and capabilities by using inter-regional cooperation to access exogenous knowledge from more central regions and cross-border partners for CE innovation. Furthermore, we discuss to what extent the current development is taking advantage of the perceived advantages for Sustainable industrial transformation.

Rationalities of public transport. A case study of the contemporary history of transit corridors *Jens Portinson Hylander (Swedish Road and Transport Research Institute)*

Planning local and regional public transport in so-called transit corridors – concentrating resources and infrastructure to a set of few, but attractive, corridors within a city or a region – is commonplace in contemporary public transport planning. This has not always been the case, however: in Sweden both ownership and governance of public transport was more fragmented and networks more widespread but have over time been concentrated organizationally as well as spatially. In my PhD thesis I have studied how transit corridors have come to dominate the discourses, planning practices and material developments in regional public transport in Malmöhus and Scania since the 1970's. This has been done by analyzing the rationalities of public transport – its fundamental ideas, values and logics – has been constructed and institutionalized through the production of texts, organization of decision-making and implementation of policies and planning tools, and how this eventually becomes materialized in the technospatial configuration of the public transport system. Importantly, the construction of the rationalities of public transport is the result of power struggles between actors vying for control over meaning making, economic resources and planning tools as they try to shape public transport. The empirical material consists of extensive use of archival records complemented with interviews. Through a qualitative analysis of how change and stability in the system has been motivated and transformed into practice, the research shows how the discourse of transit corridors developed as both a justification for, and a result of, an increased regionalization and market adjustments of public transport services. A recurring dynamic in the governance, planning and configuration of public transport lies in the tension between the concepts of 'efficiency' and 'justice', which have shaped struggles over reform and adjustments of its governance. Similar developments and trends, albeit different in shape and form, can be noted in a broader Swedish and international context, why insights from this case study have the potential for generalization, not least concerning public transport systems' role in handling, but also sparking, conflicts over sustainable mobility transitions across the world.

Regional distribution of additional housing requirements to promote resilient development - The example of the Leipzig-West Saxony region *Thorben Sell Friedrich (Friedrich Schiller University Jena) & Anna Dunkl (Leibniz Institute for Regional Geography)*

Shrinkage and growth are closely related in the European Union, with cities and their surrounding areas typically benefiting from growth impulses while rural areas often experience significant shrinking processes. Areas that already show a high degree of aging, such as many rural parts of Eastern Germany, are particularly affected by the latter. This becomes particularly evident in the planning region of West Saxony. While the city of Leipzig has been growing and the housing market is getting more tense, an increasing population loss is expected in the surroundings. Due to high costs for building land within the city, the demand for residential space is shifting in the West Saxony region. Currently, a decoupling of construction activity and expected population development can be observed, which reduces the overall resilience of the region by promoting uncontrolled land use and fragmentation of the communities as well as generating follow-up costs for the region and the community. A coordinated housing concept in Leipzig and the surrounding region is needed, to make the residential development more space-saving and resilient in the long term. Therefore, the aim of the paper is to develop an approach to distribute additional space requirements and thus future residential development in the region in such a way that the decentralized concentration in the region is strengthened and

synergies between town and the surrounding rural areas arise. In its empirical basis, the paper relies on the analysis of citizen surveys, expert interviews, and workshops as well as statistical analyzes. In the first step, housing needs are determined in a regional process that go beyond the municipalities' own development and result from the migration gains in the region. These needs are then to be distributed in the region using various indicators. For this purpose, a system is made available to calculate the future needs specifically for the municipality and thus enable coordination in the region. This shows that even with a strong growth scenario, theoretically all the needs in the region could already be met. The focus of the system is on stabilization in the region as well as transferability to other regions.

A living lab methodology for sustainability transformation *Kristina Trygg (Linköping University)*

Cities and regions are seen as both the solution and the challenge when it comes to sustainability transformation. One platform to support innovation for sustainability in urban and rural areas is the concept of the living lab, which are expected to accelerate the sustainability transition. The objective of this study is to describe and evaluate a methodology based on a living lab exercise for studying transformative challenges in a planning context. A living lab is a user-centered, interactive lab that is operating in a specific context, in a specific place, and involves a process of co-creation of public-private-people partnership (triple helix) in a real-world context. The empirical case is based on the teaching experience of the working method of living labs with master students at Linköping University. In this study we will give account of a multidisciplinary methodology approach by combining the challenge-based learning (CBL) with a living lab exercise. In the result we analyse and discuss the methodological and empirical implications.

Collaborative governance and sharing resources in a multi-sited community *Karin Skill, (Linköping University)*

Digital platforms are often expected to enable sharing. In this digital era technology is proposed in municipalities to increase “sharing” of limited resources. Among the responsibilities, municipalities organize and manage waste and recycling for the residents. These are on-site and take place within the municipal borders, but the coordination may take place online. The interaction of online and on-site sharing within the municipality and address the possibility of using the local library as a hybrid platform for sharing. The Swedish library has a long tradition as sharing platform where residents can borrow books, and access information. Furthermore, the digitalization of society has implied that libraries expand their area of activities concerning supporting citizens towards digital inclusion. Additionally, items beyond books, like tools, leisure equipment etc are shared at libraries. The study is based on interviews, on-site observations at the library, as well as online observations of a Facebook group where resources are shared. The proposal of multi-sited ethnography to enable studies of online and on-site interaction between residents, civil servants, and politicians in the municipality regarding circulation of resources and sharing is applied. The aim is to investigate collaborative governance and in what ways a small and sparsely populated municipalities can harness the possibilities of sharing platforms.

Using living labs to strengthen rural-urban linkages and transition to economies of well-being: reflections from a European multi-actor project *Daniel Keech (University of Gloucestershire)*

This paper reflects on five years of work that applied the living lab methodology as part of a major European Horizon 2020-funded, ROBUST. The aim was to find new ways to strengthen rural-urban linkages for European regions. Living labs are typically applied in urban transition contexts. ROBUST set up labs in 11 European regions, with varying degrees of rurality and rural-urban dynamics. We first explain how our our four-stage living lab methodology was developed to work across 11 diverse regional contexts, adapting earlier urban living lab approaches (e.g. Voytenko et al., 2017). Each lab was a collaborative co-innovation process, led by a research and practice partner. The analysis shows how labs worked at two levels: some adopted a strategic, policy-orientated approach, others a project, practice-orientated approach. We then review the innovations that were co-created, including how teams used their experimental work to lever change. The experiments, which cover food systems, ecosystem services, cultural connections, public infrastructure and services, and new business models and labour markets, point to a shift in economic practice towards economies of well-being. This logic extends beyond tradeable economic zones and towards foundational economies with stronger rural-urban relationships central to this transition. We provide examples of well-being economy dimensions to explain what this means. We conclude with reflections on the living lab process to inform the design of future transdisciplinary projects. Living labs are a positive mechanism for social and environmental change, but because of their experimental nature need sufficient time to achieve their outcomes.

Landscape resource analysis - Applying a collaborative method to identify and communicate a variety of values in forest areas *Margareta Dahlström (Karlstad University)*

Today's societies face significant ecological and societal challenges, including climate change. In this context, forests can be a useful resource for new innovations and products which can lead to job opportunities, economic development in new sectors and greater sustainability. However, increased out-take of biomass also increase pressure on forest resources, ecosystems and biodiversity. Conflicting interests increase between production and conservation of forests for recreation, tourism and health. There is also a rural-urban imbalance with regards to the rural forest resources. Many decisions regarding the use of the forests are made by decisionmakers either in political bodies or companies located in urban areas often at considerable distance from the actual forests. Thus, there is a call for collaborative processes to identify and integrate a range of perspectives, interests and values in forests. This paper reports back from a project "Innovation for green transition in the forest" (www.ingoskog.org) where a collaborative process for place-based development, landscape resource analysis (LRA), was used to address the social aspects of landscapes and to account for both material and immaterial values in the forest. LRA focuses on including stakeholders and local interests and knowledge. This method was applied to a small area, Norra Klarälvsdalen, in Värmland, Sweden where a workshop including 16 stakeholders resulted in the marking of subjective values on analogues maps. These maps were digitized and together with data from geographical information systems (GIS) and ArcGIS were used to visualize both material and immaterial values. Conflicting areas were identified and were discussed in a second workshop. This adapted LRA demonstrated the potential to contribute local knowledge and thus add qualitative data to forest planning and decision-making. It can also be used to address a wide range of stakeholder interests, including

both material and immaterial forest values, and is designed to capture cultural ecosystem services that are often difficult to put a price on.

Session 15 Developing earthly attachments in terrestrial crises

Chairs: Edward H. Huijhens (Wageningen University & Research) & Martin G. Gren, (Linnaeus University)

Auditorium F100, Monday

Queering Gaia: Planetarianism and potentials for re-weaving more-than-human entanglements *Michael Haldrup (Roskilde University)*

"The Earth has mercy. The Planet is indifferent" (Dipesh Chakrabarti)

If orientations point us to the future, to what we are moving toward, then they also keep open the possibility of changing directions and of finding other paths, perhaps those that do not clear common ground, where we can respond with joy to what goes astray. So, in looking back we also look a different way; looking back still involves facing – it even involves an open face. Looking back is what keeps open the possibility of going astray. (Sara Ahmed)

In classical Greek-roman mythography Zeus defeats, subjugates (maybe even kills) his foster mother Gaia to keep his privileged power position unchallenged. From her withdrawn role Gaia however keeps interfering with the business of men and gods to protect her children from the oppression and violence of the Olympian king god-father. As Dipesh Chakrabarti (2019) have noted we are increasingly faced by Gaia; and in comparison, with her other faces – world, earth, globe – the face that emerges is not that of a caring mother or a manageable blue dot in Gods eyes perspective. To the contrary we see a planet protecting herself and her multiple offspring against atrocities by unleashing floods, wildfires, and infectious diseases (Clark and Szersynszki 2021). The face of Gaia is increasingly turning uncanny as she awakes and confront us. Departing from myth this presentation asks how we can draw on 'queering' as an active practice in creating new stories, fictionings and entanglements for inhabiting the 'critical zone' (Latour and Weibel 2020) of our planet rather than blindly continue along the straight course that has lead us to the brink of disaster. Hence, 'queering' is used as a productive tool for 'doing in futurity' (Muñoz 2009, see also Ahmed above), to re-orient ourselves towards new ways of weaving our relations and entanglements with Gaia and her multiple relatives; opportunities for embracing our failure as potential for planetary futures beyond planet-cide.

Posthumanist earthly attachments and practice theoretical solutions *Joni Vainikka (University of Helsinki)*

In 1972, the Apollo 17 space mission captured the famous Whole-Earth image. The photo covered the ice caps of Antarctica, a lush Africa, sands in the Arabian Peninsula and most of the Indian Ocean. Humanity, it seemed, took a selfie and the photo quickly became a recognizable emblem for environmental and social movements. Put beside the Golden Records of the 1977 Voyager missions, the legacy of the 1970s universalist dreams strikes a different chord to the 2021 billionaires-first space flights just beyond the mesopause. Geography, throughout its history from Varenius to Reclus and Della Dora, has had an odd placement close to cosmology. The planetary attachments and iconographies have, in a sense, become omnipresent. Yet, the

scales of humanity do not necessarily transpire as action for planetary wellbeing. This paper ponders on the issue of earthly attachments through the ideas of 'becoming climate-wise' and 'tipping points' to essay for a more holistic or posthumanist view of terrestrial crises. Climate-wise, here entails a future-driven action to decarbonize our everyday social practices as urban life and circular economies are seeking a balance with natural cycles. Tipping points refer to a nearly existential condition where 'tiny perturbations' can cause irreversible changes in different social and ecosystems. While the tipping point is more frequent in the glossaries of climate science, positive social tipping points give hope that social interaction could inspire majority transformations. Learning to live with our planet means that we understand the limits of gradually nudging natural cycles and that every practice is a possible solution. Climate wisdom and tipping points, however, are processual elements. What is needed is an identity politics of earthly attachments.

Exploring the Role of Environment on Handcrafting: Experimenting with Wool and its More-than-Human Relations *Berilsu Tarcan (Norwegian University of Science and Technology)*

With the age of the Anthropocene, humans have been exploiting resources for their own needs, without considering other-than-human factors. The issues caused by this, such as the environmental issues and climate crisis brings the question of how to deal with these problems in different fields, design being one of them. One of the ways to address these issues is to reconsider more-than-human elements in design processes, from the production techniques and materials used. By reclaiming materials from the nature and reusing traditional production techniques, design can be used as a tool to facilitate the reconfiguration of earthly attachments of humans and nonhumans, and this can lead to redefining design and making practices from non-anthropocentric approaches. Accordingly, this study uses wool as a natural resource from animals, and felting as a production/making technique. It is a part of a research project from the design field that aims to understand wool as a material, by looking at the elements of human, society and geography. For this purpose, it explores the relationship between environment and material through felting, which is a traditional and contemporary production technique used for making felted textiles or objects, by compressing basic fibers (usually wool) with hot water and alkaline. The study of materials within design strongly contributes to understanding of geographical influences. Wool is a known and used resource in Norway, however imported wool is being used in many examples. Therefore, there is still a need to study how local wool can be used in Norway not only from production techniques used in the industry, but also through design and handicrafts. In this study felting is employed in several places: Interior spaces such as workshops and domestic environments; and exterior spaces, such as forests, seaside and in-situ. By documenting these experimentations of my autoethnographic handicraft process, I aim to specify relationships between geography and a craft/ making knowledge with wool, by using more-than-human approaches and traditional knowledge.

Bordering climate neutrality and entangled care *Tarmo Pikner (Tallinn University)*

The ambitious aims of green transition and present crisis are reconfiguring perspectives on existing built environments, energy matter and human agency. These dynamics pose diverse questions on durations and trajectories of change bound to urbanisation, Anthropocene and environmental legacies. The current paper scrutinises anticipatory politics, (b)orderings and ethics of care as complex spatial-temporal assemblage towards climate neutrality. This approach

can provide novel perceptive on landscapes of energy transition by addressing diverse tensions like presence/absence, value/waste, utopia/dystopia. The paper engages with thematic processes and practice in Ida-Viru (north-eastern) region of Estonia and its wider planetary contextualisation. This region situated next to the EU and Russian border is framed as primary node of post-oil-shale and just transitions on the national and EU scale.

Grounding tourism in the Anthropocene *Edward H. Huijbens (Wageningen University & Research)*

This talk will interrogate the usefulness of the Anthropocene in understanding tourism. The United Nation's World Tourism Organisation (UNWTO) and other global and local industry stakeholders regularly tout a graph depicting the rapid post-war growth of international tourism. The graph is one of many promoted by scholars of the Stockholm Resilience Centre showing how a range of socio-economic and related ecosystem indicators have taken a steep upwards turn since 1950 in what they label 'the Great Acceleration' when making sense of the global environmental impact of society. Using tourism growth as one of these indicators thereby clearly lodges the industry in debates around the Anthropocene, a newly proclaimed geological era following the Holocene, where humankind is recognised as a geological force transforming earth system dynamics, one of the most prominent of which is the emerging climate emergency. But as much as the Anthropocene cannot be understood as the creation of humankind en-masse, tourism needs to be unravelled through its geographical specificities. Countering the growth paradigm and recognising and coming to terms with the climate emergency the talk will outline the contours of earthly tourism and a research agenda for tourism that pays heed to the geographical variation of spaces and places, whilst making for earthly attachments in the Anthropocene.

Session 16 Localising welfare. Public facilities, social equity and community building

Chairs: Ebba Högström (Blekinge Institute of Technology) (chair + co-organizer), Lina Berglund-Snodgrass (Swedish University of Agricultural Sciences) (co-organizer) & Maria Fjellfeldt (Blekinge Institute of Technology) (co-organizer)

Auditorium F101, Monday

Understanding socio-economic resilience in the context of Covid-19: Examining people and community responses to the latest capitalist crisis *Thomas Hastings (Queen's Management School)*

The Covid-19 pandemic provided the latest crisis for the global capitalist economy, following on twelve years from the financial crash of 2008/2009. Unlike responses to the financial crisis of 2008/2009, in many countries Covid-19 provoked new, socially progressive interventions from the state, including income-replacement schemes and related supports in the private sphere (e.g. mortgage payment freezes, loans) to offset the effects of labour market closures. In this sense, governance responses to Covid-19 included radical regulatory responses which underline the need for capital and the state to foster reciprocities between (linked) spheres of production and consumption to alleviate crisis conditions (see Jonas 1996). Having observed this, the prospect of new long-term development and labour market governance approaches remains unclear. The paper draws on regulation school thinking which lends itself to a focus on new governance approaches in the interests of labour market/community stability following the

crisis. Focussing on Northern Ireland in the UK, it responds to the commonly neglected role of labour and community groups at the time of Covid-19 in both media and regulation school accounts. This is achieved through a focus on the role of community and worker activists in the state space of Northern Ireland, focussing on community responses in spaces of urban decline as well as the agency of new community groups geared to generating better supports for small and medium sized businesses. The paper thus focuses on the regulatory gaps created by state and capital inaction, examining the role of worker and community groups in creating a locally variegated landscape of labour control/regulation across.

Public meeting places as local welfare facilities for enhancing social capital *Christine Benna Skytt-Larsen (University of Copenhagen) & Trine Agervig Carstensen (University of Copenhagen)*

In this article, we present and discuss the phenomenon 'public meeting places' as a point of departure for localising welfare. The long tradition of urban neighbourhood planning has stressed schools as central meeting places for generating community and local social coherence. The last several decades, however, there has been a growing focus on wider defined public meeting places and on how the planning and building of physical places can provide frameworks for social meetings across established cultural and socio-economic groups. Often, it is argued that new encounters and interactions potentially foster new relationships and in turn contribute to bridging social capital. This creation of social capital can be understood as a welfare function in itself, as it contributes to the well-being of individuals and increase the community building in local neighbourhoods. Furthermore, it is argued that such new relationships ultimately have the potential to promote social mobility. In recent decades, this conception has more or less explicitly been applied to justify initiatives to establish new meeting places in or near socially deprived neighbourhoods, especially in Northern European welfare societies. In this article, we take a critical look at this premise by outlining the theoretical foundation and empirical accounts for conceiving public meeting places as localities that, besides from merely offering recreation, also provide core beneficence for welfare distribution. Based on ongoing studies of cases from Denmark, we present governance strategies that are used when planning and building meeting places in connection with socially deprived housing areas. Moreover, we discuss how distinct strategies may influence the potential for welfare functions of the established meeting place. A preliminary conclusion is that the specific location of the meeting place is important for its facilitation of welfare. However, features proven most essential for public meeting places to serve as local welfare facilities for enhancing social capital include the governance processes fostering local involvement and ownership among community residents throughout the planning process and programming, as well as the opportunity of connecting over 'The Common Third' in the meeting place.

Schools as a neighbourhood service *Oskar Rönnberg (University of Helsinki)*

Finnish cities have experienced deepening socioeconomic and ethnic segregation during the past three decades, and this process has been demonstrated to have a strong impact on both neighbourhood communities and schools as contexts for learning. In this process, social disadvantage has clustered and accumulated particularly in the post-war suburban housing estates (lähiö), some of them being labelled with bad reputations that further feed the vicious cycles of segregation. Many of these peripheral urban neighbourhoods also seem to have lost access to many everyday services due to i.a. major structural changes in the retail sector.

Rationalisation by centralisation to larger entities in well-accessible locations has not concerned only private enterprises, but also been central for some municipalities' provision of public welfare services, such as libraries and health care. How has the supply of welfare and everyday related services and facilities developed in urban neighbourhoods, and how do these developments potentially affect the opportunities and welfare of disadvantaged groups, that tend to live more localised lives? I present an empirical study of the change of local access to services in the Helsinki Metropolitan Region during 1996–2018, and discuss the implications these developments have for the future and social life of different neighbourhoods. Schools have been identified to be central for the development of these neighbourhoods – not only as places for learning, but also as affecting the residential decisions of families and through functioning as a central node in the neighbourhood. How could the school be developed as a service in the neighbourhood, supporting individual and community-level positive development, when it seems that it is one of few key services still available in most urban neighbourhoods?

Wellbeing of Future Generations as local governance principle *Mel McCree (Bath Spa University)*

The Wellbeing of Future Generations Bill (WFG) is currently going through the UK Parliament. The WFG Bill takes its initiative from the WFG Act (2015), a Welsh policy having many successful cross-cutting impacts upon public life. The Act ensures that legislation and development bears in mind long term impacts and acts in future generations' best interests. There are many wellbeing disparities in between Arctic countries and regions, between non/indigenous populations, young/old and rural/urban areas, but the overview shows a reduction in life expectancy, opportunities and resources for future generations. Finland is a country also noted for its future governance and preventive policies. This paper presents project is about connecting, building understanding and critiquing the inclusion of the Wellbeing of Future Generations in UK and Nordic policy, with a particular focus on children's climate resilience in everyday local spaces. Where can children, young people and families find public facilities, social equity and build community that will sustain them? What policies work effectively towards these common good use? Comparisons with other international future generation arrangements will be made. Wales was the first country in the world to implement such innovative, future-facing legislation. It positively affects many areas of life in Wales, such as housing, agriculture, health, education, welfare and child rights. It encourages the involvement of young voices in decisions surrounding their future. WFG demonstrates how we need to think systemically about children's wellbeing; interconnected and intersected across silos, social groups, public/private provision and species relations. The Act is a tangible mechanism to help meet the UN Sustainable Development Goals (particularly 3). The Act and Bill share concerns with the Ecological And Climate Emergency Bill, also going through UK Parliament. There is much to critique, in assessing the impacts of the Welsh Act and by analysing the debate within the UK Parliament. The paper sets out to what extent there is successful future generations governance in evidence, and the challenges in its (often local) implementation. What lessons can be shared comparatively between countries, and how can we strengthen the networks that build on this initiative?

Session 17 The Politics of Parks and Recreation

Chair: Erik Jönsson (Uppsala University)

Auditorium F103, Monday

Forbidden meetings within the borders of city planning: meetings between men in Stockholm 1880-1950 *Thomas Wimark (Uppsala University)*

Since the burgeoning of feminist planning in the 1970s, gender has not only been put on the agenda but also become an integrated part of urban planning and governance in many countries. Planning practitioners now draw from research fields, such as the geographies of fear, and adopt methods and initiatives to make cities safer for women, commonly through pruning greens and increasing lighting in public spaces. In this presentation, I use this current stream of planning practice as a starting point to discuss the potential and concerns of using materiality to control the lives of citizens. Using historical city records dealing with park planning and governance in Stockholm 1880-1950, I illustrate how men who desire men have come to adapt and align with the materiality of public spaces in order to meet and explore their sexualities. However, I also show that the very same planning practices used today have been used to control and limit sexual minorities as their visibility has increased. Building on this analysis, I argue that it might be dubious to encourage planning practices that draw from a controlling epistemology. I suggest that we need to rethink the foundations of planning and move beyond planning as a heterosexist project.

Same, Same but Different? The 'right' kind of gardening and the negotiation of neoliberal urban governance in the post-socialist city *Bianka Plüschke-Altof (Tallinn University), Lilian Pungas (Friedrich Schiller University Jena), Helen Sooväli-Sepping (Tallinn University) & Anni Müüripeal (Tallinn University)*

Our contribution analyses the ways in which different urban gardening forms relate to neoliberalisation processes in the post-socialist city. Based on fieldwork conducted between 2017 and 2020 including on-site observation and in-depth interviews with gardeners, activists and city officials in several Estonian cities, it seeks to understand the unequal treatment of community gardens and dacha allotment gardens. Despite equally fostering urban sustainability, dacha gardens are often negatively associated with a (post)socialist 'survival strategy of the poor' while community gardens are embraced for their transformative potential with regard to health, active citizenship, social cohesion, and environmental learning. Taking a critical approach to neoliberal urban governance, we explore the adherence and/or resistance of both gardening forms to post-socialist urban neoliberalisation dynamics on three analytical levels: socio-spatial discourses, spatial materialities and cultivated subjectivities. As a result, the presentation conveys that dacha gardens rather 'quietly' maintain the system, while community gardens contribute to its thriving process, by being visible, actively engaging with, and being supported by, the neoliberal urban governance. This preferential treatment, however, comes at a price of higher vulnerability to cooptation attempts and neoliberal control of space, to which dacha gardens have hitherto resisted.

Recreation, parks and ecosystem services. Exploring a diversity of urban green in Warsaw

Marta Derek (University of Warwaw), Sylwia Kulczyk (University of Warwaw), Tomasz Grzyb (University of Warwaw) & Edyta Woźniak (Polish Academy of Sciences)

Among a number of key questions and debates concerning urban green spaces in geography, one especially demanding of attention is its role as places where people can have direct contact with nature. This is because urban parks and forests are the most accessible, and sometimes unique, options of this contact for most people. Apart from their ecological role, green urban spaces offer a wide range of immaterial benefits to humans, which are widely referred to as Cultural Ecosystem Services (CES). These are, among others, recreational, educational, and aesthetical values. Understanding the flow of CES is recognized as crucial for effective spatial management and local policy development (van Zanten et al., 2016). In this study, we aim to discover to what extent the character of CES provision is shaped by the natural and social characteristics of a green area. To address this, a typology of public green areas in an urban zone will be developed. For each of the types, the actual park usage will be described, by showing who, when, and how benefits from contact with nature. A set of different data will be connected to this analysis, including both ecological and social data. Warsaw Urban Zone understood as the city of Warsaw and its border zone (18 municipalities which border the capital city) will be used as an example.

Multifunctionality in urban parks: Definitions, drivers and implications for management

Shelley Kotze (Gothenburg University)

Urban parks are commonly seen as the panacea for multiple of issues. From migrant integration to climate change, urban agriculture to wellbeing, biodiversity to obesity, urban parks are touted as the answer. Generally we see an ever-increasing amount of money spent on the (re)development of urban parks, with less money allocated to their ongoing management. In order to 'solve' a multitude of urban issues, parks are becoming increasingly complex in their design – and therefore can be characterised as multifunctional. However, increasingly multifunctionality simultaneously increases the demands of ongoing management. Multifunctionality as a concept is commonly associated with rural landscapes, and when applied to the urban context is commonly concerned with blue- green-infrastructure. Therefore, this research will explore the concept of multifunctionality in relation to urban parks and the impact that this has upon their management. Gothenburg, Sweden's second city, both promotes itself as a 'green' city, as views urban parks as a way of addressing its wicked urban problems. As such, the relationship between multifunctionality and management will be explored within this single case study. Focus groups will be conducted with the landscape architects, project managers, park managers and maintenance teams involved with the (re)development of urban parks in Gothenburg. The aim of the focus groups is to garner an understanding of what multifunctionality means to these different groups of actors, how multifunctionality manifests in design and the impact this has upon the management of urban parks. Preliminary findings demonstrate that a desire for multifunctionality is not only driven by the need to address a diversity of urban issues, but due to the funding models through which urban parks are (re)developed. Ringfencing funds from the sale of land for urban development funds the (re)development of urban parks. The ringfencing of funds creates a pressurised environment where funds are spent within a designated space in a short period of time, in part, through fear of losing the funds to other parts of the administration. A tentative conclusion is that

multifunctionality in urban parks may be considered over-functionality, which increases the complexity of ongoing management, making it more difficult and costly.

"The People's park is bigger, more freely located, more beautiful and – our own park": Hegemony, greenspace, and class struggle in turn of the century Norrköping. *Erik Jönsson, (Uppsala University)*

Based in work conducted together with Don Mitchell and Johan Pries I in this paper engage with park politics in turn of the century Norrköping, and in particular the 1901 establishment of the city's People's Park. This I do to explore the struggles over the kind of greenspaces that were made available to the population of one of Sweden's most thoroughly industrialised cities, the constellations that initiated and controlled these, and the kind of behaviours that parks should spur. Today most historians and historical geographers tell us that late 19th or early 20th century parks were elite landscapes, produced as explicitly de-politicised spaces enabling the moulding of park-visiting subjects in line with bourgeois sensibilities. But at the same time some current research underscores how greening is "available to a wide range of actors and political projects" and that it therefore has "no predetermined relationship to power and hegemony" (Angelo, 2021:22). In line with such remarks, tracing the early history of Norrköping's People's Park enables telling a history in sharp contrast with many earlier histories of park politics. Norrköping's People's Park was not delivered 'from above' by wealthy benefactors or state authorities, nor was it a park appropriated by the working class or by labour activists. Instead this was a park initiated, designed, materially shaped, owned, and for many decades managed by the Social-democratic labour movement. Choosing to establish their own park allowed these labour movement activists to establish a stable platform for political agitation and rallies when both public space and privately owned venues were often rendered off-limits. But, like other People's Parks established throughout Sweden, it also allowed the Social-democrats to anchor their ambitions of being a party for the people to a park that was supposed to be 'the People's' (cf. Berman, 2006). Telling the story of this park offers a fruitful opportunity to engage with questions concerning the geographies of hegemony, whether producing their own park lead to Social-democratic hegemony in Norrköping, and how a Gramscian conceptualisation of hegemony is not only about describing working class accommodation but also about exploring transformative potential.

When Apple came to town: the struggle over the meanings of public space and the public in Stockholm *Hoai Anh Tran (Malmö University)*

For the past few years, Apple, the global tech company, have chosen prominent public spaces in many cities as locations for its new flagship stores. Apple is said to implement a unique concept in which its flagship stores are designed not only to sell Apple products but also serve as "public" meeting places. In Stockholm, Apple seek permission to build a new flagship store in Kungsträdgården, the city's oldest and most popular public park. The project was positively received by the city's politicians who saw the presence of the influential global tech giant a potential for competitive positioning of the city and an opportunity for economic development. Only after forceful protests from a great number of citizens that the proposal was finally rejected. Contestations over public space is a topic of a wide academic scholarship. Widespread privatization, commodification, and increasing policing in many cities raised strong concern about the future of public space. The case of the attempted Apple store in the eminent historical park of Stockholm raises not only questions regarding the rationales behind commercialization

and privatization of public spaces in Sweden, but also questions about how the different notions of public spaces are contested and struggled over, and the variety of discourses that are used for their legitimation. Essentially, case raises question about the meaning of the public, who are involved in the notion of the public, and the different rhetoric involved in public-making. The paper addresses these issues based on planning documents and public consultation materials on the Apple case that were obtained from Stockholm city.

Does outdoor recreation behaviour during the COVID-19 associate with green infrastructure proximity and availability? - Cross-site analysis of Nordic cities *Nora Fagerholm, University of Turku. Karl Samuelsson (University of Gävle), Salla Eilola, (University of Turku), Matteo Giusti (University of Gävle), Kamyar Hasanzadeh (Aalto University), Anna Kajosaari (Aalto University), Silviya Korpilo (University of Helsinki), Marketta Kyttä (Aalto University), Liu Yu (Aalto University), Søren Præstholm (University of Copenhagen), Christopher Raymond (University of Helsinki), Tiina Rinne (Aalto University), Anton Stahl Olafsson (University of Copenhagen) & Stephan Barthel (University of Gävle)*

Recent empirical research has intensively explored the role of green infrastructure and outdoor recreation behavior during COVID-19 pandemic and confirm the importance of but also varying access to urban green infrastructure. However, only a few studies provide comparative analysis in the crisis situation. We provide empirical evidence of outdoor recreation behaviour across four Nordic cities ranging from a middle-sized city to large metropolitan areas. The pandemic restrictions were similar across the countries and it was citizens' responsibility to reduce social contact and respect social distancing. We analyse map-based survey data collected in Copenhagen (Denmark), Stockholm (Sweden), Helsinki, and Turku (Finland) (n=469-4992) during the early phase of the pandemic in spring 2020. Residents were asked to map their outdoor recreation sites, and we analyse the data from the perspectives of green infrastructure availability and proximity applying European wide spatial datasets and statistical analysis. Focus is on the differences across the four Nordic cities and the different socio-demographic groups (age, gender, employment, remote working, and children in household). The results are interpreted against the availability of green infrastructure at the respondents' residential location. The results highlight that the larger the city, the closer to residence and with less available urban green infrastructure the outdoor recreation targeted during COVID-19. Low green infrastructure availability at residence encouraged people to seek outdoor recreation experiences further away, and vice versa. However, this was not the case for those who shifted to remote working. Families with children live in surroundings with rather high availability of green infrastructure and go outdoors feasibly near their residence but use outdoor recreation possibilities in less green environments. Specific socio-demographic groups (e.g., unemployed) seeked outdoor recreation experiences during COVID-19 at a notable distance from their residence. We discuss the differences in outdoor recreation behaviour across the Nordic cities and suggest implications for green infrastructure management for future crisis or exceptional situations.

Foreseen consequences for recreational use of establishment of a national park in urban setting *Vegard Gundersen (Norwegian Institute for Nature Research), Berit Junker Köhler (Norwegian Institute for Nature Research) & Rose Keller (Norwegian Institute for Nature Research)*

Most Norwegian mountain areas and national parks receive few visitors (but their numbers are increasing) compared to national parks worldwide. A large majority of the 40 national parks on the mainland Norway is located in remote areas far from settlements and, by definition, they are without roads and other heavy infrastructure. Thus, by international comparison their physical appearance and service level usually matches the IUCN category I, wilderness areas, rather than the category II, national parks. However, during the last decade the purpose of national parks in Norway has changed radically to also include branding and visitor strategies to increase the tourism volume for local economy. As an extension of these political trends, the government plans to establish national parks closer to urban areas as well as establishing areas that include a recreational infrastructure and visitor services. Our intention here is to describe and discuss consequences for recreational use of the planned Østmarka national park in the fringe of the capitol city Oslo. To do this, we describe the current visitor volume, spatial and temporal extent in the study area by using crowdsourced Strava data in combination of electronic counting devices (EcoCounter, TrafX). Data from a short questionnaire at self-registration checkpoints at main entrances describes the types of activity and visitor characteristics. We use the description of current visitor use to frame our qualitative interviews with key stakeholders in the area covering themes of future recreational development and possible conflicts between users. Our results indicate that the number of visits to Østmarka is about 1.2 million during a year; most of this everyday traffic occurs in dense network of recreational infrastructure along the edge of the planned park. Stakeholder interviews revealed that the recreational use is increasing rapidly, and that the use of Østmarka has changed and become more heterogeneous in recent years. New user groups and activities as well as new technology and recreational equipment have led to a more complex activity pattern. However, stakeholders had different perceptions about user-conflicts. While some presented conflict as widespread among users, others presented a different user landscape: one characterized by mutual respect and consideration. The different descriptions seemed to be connected with different views on the establishment of a national park in Østmarka. Based on the different perceptions that were expressed, we have outlined two ideal-typical models for understanding the relationship between user groups, use and protection. We have chosen to call them the `harmony model` and the `conflict model`. We believe that an effect from national park establishment on future use will depend on 1) future trends in recreational use, and 2) which of the two above-mentioned models, harmony or conflict, will guide the implementation of the impending Østmarka national park.

Session 18 Housing in Crises: A European Perspective, COVID-19 and Beyond

Chairs: Defne Kadioglu (Malmö University) & Myrto Dagkouli-Kyriakolglou (Malmö University)

Auditorium M101, Monday

Conceptualising and resisting evictions in the COVID-19 crisis: Lessons from Scotland's Tenants' Union *Meg Bishop (University of Edinburgh)*

This paper explores the strategies deployed by a Scottish grassroots tenant movement in protecting people from eviction during the pandemic. When countries began entering national lockdowns, activists, anti-poverty organisations, and policymakers alike expressed concerns over the prospect of households being forced from their homes, risking homelessness in the middle of a crisis (ACORN, 2020; Mendes, 2020, Farha, 2020). In Scotland, tenants' union Living Rent called for a ban on evictions alongside financial support for renters to ensure their protection during the pandemic. As a result of the union's resistance, the Scottish Government enforced a moratorium on evictions in areas with strict Covid-19 restrictions and granted some financial aid to tenants. By analysing court records, and interviewing Living Rent members, I argue that the Scottish Government's frequent claim that it had banned evictions during the pandemic does not stand up to serious scrutiny. Placing my analysis within the conceptual registers provided by Hartman and Robinson (2003), Desmond (2017), and Marcuse (1985), I demonstrate that tenants have continued to experience evictions, not only formally through the tribunal system, but illegally and silently whereby they are displaced through other means. Finally, I examine how Living Rent has organised to resist both the instances of eviction, and the structural patterns of housing financialisation which make tenants vulnerable to eviction from the outset in fighting for housing decommodification.

Grappling with housing de/financialization. Scholar-activist experiences from Germany. *Tabea Carlotta Latocha (Goethe University Frankfurt am Main)*

Over the past decades, social rental housing in Germany has advanced to the new frontier of financialization, today serving the needs of institutional investors rather than those of low-income tenants it was originally built for (Fields/Uffer 2016; Wijburg et al. 2018). In my PhD, I approach housing financialization through the lens of (struggles for) social reproduction. Focusing on how marginalized subjects experience and cope with their liquid homes, I sought to ›demystify‹ how the abstract dynamics of global property markets (macro-level) have reshaped rent relations, tenants' everyday experiences of home and their struggles to stay put in neoliberalized urban contexts (micro-level). Following the long tradition of radical feminist scholars fighting against dispossession in cities around the world, I understand my activist-research as a political praxis that is both ethically and methodologically committed to a »form of situated solidarity« with marginalized communities, hence seeking to work what Loretta Lees and Michael Herzfeld (2021) call »beyond the academy«. This refers here to my aim of focusing on the lived experiences and making the voices heard of those social groups who hold a marginalized social and economic position, and are thus more prone to being exposed and suffer from »urban trauma« (Pain, 2019), hence the »slow violence« (Nixon, 2011) of neoliberal urban politics, austerity regimes and housing commodification that »means violently destroying lives.« (Reyes et al., 2021, p. 3). By deploying such situated feminist research perspective in the

conduct of my PhD project, I would like to show that the financialization of social rental housing in Germany is a contradictory process, with major risks building up as part of the value extraction agenda and serious consequences for vulnerable communities as housing quality and affordability are becoming subordinated to shareholder-values and the maximization of returns (Madden/Marcuse, 2016). In my contribution, I would like to discuss how a critical-feminist approach to researching housing financialization in ›situated solidarity‹ with marginalized communities can help grapple with the challenges involved in navigating the researcher/activist relationship and and collectively contesting transnational landlords.

Unsettled housing systems, social reproduction squeeze and violence in Thessaloniki
Nikolaos Vrantsis (Uppsala University)

Encompassing data from a year-long field based work in the neighborhood of Ksiladika in Thessaloniki, I will unravel a vigilant campaign of informal evictions of undocumented migrant squatters on behalf of local property owners. I contextualize the emergence of violence, historically and geographically, to suggest that this vigilant campaign is linked with (i) the unsettlement of the familistic model of social reproduction, (ii) the scarcity of outright homeownership as a resource of symbolic and material value and (iii) the particularity of Ksiladika, that is at once a relegated neighborhood and a land of promise. Hence, what is usually observed and hastily denounced as an act of pure racism, is here seen as an instance of the tectonic destabilisation of the local property regime, the gist of which is to be found in the social reproduction squeeze. Moreover, what might be perceived as a fringe phenomenon in a distinct context can in fact unspool the invisible, objective violence inscribed in the contradiction between housing aspirations and the incapacity to reify them, a discrepancy that rather than an exception reserved for the urban margins eats its way into the core of many housing systems worldwide.

"Batti il 5!". Grassroots strategies against the administrative invisibilization of Rome's housing squatters before and during the pandemic. *Margherita Grazioli (Gran Sasso Science Institute)*

Following the surge in squatting for housing purposes in Rome after the 2008 financial crisis, the Italian government has chosen to banish housing squatters from the access to local social welfare to punish them by the means of administrative invisibilization, while discouraging prospective ones. This criminalising effort was realized through the ratification of the 2014 National Housing Plan, whose fifth article prohibits the local registrars to accept a squatted place as a legally valid home address, causing manifold repercussions based on the squatters' intersectionality of differential inclusion, thus stripping housing squatters of both their civil (i.e. voting and be elected), social (access to local welfare) and mobility rights. Drawing upon the materials collected within the author's activism inside the Blocchi Precari Metropolitani collective (as part of the larger Movimento per il Diritto all'Abitare), the presentation contextualises the rational underpinning the Article 5 as part of a long-standing culture of administrative invisibilization of the houseless, and the poor, which has characterised Italian (and

Rome's) urbanism at least since the Fascist regime. It then proceeds to illuminate the escalation of the Article 5 from 2014 onwards for the 'illegal' inhabitants of squatted vacancies and public housing apartments, focusing on the turning point of the current Covid-19 pandemic. On the one hand, the lack of tracking by the healthcare system of address-less people was weaponised to displace, remove, or military quarantine those informal settlement and housing squats who have no solidarity or institutional connections. On the other hand, grassroots social movements (especially housing rights ones), NGOs, associations, legal aid and solidarity groups have been intensifying their campaigns and mobilizations also during the pandemic with a double goal: exposing the long-standing damage caused by the Article 5, while presenting the public opinion and policymakers with its further repercussions during the pandemic. Lastly, they have strategized new collective tools and modalities of street-level policymaking with cooperating local institutions to mitigate the consequences of the Article 5 and ensure the squatters' access to healthcare (including being vaccinated) and education.

Moving out and moving in – Understanding housing instability in Sweden *Karina Villacura (Malmö University)*

The Swedish welfare system – developed from the 1930s and onwards– was predominantly designed as a formula for wealth distribution. Combined with specific means-tested aid, its universal character was meant to guarantee access to services regardless of income and class. One of the essential pillars where this universalism was expressed was housing, especially when considering the key role played by the public housing system. Currently, the receding of the welfare state –experienced from the 1990s– has led to a model shift transforming the former general housing regime into a market-oriented housing system. The new business-like model has paved the way for the outburst of issues such as the lack of affordable housing and the financialization of the rental sector impacting, as expected, much harder to low and middle-income households, lone parents, young people, etc. The system that once aimed for equality is characterized now by instability and unaffordability. In this presentation, I would like to focus on how housing instability –as an outcome of the housing crisis and model shift– may turn visible through the mobility patterns of young families in the housing system. Changing residence is frequently understood as a crucial element in the functioning of the market-oriented model. However, moving out/in usually comes with a high price and consequences for an important group of people. The mobility of young families among different residences illustrates instability and allows us to understand another perspective of housing crises and their entanglements with the withdrawal of the welfare state.

The influence of selected building properties on the evacuation route choice strategy *Dajana Snopková (Masaryk University), Laure De Cock (University of Gent) Ondřej Kvarda (Masaryk University), Vojtěch Juřík (Masaryk University) & Lukáš Herman (Masaryk University)*

A closer understanding of decision-making processes occurring during evacuation is crucial for designing smarter and safer buildings. Previous studies and evidence from real evacuation events show that people don't always behave as one might expect. Often they neglect evacuation signage and plans or remain committed to their ongoing tasks. When unfamiliar with the building they often apply a retracing strategy and try to exit the building the same way they

came in. This seemingly irrational behavior of the evacuees is caused by stress, time pressure, and the lack of currently available environmental information. This contribution presents the design and preliminary results of our online user study where we focus on the influence of different properties of the surrounding built environment on the choice of the evacuation route. More specifically, we focus on the influence of corridor width and length, both influencing the visibility, which is one of the main factors influencing human decision-making during wayfinding, and stairs, which present the connecting point between floor levels and determine the integration of the corridor within the building. We created several virtual 3D models of T-junction crossings, which differed in our studied environmental properties. These models were presented via an online questionnaire using interactive 360° spheric photographs. We logged user mouse interaction and corridor choice. Results from our study will contribute to the body of knowledge in the understanding of human evacuation behavior and can be further used to enhance agent-based evacuation models.

Spatial patterns of Airbnb in major cities: are professional hosts special? *Kristóf Gyódi (University of Warsaw)*

Airbnb has created a significant incentive to invest in real-estate with the purpose of short-term accommodation provision in touristic cities. The robust growth of Airbnb supply has been accompanied with an increasing professionalisation of the platform. The main aim of the analysis is to examine the spatial patterns of Airbnb in Barcelona, Berlin and London focusing on the differences between listings that belong to non-professional and professional hosts. Using Exploratory Spatial Data Analysis techniques, we demonstrate that listings that belong to professional hosts are more concentrated in city centres, and are more influenced by the location of tourist attractions and hotels than non-professional offers. The results suggest that professional offers contribute more to the negative effects of Airbnb on local residents.

Asylum seekers and refugees unofficial tent camps as manifestations of housing crises *Rebecca Frilund (Northumbria University)*

European cities and metropoles attract migrants and asylum seekers, but once here, the harsh realities of neoliberal European housing markets can be devastating for them. In this presentation, I discuss an example based on my research on Tibetan refugees and their living conditions in tent camps in Greater Paris, one of their top migration destinations. Their housing situation resonates with many other asylum seekers and refugees who live in tent camps in Paris. It is difficult for them to earn so much that renting a place would be possible, and demand exceeds supply in state-funded housing, although the state should provide housing for them according to the law. Many asylum seekers and refugees live in tents for years because of the lack of affordable housing, even if they have been guaranteed asylum. As an example, a few days before my fieldwork trip to Greater Paris in December 2019, just before the global Covid-19 pandemic started, a tent camp of around 600 Tibetans was demolished by the authorities in a town next to Paris. They were offered shelter in dormitories and alike, and some were placed in other parts of the country. However, a new tent camp arose in the nearby forest while some Tibetans spent their nights on the property of a local NGO that assists them. During the Covid-19 pandemic, they were evacuated more quickly from the tent camps because their living conditions were considered unhealthy. Nevertheless, the evacuations do not solve the housing crisis as new tent camps start growing soon after the old ones are demolished. It is a vicious

circle that has been going on for more than ten years, and it seems that it is not going to end. The long-term solution would be to end neoliberal housing policies; housing has become more privatised and profit-oriented in Europe since the 1980s, making it increasingly unequal, particularly in the famous and expensive metropoles.

Gentrification in Dudelange: the production of housing and stages of social change (1980 – 2019) *Mădălina Mezaroşa (Luxembourg Institute of Socio-Economic Research) & Antoine Paccoud (University of Luxembourg)*

This article studies the relation between the production of housing and the social changes that occurred in apartment ownership over four decades in Dudelange, a postindustrial city close to the capital of Luxembourg. We draw on Land Registry data that contains information on the characteristics of apartment buyers: country of birth, age at purchase, occupation, and number of buyers. We identify four key actors in the progressive gentrification of the city: marginal gentrifiers, local developers, first wave gentrifiers, and investors. Marginal gentrifiers were the first non-locals to purchase new apartments in the city in the 1980s, as the industrial sector was gradually replaced by financial services. In the early 1990s, local developers built frantically in the city to capitalize on the growing demand for housing in Dudelange from workers in the financial centre. This supply shock created two parallel lines of gentrification: that within new apartments built from the 2000s onwards and that within the resales of the large number of apartments built in the 1990s. For both of these types of apartments, we find progressive change in the four characteristics studied – ageing, professionalization, internationalization, and an increase in couple buyers, reflecting the arrival of the first wave of gentrifiers in Dudelange – as well the important presence of investors. These changes are however much more pronounced among purchasers of new apartments. Despite the increased competition for housing and the surge of apartment construction, the paper argues that second-hand purchases slowed down gentrification and kept housing affordable in the context of incentivized real estate investments, decreasing ownership rates, and spatially displaced demand from the capital city. The findings show how the supply of housing (its timing and the actors involved) is a crucial factor to understand the unfolding of gentrification, both in terms of accelerating and limiting its spread.

Session 19 Mobilising, producing and contesting transport and mobility from below

Chair: Chiara Vitrano (Swedish National Road and Transport Research Institute)

Auditorium M101, Tuesday

"Bouncing between the buses like a kangaroo": Efficient transport, exhausted workers. *Chiara Vitrano (Swedish National Road and Transport Research Institute) & Wojciech Kębłowski (Vrije Universiteit Brussel, Université libre de Bruxelles)*

Ongoing debates about public transport (PT) in Sweden appear to highlight a growing contradiction. On the one hand, an increasing number of news reports depicts a continuous deterioration of working conditions for bus drivers in PT. According to the local trade unions, PT workers report long working days, interrupted by several hours of unpaid breaks. As a result, they suffer from extreme tiredness and experience difficulties attempting to balance work and private life. On the other hand, the current conditions comply with the Collective Agreement and the employers, private companies operating PT based on a procurement agreement, argue that

current work schedules are necessary to ensure service efficiency and provide full-time employment. The standards of PT services are indeed very high, and across the country PT is approached as a central component of sustainable urban development agendas. We address this contradiction as a social conflict between the efficiency and sustainability of PT in Sweden and the worsening working conditions reported by trade unions. By means of a thematic analysis of semi-structured interviews, we explore how bus drivers in procured PT—approached as producers of PT but also actors that contest PT agendas and practices—experience the spaces and times of their work, with a focus on the different dimensions of their temporal well-being. Temporal well-being is here defined as a series of conditions describing a person's satisfaction related to time use, including the availability of sufficient time to conduct the required and desired activities, compatibility between work-rhythms and personal and social rhythms, and control on one's own time. We suggest that temporal well-being is a further element of distributive justice in transportation; the way in which transport systems provide or hinder temporal well-being and the way in which temporal well-being is distributed is a matter of transport justice. Additionally, we aim at highlighting the relative absence of workers from the literature on sustainable transport and mobilities. While the working conditions for urban PT workers have been analyzed extensively in health and occupational studies, they are much less prominently examined by transport and mobilities scholars, including those drawing upon critical approaches.

The freedom and unfreedom of the bus: the struggle over transit in metro Atlanta's Clayton County and the limitations of the right to mobility *Marcus Mohall (Uppsala University)*

In March 2010, faced with a budget crisis in the wake of the Great Recession, the leadership of metro Atlanta's Clayton County closed down C-TRAN, the county's small-scale transit system. After the last bus ran, thousands of predominantly Black riders were deprived access to basic transportation. Four and a half years later, however, following extensive organizing efforts by grassroots transit activists, the county's voters approved a referendum on joining the city's main transit system, the Metropolitan Atlanta Rapid Transit Authority (MARTA). As a result, the county's public transportation infrastructure was restored and significantly expanded. This paper traces how those who worked to bring MARTA to Clayton County saw public transportation as an infrastructure conducive to freedom, and how this understanding resonates with some of the core arguments about the integral role of transit systems in allowing urban residents to secure their "right to mobility". For the transit activists, MARTA held the potential to vastly improve the lives of those who relied on buses and trains to meet their basic mobility needs. Critically, they conceived of their efforts to eradicate the disastrous conditions created by the closing of C-TRAN as part of the broader struggle for Black freedom. Concomitantly, however, the conditions in Clayton County disclose the importance to consider how the need for transportation access tends to be grounded not only in a desire to be mobile for reasons associated with freedom. The need for transit was to large extent grounded in the need to be mobile simply to survive, insofar as the city's racialized housing and labor markets require many to take on long and burdensome commutes. By exploring the dialectics of how access to transportation was crucial to make possible forms of mobility associated with freedom as well as with sheer survival, the paper draws attention to some fundamental limitations to what merely expanding and improving public transportation can accomplish, and how the idea and value of a right to mobility must necessarily be situated in relation to from where the need for mobility originates in the first place.

Fair but Limited: The Insurgence of Informal Transit Practices in Beirut as Social Innovation *Carine Assaf (KU Leuven)*

Following the government's decision to fully lift the subsidies on fuel in August 2021 due to Lebanon's dire economic crisis, Beirut's streets have turned into scenes of cars queuing at gas stations, while other people are fighting for their right to mobility through finding alternative, yet affordable, modes of transport. Out of need, the mobility landscape is witnessing a shift in transit behaviours due to the lack of political consensus over effective transport policy initiatives since 1960. In other words, some people are moving beyond car dependency to navigate the city by walking, cycling, car-sharing, or using the existing privately-operated transit system, including buses, minivans, shared taxi services, and tuk-tuks. The emergence of these informal practices are not new social phenomena. In fact, they have been challenging the predominant car-dependent paradigm since the late 1950s and are seemingly resilient within the apparent chaos in transport, and filling the gaps in the public transport service provision. The question remains, to what extent is the insurgence of these informal infrastructures and self-managed collective practices, producing innovative social responses to provide socio-spatial transport justice? This leads to a more fundamental question regarding the roles of the main actors in transport, including governmental bodies and the transit unions. This paper examines these urban transport infrastructures articulated from below through mobilising a socio-spatial historical-institutionalist approach. This analytical framework is designed to demonstrate how the interplay between different agencies in Beirut, from the year 1960 until 2021, has imbued political differences in transport infrastructure, leaving inhabitants with para-transit practices. The paper builds on collected stories and maps, interviews with transport stakeholders, socio-spatial ethnographic observations of transit practices, the analysis of popular discourses between 2018 and 2021, and archival material including articles, news and governmental reports, and so on. The paper concludes by arguing that the informal transport practices are insurgent in a way to address needs unaddressed by the government and market but are not enough for being socially innovative. These informal transit practices are not changing social relations nor empowering because they are reproducing decennia old power-confirming and coping practices.

Negotiating emerging affordances in the urban and peri-urban environments: Recreational mobilities during the pandemic *Neva Leposa (Swedish University of Agricultural Sciences) & Mattias Qviström (Swedish University of Agricultural Sciences)*

Recreational urban runners are highly skilled. They take various strategies to negotiate (i.e. take advantage of or avoid) the urban structure. On the one hand, they avoid the traffic, traffic lights, and noise, as they seek the 'best nature experience as possible' in urban places. This is either by running next to the water or through the city parks, for example. On the other hand, they take advantage of the affordances of lights and the cleaned roads to make their running possible in otherwise challenging weather/light conditions. In addition, knowing the city becomes visible, as they need to learn to establish the time/length of their route, so they manage to go for a run when there is a gap in their work schedule for example, and/or navigate the daylight in the late autumn in Sweden. Runners establish their practices of running by continuously negotiating the emerging affordances in the urban environment. Inspired by Affordance theory and Social Practice Theory we analyse the ways runners navigate through life and places in their running practice. We tap into the everyday recreational mobilities, by empirically drawing on diaries and solicited interviews with almost 40 recreational runners in various urban and semi-urban areas

in November, in Sweden. During the COVID-19 pandemic, work from home became common practice for many in Sweden while travel and use of public transportation were suggested to be avoided. Consequently, since the everyday recreational mobilities commonly departed 'from home', one could recreate when the schedule was empty of meetings for example. That meant that also during the dark season, being outside while it is still bright outside became possible. The pandemic conditions were particular and formed a different city, with perhaps less traffic and more people outside. However, we argue that these contexts established an ideal methodological opportunity for exploring the importance- and suitability of the urban and peri-urban environments for outdoor recreational mobilities, i.e. what is made possible as well as what is left out.

Session 20 No austerity, new austerities, Nordic austerities? Comparative geographies of health and social care in pandemic times

Chairs: Ed Kiely (University of Cambridge) & Sander van Lanen (University of Groeningen)

Auditorium M101, Monday

Introduction: Quiet Austerities – Locating austerity in Nordic and Northern European contexts *Sander van Lanen (University of Groningen), Ida Norberg (Stockholms Universitetet) & Ed Kiely (University of Cambridge)*

European austerity is most frequently discussed in relation to the UK and Southern Europe. The former was led by a series of fiscally conservative governments which proclaimed themselves austere, while the economies of Spain, Portugal, Cyprus, and most prominently Greece were ravaged by Troika-imposed conditionalities. The prominence of these instantiations of austerity is a consequence of multiple geographies. There is a political geography of domination, in which austerity is imposed from above and outside, and a consequent geography of resistance. There is a social geography of poverty and sudden destitution, and a cultural geography through which these privations are ideologically justified. In this introductory commentary, we argue that these geographies work together to render austerity particularly visible in UK and Southern European contexts. In contrast, we wish to draw attention to more hidden modes of 'quiet austerity' which operate in Northern Europe and the Nordic countries. Highlighting the history of 'frugality' in this region, we suggest that austerity here is longstanding, subtle and marked by uneven geographies which differentially target marginalised social groups. This is a less spectacular mode of austerity, which nonetheless retains many of its brutal capacities. Drawing on case studies from Sweden and the Netherlands, we make the case that scholars of austerity need to turn their attention towards these regions, where austerity is assuming new forms; in turn, these demand new practices of resistance.

Organized abandonment, austerities, and disabled people in British Columbia during the age of COVID *Lawrence D Berg (University of British Columbia)*

We present in this paper some of the long histories of neoliberal austerities and their variegated impacts on disabled people in British Columbia, Canada. BC began to experiment with neoliberal austerity when it instituted supply-side economics under the guidance of the Fraser Institute (the first neoliberal thinktank in the world) in the early 1980s. Disabled people bore the brunt of this neoliberalizing austerity. They have continued to bear a higher proportion of the 'costs' of

neoliberalization under both Right and Left provincial governments. More recently the COVID pandemic foregrounded the disproportionate impact on disabled people who received lower amounts of COVID response related state funding, and were the first people to have such funding reduced as the pandemic entered its third and fourth waves. These policies highlight the ways that the state and capital treat disabled people as surplus labour (i.e., labour not in use) or as failed human capital that they are happy to abandon. We analyze this organized abandonment drawing on Marxist feminist theories of social reproduction, materialist disability studies, and poststructuralist political-economic theories of the production of identities in place.

The affective geographies of the fraying welfare state: a comparative approach *Eleanor Jupp (University of Kent)*

Comparison between welfare states has been characterised by typologies of different national states as 'welfare state regimes' in terms of differing arrangements of social protection, classically following Esping-Andersen as 'social-democratic' (encompassing Nordic states); 'conservative' and 'liberal' (encompassing the UK and US). This paper explores the potential for seeing welfare states as 'affective regimes', encompassing ambivalent dynamics, atmospheres and micro-geographies, yet retaining elements of coherent affects across national contexts. It is argued that recent work on austerity within social and cultural geography has developed new conceptual and theoretical tools to explore such affective regimes. The paper engages with matters of presence and absence, ambivalence and care, and the dynamics of the 'edges' of the state. Such approaches offer new opportunities for social and cultural geography to engage with matters of comparative political economy and governance.

Buying time: Austerity, mental health care and the commodification of the future *Ed Kiely, (University of Cambridge)*

Following the 2008 financial crisis, countries across Europe introduced austerity programmes, using soaring debt levels to justify the slashing of state services. In the UK, successive governments made spending reductions which constituted the deepest cuts to social provision in since the foundation of the welfare state. These cuts were then redistributed and rescaled so that they fell disproportionately on local and regional levels of government which organise and provide social care. Geographers have tended to interrogate the effects of cuts on people at the sharp end, including service users, families and staff. In contrast, my study is comparative, analysing a mental health day centre in the process of being cut alongside the bureaucrats doing the cutting, in one English local authority. I aim to understand how service cuts are made tenable – logically, morally and affectively – for those charged with wielding the knife. In this paper, I argue that commissioners – that is, the bureaucrats who plan and deliver care services – frame the day centre as outmoded, a relic of the past. This temporal stigma works to discredit the service, justifying bureaucratic indifference and inattention. In turn, for the people who rely on the service, this renders the future uncertain. They are forced into fundraising activities which aim to 'buy time', commodifying their labour, in an attempt to purchase a secure future. Austerity works through these temporal processes to deepen ongoing neoliberalisation and commodification.

Session 21 Analysis of flows, dynamics, and accessibility

Chairs: Ossi Kotavaara (University of Oulu) & Olli Lehtonen (University of Eastern Finland)

Auditorium M101, Wednesday

Spatiotemporal Logics of Urban Bike Commuting *Radim Lískovec (Masaryk University) & Ondřej Mulíček (Masaryk University)*

The contemporary city is a highly fluid relational environment in which mobility and accessibility are the key qualities shaping the patterns of urban everydayness. We argue that each urban mobility practice produces and defines a specific ensemble of actors, technologies, places and times. The aim of the paper is to explore the embeddedness of bike commuting practices into a regular spatiotemporal organization of everyday urban life. We seek to explore the spatiotemporal contexts and situations in which 'pragmatic cycling' seems to be an appropriate mean of mobility. A special attention will be paid to the rhythms integrating bike commuting with specific urban locales and specific urban times. In a mixed research design carried out in the city of Brno (Czech Republic), we will use aggregated quantitative data as a basis for identifying and qualitatively interpretation of bike-commuting related spatio-temporalities. Information from bike-sharing companies on the rides and station occupancies will be used as a kind of proxy-data to outline the spatial type and temporal identity of places animated by pragmatic cycling. The position of these locales within the overall mobility-based rhythms of the city will then be commented on in greater detail.

The 15-minute countryside: shifting daily urban systems and the dependability of public transportation in rural Netherlands. *Ate Poorthuis (KU Leuven)*

The 15-minute city – providing most daily needs relatively close to home and thus shrinking the spatial reach of daily urban systems – has gained popularity among policy makers as a means for a more sustainable future. While this goal seems achievable for many European cities (i.e., urban residents have 15 minute access via walking or public transport), rural areas face a much more challenging situation given lower density and disinvestment in both public transportation and amenities. It is with this urban-rural juxtaposition in mind that we analyze changes in the size of daily urban systems and the role of public transportation within those systems in the Netherlands from 2012 to 2019. To conduct this analysis, this paper uses two datasets based on actual mobility and travel behaviour, rather than the availability of public transportation or hypothetical trips. The first dataset is based on a historical dataset of 120 million geotagged tweets sent during the study period, and the second dataset comes from detailed travel logs provided by the annual Household Travel Survey (OViN/ODiN) conducted in the Netherlands. For every trip identified in each of the datasets, we calculate the travel time by private (car) and public transport, allowing us to analyze the average trip length for both origins and destinations (aggregated to postal code zones), as well as the discrepancy between private and public transportation travel times – a proxy for the dependability of public transportation – for each postal code zone. To evaluate a potential change in the size of daily urban system and average trip length, as well as the dependence on car transportation, we compare and map these metrics based on both datasets for both the 2012-2015 and the 2016-2019 period – paying specific attention to the differences between rural and urban postcodes as well as the potential relation between changes in these metrics and socio-economic characteristics.

New databases to analyze dynamic population – case of North Karelia, Finland *Antti Petteri Hiltunen (University of Eastern Finland) & Olli Lehtonen (University of Eastern Finland)*

Since the dynamic population estimation lacks a "golden standard" for the methodology and type of data to use, there are varying types of data and methods to capture temporary and seasonal population, yet almost all studies use census population statistics in one way or another. For instance, public services and resources are planned and allocated based on the permanent settlement structure, and do not recognize the increasingly complex and interconnected nature of today's dynamic society. In this paper, we used electric consumption (EC) and remote-sensing (RS) data of night-time lights to estimate dynamic population in North Karelia, Finland. Census population grid of 1km² from Statistics Finland was used to aggregate the EC and RS data to same geographical scale. Changes in the EC and RS was compared to the baseline values set for each month. Census population only captures one point in time and is based on inhabitant home addresses, assuming most people spend their time at home. We used EC and RS data to evaluate the point in time when the census population best describes the dynamic population, as when most people are home the census data is closest to the actual population distribution in that point of time. From this we can estimate the population dynamics inside the region. The results shed light on the relation between dynamic population and traditional population statistics.

Understanding cross-border mobilities of people: Insights from social media data in case of the Greater Region of Luxembourg *Olle Järv (University of Helsinki)*

Mobility is a global megatrend – constant mobilities of people transcend nation-state borders and further constitute to the global network society. Borders are crossed not only for international migration and tourism for leisure and business, but also for a less studied form of cross-border mobilities – recurring and frequent mobilities crossing state borders for work, shopping, services and leisure as individuals' daily life practices and social networks are increasingly not confined to a fixed territory of one country. Frequent cross-border mobilities from both sides of a state border further contribute to producing functional border regions. Border regions are a key issue towards balanced and sustainable spatial cohesion within the EU, thus receiving considerable political and monetary resources. Besides improving governance and development of services and infrastructures, one crucial aspect is to broaden interactions and foster integration of local people in border regions. However, we know little about actual border practices of local people in space and time due to lack of suitable data and methods to provide such information. This hinders the evaluation of the effectiveness of cross-border developments from the perspective of local people. To tackle current bottlenecks in methodology and knowledge, we stem from the notion that mobility can be used as a tool to understand society. We propose to use mobilities crossing borders as an indicator to understand cross-border interaction and integration of local people. For operationalization, we propose to use big data approach as it is proven feasible for studying human mobility. Especially, social media data is a promising source given its inherently transnational nature. With this paper, we aim to conceptually demonstrate the feasibility of big data approach in cross-border mobility studies, and empirically provide new insights by revealing who are crossing borders, when and where borders are crossed. Special attention is given to cross-border commuters. We use Twitter data and investigate one of the busiest border regions in the EU – the Greater region of Luxembourg. We compare our results against existing survey and registry data. Finally, we

discuss prospects and challenges in using big data for cross-border mobility research, and potential avenues for future research.

Flow of Ukrainians to Poland - labour migration and refugees *Konrad Czapiewski (Institute of Geography and Spatial Organization PAS) & Tomasz Komornicki (Polish Academy of Sciences)*

Since the EU accession in 2004 Poland witnessed the biggest migration flows in the contemporary history, first mainly outflows to the Western European countries and recently also inflows from Eastern European countries, namely Ukraine. Ukraine is the main reservoir of foreign labour coming into the CEECs (Górny & Śleszyński, 2019; Prát & Bui, 2018). Poland emerged as the top temporary labour-migration destination among OECD countries, mostly due to migration from Ukraine (OECD, 2019). Since 2006, Poland's procedures in line with which citizens of some former USSR Republics have undergone steady simplification year after year. A work permit is no longer required, only an employment-office registration of a foreigner by an employer. The result has been a quantum leap in numbers of foreigners working in Poland, from about 300,000 in 2013 up to more than 2 million in 2018. At the beginning of 2020 COVID-19 pandemic has appeared. None of the previous events that had an influence on the volume of cross-border traffic across Poland's eastern border has had a greater impact than the restrictions put into place to combat the COVID-19 pandemic, according to the study. Collected data shows that the Polish-Ukrainian border traffic has been recorded at only one-third of the pre-pandemic cross-border traffic numbers. A slightly lower, yet still significant, decrease has been seen on the Polish-Belarusian border where only one-fourth of the pre-pandemic border traffic numbers have been observed. And now, on 24th of February 2022, the Russian Federation has declared war on Ukraine. More than 1.5 million refugees from Ukraine have crossed into neighbouring countries in 10 days — the fastest growing refugee crisis in Europe since World War II. About 70% of those people crossed to Poland. This presentation will be a record of the dynamic changes in the movement of people between Ukraine and Poland over the last 6-7 years. It will be a narrative of three different factors determining these flows - economic, epidemiological and finally those related to fleeing the ongoing war. This research has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 726950 and ESPON 2020 Cooperation Programme, partly financed by the European Regional Development Fund, within a project IRiE "Interregional relations in Europe". This paper is solely a reflection of its authors' views. The Commission is not responsible for any use that may be made of the information it contains.

Polycentric spatial vision in planning practice: between normative narratives and specific institutional frameworks *Jiří Malý (Institute of geonic of the CAS) & Marek Lichter (Masaryk University)*

Spatial planning concepts, such as polycentric development or compact city, are based on theoretical and analytical research into the functioning of contemporary cities and metropolitan areas. These are concepts with a strong geographical and spatial dimension. At the same time, however, they are becoming planning normatives that penetrate planning practice at various scale levels. Each normative is by definition limited when encounters local specifics. The paper aims to point out the limits and barriers in the application of polycentric and compact narrative in the given institutional conditions of the post-socialist territory of the Czech Republic with emphasis on the scale of daily urban system (DUS) as a spatial arena for routine everyday human practices (work/school commuting, shopping, leisure activities). A different

understanding of scale, hierarchy of spatial planning documents and various explanations of the terms 'centrality' or 'metropolitan space' are discussed. Although the defined normatives have been part of the global planning discourse for several years, only after permeating spatial planning practice their importance for managing particular territories can be evaluated. The paper is based on quantitative analysis of the settlement structure of selected metropolitan areas and qualitative research of spatial planning and strategic documents. Preliminary results show the incompatibility between the generally adopted narratives of spatial planning and the institutional framework of a particular territory and emphasize the need of the institutionalization of metropolitan areas in relation to a more effective planning at the scale of DUS.

Location optimisation of biogas reactor(s) – Combined network accessibility potentials of incoming and outcoming flows *Ossi Kotavaara (University of Oulu)*

A biogas reactor is used to produce biogas (mainly methane) that can be used for energy e.g in industry, transportation, and farms. The reactor produces also and digested slurry (i.e. digestate) that can be used in fertilising. To operate biogas reactors efficiently in economical and ecological terms, incoming and outcoming flows must be maximised with minimised transport costs. This trade-off sets interesting spatial location optimisation or allocation problem. To benefit from industrial (economies of) scale, biogas reactors should be as big as possible, but transport costs of incoming and outcoming flows at longer distances are the key limiting factor. Incoming flows are most often by-products from agriculture (cattle or pig manure or farm field biomasses), sewage sludge, food waste, or other industrial or municipal waste. Digested slurry is main outcoming flows (in tons) whereas the main product to markets is biogas (sometimes liquefied). Incoming flows from agriculture may be collected and transported from dozens to hundreds of origins and digestate may be distributed to an even more large number of sites at farm fields. This study applies the potential accessibility analysis to measure maximum site-specific potentials of both (incoming and outcoming) flows for a large number of competing sites at Northern Ostrobothnia Finland. The data consists of 1) Digiroad model of transport network 2) farm-specific cattle register data which is connected to Finnish Normative Manure System and 3) farm field register data. Preliminary results indicate that large regional variation exists in accessibility potentials of incoming and outcoming flows, but in southern parts of Northern Ostrobothnia high local potentials are reached.

ARIFi – a model for a fairer consideration of accessibility and remoteness in regional and municipal policy *Simo Rautiainen (University of Eastern Finland)*

Finnish regional and municipal policy treats certain regions unfair as it does not consider local differences in accessibility and remoteness properly. In my previous research I have shown the shortcomings of the remoteness indicator used currently in the system of central government transfers to local government. Current indicator is based exclusively on population. It considers varying geographical conditions deficiently and does not consider the accessibility of the service centre network at all. Thus, regions with challenging community structure and transport network disrupted by geographical factors, such as water bodies, are left in an unequal position. As a solution, my research provides a tool for more equitable definition of remoteness, and for assessing and developing regional equity in decision-making. In this research, I use geospatial methods to develop an accessibility and remoteness indicator for Finland that considers both transport and service centre networks. My model is inspired by Accessibility / Remoteness Index

of Australia (ARIA) which has been applied also in other countries. I will develop the model more accurate in describing the movement of the people and Finnish geographical conditions. The results of the ARIFi indicator describe the accessibility and remoteness in different parts of the country and their position in Finnish regional structure. With the new indicator, I can also assess how fairly the system of central government transfers to local government currently treats different regions and create spatially fairer distribution model.

Supply and demand of European forest resources *Anita Poturalska (Uiniversity of Oulu)*

Forest ecosystem services (FES) are one of the key sources of natural capital globally. They provide a wide range of different ecosystem services (ES). This includes preventative benefits of forest (regulating ES), its' spiritual and aesthetic functions (cultural ES) and useful physical forest products (provisioning ES). Provisioning FES are essential for humankind. Especially wood production is crucial, being a key provisioning service of forests. In Europe, forests and wooden lands cover approximately 1.02 billion hectares. In the recent decades, sustainable management and protection of forests have led to an increasing focus on forest production patterns. However, exploitation of forest resources is still on very high level. Regional wood supply is driven by constantly growing demand, which is trending to be even higher in the upcoming years. Wood supply is not only dependent on harvest. Transport system conditions and the cost of transportation are playing an important role in provision of this ecosystem service. The aims of this study are: 1) to explore the balance between production and consumption of wood products across Europe, 2) show the availability of primary wood products using transportation network by road, rail and ferry in different distances via accessibility analysis, 3) produce easy-to-read maps of wood supply and demand balance across Europe. To answer the questions of balance and accessibility of wood products, we will use the following data: regional wood harvest from national databases, apparent wood consumption and transportation cost data as well as the network model of European infrastructure. Analysis of accessibility will be performed using Enhanced Two-Step Floating Catchment Area (E2SFCA) method from Luo and Wang (2003), applied recently to map mismatch in food supply and demand in European scale (Ala-Hulkko et al. 2019). Testing accessibility analysis for forest resources can help to better understand of the balance between wood supply and demand across Europe. This approach can be a promising for spatial visualization of ES supply and demand compared to overlay analysis.

Mapping the balance between supply and demand of grains globally *Terhi Ala-Hulkko (University of Oulu)*

Achieving sustainable global food security is one of the biggest challenges for humankind. Food security refers to conditions in which "all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (FAO). Despite the satisfactory level of global food production in general, shortage of food is still a huge problem for a third of people globally. The availability and access to food supplies has a key role in achieving global food security goals. Regional balance between production and consumption, as well as functional transport systems are important for satisfying demand. To ease the regional food shortages in the world (e.g., by developing agricultural policies, farming practices and food markets), we need timely and accurate information on global food accessibility. The central aim of this study is to (1) analyze the current under-supply, balance, and oversupply of grains using precise transport networks and generalized transportation costs based on bilateral trade and, (2) identify the impact of potential

shock events on food accessibility when grain production is reduced, and transportation infrastructure is damaged. The study is based on the Geographic Information Systems (GIS)-based data on food grain supply and demand and multimodal global transport network model of road network, major ports, and maritime connections. The potential to transport grain products from supply to demand areas is calculated based on the enhanced two-step floating catchment area (E2SFCA) accessibility method. Our preliminary results indicate that global accessibility of grains varies significantly. Especially Siberia, the Arabian Peninsula, Central Africa, and Central America are the most vulnerable in terms of regional food accessibility. Some regions suffer from poor accessibility, even if the potential transport distance is increased from regional to continental level. Reported results are, however, research in progress and our next goal is to assess the impact of food shocks and infra-hazards on regional food accessibility across the world.

Session 23 Future health geography and geospatial health

Chair: Olli Lehtonen (University of Eastern Finland)

Auditorium F100, Wednesday

Rural to urban migration among elderly - consequences for lifestyle, health and well-being

Ivar Svare Holand (Nord Universitet)

The proportion of old among the population is increasing in Norway, and we see a tendency that the old migrate to more centrally located places of residence. Both urbanization and aging population are transformative trends that for the individuals alter lifestyles and have consequences for health and well-being, while for the collective it changes the preconditions for localisation of welfare facilities and services. This study at Nord University is investigating these trends, asking questions about the characteristics, socially and physically, of the locations that individuals migrate from and migrate to, as well as health consequenses. The main body of data is self reported health for elderly persons from Trøndelag County (about 20 000 respondents, Trøndelag Health Study, years 1996, 2007, and 2018) linked with socioeconomic and physical profiles for one-kilometer radius areas centered on the locations of residence for each individual (register data from Statistics Norway). This presentation will report preliminary observations.

How the opportunities to do sports vary spatially and between socio-economic groups, case Helsinki and Jyväskylä

Marisofia Nurmi (University of Helsinki)

According earlier studies, physical activity promotes physical and mental health and improve quality of life. Healthy and active lifestyle again help to prevent social exclusion. As part of our project Equality in suburban physical activity environments (YLLI) we study how the possibilities to do sports and live physically active life varies spatially within cities and between people from different socio-economic backgrounds. Analyses include both city-wide spatial analysis and other methods (such as phone interviews and surveys) applied in our two Finnish case suburbans: Huhtasuo in the city of Jyväskylä and Kontula in city of Helsinki. We have studied the geographical accessibility of different types of sport facilities based on door-to-door travel time calculations of four different travel modes: walking, cycling, public transportation and private car. Using these calculations, we are analysing the diversity of geographically accessible sport facilities and its spatial variation in Helsinki Metropolitan Region and Jyväskylä. The preliminary

results show that people living in suburban areas (and especially in our case study areas) have quite good possibilities to do different types of sports, based on geographical travel-time accessibility. We are also going to see whether there is socio-economic disparity in geographical accessibility of sport facilities. However, the real possibilities to do sports and access facilities depend also on other measures of accessibility than only geographical: mental, knowledge based, economic and social accessibility. Different barriers to do sports have been identified in our phone interviews in which we asked the inhabitants of the case suburban areas about their physical activity. If the sport facilities are already geographically accessible for also people from lower socio-economic backgrounds, sport planning could extend their focus to address the other measures of accessibility, and related barriers where it is possible.

Spatial patterns of register data derived wellbeing in Sweden *Gijs Westra (Uppsala Universitet)*

Research context In recent years, the interest in wellbeing in the social sciences and governance has increased. One of the methods to measure wellbeing is by creating surveys indicating objective measures of the life situation of individuals, often dubbed “objective” wellbeing. While this approach is not without weaknesses such as the general paternalism of the researcher having to choose what is important for the participant´s wellbeing, this approach yields clear results with clear areas for improvement which can be used in policymaking. Data The data used will be the PLACE dataset. The PLACE dataset is a collection of Swedish register data made available to Uppsala University. Crucially, the data places every individual in a 100 by 100 meters grid, making spatial analysis possible. Additionally, it provides objective data on the neighbourhood and family as well, allowing for a reliable holistic approach to wellbeing. For this analysis, only the adults in the year 2015 will be used. Method An index of wellbeing is made containing four dimensions: housing (dwelling size), health (received health benefits), labour status (income and activity status), and marital status. Based on robust findings in previous literature, each component is standardized into a score from 0 to 10. Using this method, a score indicating the probability of somebody being well is created. Furthermore, bespoke neighbourhoods have been constructed to explore individual-based neighbourhoods that do not follow the (il)logic of administrative borders. The index spatial patterns are subsequently studied using various spatial analyses. Results The index tends to evaluate life at the city’s periphery and the countryside as better, regardless of the method of aggregating data. Nevertheless, there are also arguments that life in the city is mostly an economic necessity and not necessarily the best life. Furthermore, outlier analysis on a neighbourhood level reveals that there is a clear segregation of wellbeing in the three major cities of Sweden. Lastly, in every form of analysis and at every scale, the region of Småland appears to be the region with the highest index scores, therefore, making it the place where the population is most likely to feel well.

Multi-local set challenge for provision of public health services *Olli Lehtonen (University of Eastern Finland)*

In the simplest definition, multi-local living means that a person or family have more than one residence or place to stay for a longer period. The concept of multi-locality is a current and global phenomenon, and in Finland it has become common during the last few decades. However, no attention has yet been directed to include it in the planning and allocation of the public health services. In this paper, we ask in what extend the public health services are allocated for areas based on their permanent population and what are the consequences of this allocation for the potential accessibility of the health services in different seasons during the

year considering the multi-local living of the population. The questions are evaluated with statistical modelling and geospatial analysis using uses North Karelia in Finland as the research area. The multi-local living and seasonal variation of the population is analysed with cellular data by using Telia Crowd Insight database. The results of the paper demonstrate that the changing seasonal scale and dispersion of the population challenge planning and allocation of the health services which is currently mainly driven by permanent population. Ignorance of the seasonal variation in population highlights the need for the use of new dynamic population data sources in the future planning and allocation of the health services. In the modern multi-local society, temporary mobility should be treated as an integral part of regional populations, and ignoring it hampers the complete understanding about population processes in different regions and their service needs.

Session 24 Advances in GIS and open source approaches

Chairs: Eliisa Lotsari (University of Eastern Finland) & Nora Fagerholm (University of Turku)

Auditorium F100, Wednesday

Pilot study showing opportunities and challenges of digital 3D geovisualizations in participatory urban planning *Salla Eilola (University of Turku)*

Digital 3D geovisualizations supporting communicative urban planning have been developing fast in the past two decades. 3D geovisualizations attract attention in their capacity to support citizen and stakeholder participation in planning processes. The importance of communication and its needs in various phases of planning has increased in parallel with smart city development and the large amounts of geospatial data of our urban environments. The usefulness of digital 3D geovisualization tools for professionals has been studied in recent years, however, their usefulness for citizen participation in planning is a new avenue in research. We present results of a pilot study in which citizens were engaged in an urban renewal planning through a 3D-based public participation geographical information system (PPGIS) survey. The aims of the study were to test the usefulness of the 3D-based PPGIS tool for participation and capture citizens' wishes for the future development of the area. The pilot was carried out in collaboration with the city of Turku and two Finnish software companies in one city block in Turku in April 2021. The 3D-based PPGIS combined Maptionnaire online survey platform and enhanced 3D city model (S3D-maps). It included questions regarding future wishes for the city block and feedback on the usability of the 3D components of the survey. Altogether 135 respondents mapped their wishes in the 3D view resulting in 368 map markers that we analyzed using content analysis and spatial visualization. The results were summarized for the use of city planning authorities. The user feedback and survey log were used to analyze the usability and challenges of the 3D geovisualization. Large proportion of people who opened the survey quitted without finishing. This was particularly evident among those using a smartphone. Certain common challenges were reported by 35 % of the respondents (n=124). However, 84 % of the respondents, who completed the survey (n=125), would recommend the use of 3D-based PPGIS surveys for digital participation. Based on the pilot study, we discuss opportunities and limitations of the digital 3D geovisualization tools for citizen engagement in urban planning.

3D PPGIS data: the new spatial analytical prospects *Kamyar Hasanzadeh (University of Turku)*

In 2021, the GreenPlace team together with two companies and the city of Turku developed and piloted an online mapping survey to collect Turku citizens' views for urban planning. The major novelty of the survey is in the use of a 3D visualization as the participatory mapping background. The use of conventional 2D participatory mapping data is already well-known and a wide range of spatial and statistical analytical methods have been applied over years to study such data from different aspects. However, the addition of altitude as the third dimension to this data comes with not only new opportunities, but also analytical challenges. Identifying and tackling these technical challenges is essential as it will help us harness the new possibilities emerging from this fresh approach to participatory mapping. This is particularly important and topical at this time as 3D city models and so-called digital twins are becoming increasingly common in urban information management and planning. In this study, we will explore how 3D PPGIS data can be spatially analyzed to lead to new levels of participatory knowledge. First, we will explore how 3D PPGIS data can be visually represented and analyzed to provide a better understanding of the data and its patterns. Second, we will investigate more advanced analytical approaches to explore latent patterns in the data. This will include spatial data mining and spatial statistical techniques aiming at pattern recognition and data classification. At the same time, we will aim at developing a new methodological framework which facilitates the analysis of 3D PPGIS data in parallel to other 3D GIS data such as airborne LiDAR data. In addition to the methodological contributions, the results from this study will also showcase how 3D PPGIS data can be effectively analyzed and practically adopted in empirical urban studies.

A GIS-based approach for exploring the factors affecting conflict intensity in Africa *Helena Tukiainen (University of Oulu)*

During the last two decades, the countries in Africa have suffered from hundreds of thousands of civil conflict events, which have caused the death of near to half a million people. These events are, according to The Armed Conflict Location & Event Data Project (Acled) classification, battles, explosions and remote violence, violence against civilians, protests and riots. The reasons for civil conflict and their intensity can be complex and scale-dependent. In general, political and social factors (such as economy and population), environmental factors (such as the land-use and topography at a conflict site), and the role of natural resources, such as oil and natural gas infrastructure, have been pointed out in recent conflict research. In this study, we investigate the factors that have an impact to civil conflict intensity (measured as fatalities) in Africa. Our main aim is to explore the effect of three different variable groups on conflict intensity: oil and gas infrastructure, human factors and environmental properties. For this, we use quantitative GIS-based datasets and a statistical approach with regression-based variation partitioning as our main method. Our conflict data consists of over 126,000 conflict locations (from years 1997−2019, derived from Acled) in 35 African countries. For the calculation of the explanatory variables, we have utilized geo-located, mainly open-access datasets with high spatial accuracy. The analysis results show that variables from all explanatory groups are meaningful for conflict fatalities. The three variable groups contribute differently for fatalities at each conflict event type, but social and political factors (GDP, the amount of urban land-use and the number of ethnic groups at the conflict area) have the most prominent role across the conflict event types. These results give evidence for the applicability of GIS-based approach in this context. In addition, the results further highlight the multiplicity and complexity of the factors affecting conflict severity.

Session 25 Climate mobilities

Chairs: Päivi Lujala (University of Oulu) & Eeva-Kaisa Prokkola (University of Oulu)

Auditorium F101, Wednesday

Environmental Change, Framing and Displacement: Knowledge, Politics and Voices of the Survivors *Md Nadiruzzaman (Hamburg University)*

Environmentally forced migration with its related paraphrases generally refers to climate change (CC)-induced migration; it is tied up with diverse underlying politics but lack a 'southern' voice, particularly that of the 'migrants'. A consensus definition was unattainable because of i) a lack of conceptual clarity on whether and how to isolate environmental factors from CC and governance; and ii) the vested political interests of local, national, bilateral and international actors. This research responds to these needs by exploring – i) the political interests of different actors in constructing contrasting meanings of climate change and migration, ii) how these meanings conflict with the reality for ordinary people's lives on the ground, and iii) how they are constituting people's lives. This study will build on longitudinal study in a particular geographic setting in Bangladesh, often labelled as climate change ground zero. The proposed research offers new insights in explaining why and how conventional interpretations of climate change and climate displacements are inefficient to explain the context of the southern coast of Bangladesh. This research will explore the interface of climate change, forest conservation and displacement, and so echo the voices of the inappropriately labelled 'environmental migrants' with a view to them having their space in policies.

A place-based framework for assessing resettlement capacity in the context of displacement induced by climate change *Päivi Lujala (University of Oulu)*

Place-based resettlement capacity assessments to identify potential resettlement places for climate migrants are needed to guide resettlement programs related to climate change. This article proposes and validates a conceptual climate change resettlement capacity (CCRC) framework that can be used to identify potential resettlement places for climate change migrants. The CCRC framework focuses on livelihood reconstruction, as this is the primary aim of most resettlement programs and a key for successful resettlement and mitigation of impoverishment of resettled people and communities. The framework has two main dimensions – assets and conditions – as its foundation, with a set of subdimensions and generic indicators identified for both of them. Expert evaluation was used to validate the framework. The operationalization of the framework is illustrated through a case study of two regions of Ethiopia vulnerable to climate change. The framework is designed to assist international organizations, governments, planners, and policymakers in identifying both the most suitable and least suitable places to resettle communities in the face of actual or anticipated displacements due to climate change. In addition, the framework can be used by researchers to undertake theoretical and empirical studies on resettlement induced by climate change. With minor modifications, the framework can also be applied to resettlement capacity assessments for non-climate resettlement programs and research.

Border imaginaries and politics in the "problem" and "solution" narratives of climate migration in the European North *Eeva-Kaisa Prokkola (University of Oulu)*

The paper examines the ways in which climate migration is framed and narrated in multisectoral expert interactions in the European North with a focus on Finland, a country from the global north with high per capita emissions and with the predictions of lower vulnerability to climate change in comparison with many other countries. The examination is based on the material from three workshops and interviews with multidisciplinary and multisectoral experts representing international organizations, ministries, security sector, NGOs and research institutes. In the paper, the discursive framing of climate migration by experts are examined by combining multiperspectival border studies approach and Doreen Massey's writings on geographies of responsibility. The multiperspectival approach moves from state centric view of borders towards examining how borders are constructed and imagined in new ways, by different groups of people and in a variety of locations. The examination shows that the experts frame climate migration and its governance through different discursive frameworks, considering it through their own areas of knowledge and expertise. The framing of climate migration is a complex question that nevertheless has material consequences as it directs the attention to specific locations and areas of action while bypassing others. The examination shows how the framing of climate migration and its governance are intimately linked with the imaginaries and politics of borders, and that different ways of imagining borders in the "problem" and "solution" narratives of climate migration result in highly different geographies of responsibility.

A case study in conflicting moral geographies over asylum seekers in Finland *Tuulia Reponen (University of Eastern Finland)*

Finland received circa 30.000 asylum seekers during the European refugee crisis in 2015-2016, which represented a nearly ten-fold increase compared to the previous year. The de facto breakdown of the Dublin regulation took the Finnish officials by surprise and provoked a host of responses in the Finnish civil society. (Järvenkylä & Nerg 2019) People with anti-immigration views organized protests, which called for closing the borders and prioritizing Finns' security over asylum seekers. Likewise, migrants and their supporters organized protests underscoring asylum seekers' right to live. The protests progressed into physical protest camps that occupied public space in the capital city over several months in 2017. Building upon the seminal work in moral geographies of emeritus geographer David M. Smith (2000), I claim in my thesis that the highly polarized views on asylum seekers are cues about conflicting moral geographies. The discourses that anti- and pro-migration movements produce embody a normative struggle over whose mobility and – essentially – wellbeing is valuable. I hypothesize that people who hold anti-immigration views subscribe to a conservative communitarian model of a community, where membership is determined by birth and responsibilities are limited to the geographically proximate. Furthermore, I claim that people who hold positive views about immigration have a very different moral map, their community is global and stresses cosmopolitan responsibility. As climate migrants are often indistinguishable from other migrants and asylum seekers (Mayer 2018), the societal reaction to asylum seekers amidst a humanitarian crisis is an indicator how prepared Finland is to receive climate migrants. My study of conflicting moral geographies in one Nordic country portrays the massive moral tensions that undermine a unified ethical response towards addressing climate mobility from global south. It is vital to recognize that a politically influential subset of the Finnish population questions Finland's global human rights

commitments and status as a liberal country. This may become a major obstacle in the way of climate justice. References Järvenkylä, N. & Nerg, P. (2019). Tiukka paikka. Jyväskylä: Docendo. Mayer, B. (2018). Definitions and concepts in McLeman & Gemenne (eds.) Routledge Handbook of Environmental Displacement and Migration. Routledge, pp. 323-328. Smith, D. M. (2000). Moral geographies: ethics in a world of difference. Edinburgh: Edinburgh University Press.

Critical pedagogies of climate mobility *Kirsi Pauliina Kallio (Tampere University)*

This paper sets out to develop a pedagogical perspective drawing from relational spatial theory, to address the following dilemma: How to educate the young in the trans-scalar phenomenon of climate mobility, given that their upbringing, the media, and education at large rely on the state-centered image of a territorially-bound world? In Finland, as in many other countries, environmental and global education schemes typical rely on a state-centered image of a territorially-bound world. Relational spatial perspectives that reveal the interconnected and interdependent trans-scalar reality – where climate mobility for instance takes place – are rarely introduced in formal education. Dominating pedagogical perspectives echo a broader societal understanding that the media and public discussion continue to manifest, clearly visible also in national and transnational policies. Environmental challenges including climate change and biodiversity loss, as well as different forms of migration, are approached through a fixed scalar scheme that renders global concerns into local, national, and regional questions. One reason behind this persisting view of the world that evidently contradicts with the globalized reality is the (un)governability of global challenges: In a world governed by states, all phenomena must be territorial and bordered in nature. Yet as critical globalization scholarship has for long shown, neither of the notions holds: the world order does not follow the command of states, and many of the phenomena going on in the world are spatially dispersed and unevenly connected. While young generations' developing understandings about climate change and forced migration remain largely informed by the territorially-bound conceptions of the world, they are not well prepared for the world where climate mobility will be an increasingly relevant issue. Specifically, children and youths in the Global North may have serious difficulties to grasp the unequal geographies related to climate change, which hinders their possibilities to act towards a world where responsibility for its negative results is globally shared. This may encourage, on one hand, 'climate apathy, and on the other hand 'climate radicalism'. New pedagogical approaches are hence needed, drawing from relational spatial theory.

Session 28 Shrinking regions as welcoming spaces: Opportunities and challenges of attracting migrants for revitalizing rural Regions

Chairs: Marlies Meijer (Wageningen University & Research), Alberto Alonso-Fradejas (Utrecht University) & Bianca Szytniewski (Utrecht University)

Auditorium F101, Monday

Planning to meet challenges in shrinking rural regions. Towards innovative approaches to local planning. *Hagen Aksel (Innlandet Norway University of Applied Sciences) & Ulla Higdem (Innlandet Norway University of Applied Sciences)*

In Innlandet 31 of 46 municipalities have had a population decline in the last ten years. The decline is expected to continue. The age composition has changed and will keep changing to a

significantly older population. This situation has recently been discussed in the demography committee's report (NOU, 2020). They argue that the political goals for the districts should not be growth, but to create good communities for those who live and/or runs a business there. International research shows that many municipalities and regions deny the demographic development and are unable to or won't adapt the planning to the actual situation. In this article we ask to what extent the demographic development is reflected in the current planning and policy practice in Innlandet? Is there a focus on strategies and measures for population growth? To what extent do politicians and planners think we should change the way we plan based on the expected demographic changes? These questions have been worked on in a project carried out in the winter and spring of 2021. We have reviewed the societal part of the municipal plan and the planning strategy, as well as the local political programs in 31 municipalities with ongoing or expected population decline in Innlandet. We have also reviewed the Innlandet county's regional planning strategy and regional political programs. Interviews and workshops with politicians and planners have been conducted in Innlandet county and two of the municipalities. The results are presented in this paper, and future knowledge needs are discussed. NOU 2020: 15. (2020). Det handler om Norge – Utredning om konsekvenser av demografiutfordringer i distriktene.

Spaces of solidarity and geographies of learning: Rural practices of solidarity in the here and now through "Folkbildning" by Swedish labour movements *Zinaïda Sluijs (Uppsala University)*

Sweden has long been an important country of arrival for forced migrants. In Sweden, rural areas have become key "welcoming spaces" hosting forced migrants. In these rural areas, civil society has played a central role in enacting solidarity with newcomers. This research will look at the specific role of Swedish labour movements in facilitating interaction and solidarity between native Swedish residents and newcomers. Concretely, this research will focus on the involvement of the Arbetarnas Bildningsförbund (ABF) in the County of Västmanland. ABF is the Swedish Workers' Educational Association which, through public education ("Folkbildning") and study circles for adults, aims to contribute to democracy, collaboration and equality. Immigration, the right to asylum and solidarity with immigrants are central to their engagement. Adopting a place-based approach to solidarity, this research aims to understand how solidarity between newly arrived immigrants and native citizens emerges in specific places and context, and when it does not. Concretely, it will analyse what the role is of "Folkbildning" in developing, fostering and sustaining relations of solidarity in rural communities. Additionally, this research also aims to shed light on the complexity of solidarity practices by going beyond the notion of solidarity as enacted in the here and now by considering the transnational dimensions of solidarity with newcomers. Concretely, while practices of solidarity by the ABF and the local community might be directed towards the rural locality, networks of newcomers often transgress local or national borders. Therefore, this research also questions whether different stakeholders have different conceptions of solidarity and its outcomes. This research aims to contribute to debates in human geography on the "spaces of solidarity" and "geographies of learning". Additionally, adopting an interdisciplinary focus this research also aims to contribute to the growing field of "public (adult) education" in educational sciences. The methodology is based on a participatory action research, actively involving newcomers, native Swedish residents and members of the ABF. As such the research aims to contribute to a democratic research practice which involves the participants at different steps of the research project.

What makes a place 'sticky' for highly mobile people?: the case of Joensuu *Ágnes Németh (University of Eastern Finland)*

Recent changes in migration trends in Europe have raised the attention of both policy-makers and researchers towards its possible social and economic challenges and impacts. There are cities in Europe that have focussed local strategies in order to internationalise their society explicitly by targeting people with high creative and/or 'spending' capacities (highly educated professionals, students in specific innovative fields, affluent pensioners, artists, etc.). One of the starting points of the research is that these people have the potential to contribute to the economy of the host cities/regions not only by filling gaps in local labour markets but also by generating innovation and synergies through interacting and actively engaging with their new social-cultural-economic contexts. It seems, however, that some places have the ability to retain and make better use of this type of human capital than others. In order to realise local/regional strategies effectively, deeper understanding is required of the reasons why highly mobile people are willing to stay in certain places representing a foreign environment, and why they decide leaving others after a short time. What makes a place 'sticky' for highly mobile people? This is an important question since from the perspective of the individual migrant, setting up one's life in a foreign environment does require personal sacrifices, compromises, including efforts and costs of adjustment and social integration. The perception and self-engagement of the migrant depends on the individual and broader institutional contexts, and at the same time, his or her own definition, interpretation of integration also effects the (effectiveness of) institutional integration efforts as well as their own individual motivation to 'integrate'. What are the possible, place-specific factors that characterise the integration process of the studied group in Joensuu? What room do local stakeholders and policy have in influencing integration? Besides the national and local (policy) documents, this paper is built upon semi-structured expert interviews with relevant organisations (local government, associations, employers, etc.), in order to map the local factors that can influence the level of social integration in Joensuu.

Mayors as Welcoming Agents. Doing action research in times of Corona *Marlies Meijer (Wageningen University & Research, & Utrecht University)*

Due to various reasons international migrants often arrive in shrinking regions of Europe and stay there either temporarily, or for a longer period, if they decide to settle down there after being granted an international protection status or permanent visa. Local authorities struggle with managing the influx of newcomers: quite often they find that themselves in a black box of national policies, reception programmes, trade opportunities and international politics. Nevertheless, some Mayors take active positions in steering this influx and welcoming international migrants. They see a potential for revitalizing their locality and/or a humanitarian duty. Following Benjamin Barbers 'if mayors ruled the world', we invited mayors to a webinar series and discussed the possibilities, thresholds and threats to welcoming international migrants in shrinking regions. Our goal was to start a Community of Practice with Mayors of rural and shrinking localities, during the pandemic. Using online environments was challenging, but also unlocked new opportunities: mayors from peripherical regions could stay in their offices. We found that the participating mayors saw potential, but were strongly tight to national-level regulations and programmes. Furthermore Mayors regarded integration and active participation of migrants very important, especially in places were local facilities, social cohesion and liveability was diminishing. Now our aim is to continue doing action research and develop

more localised communities of practice – starting out from dilemma's coined by participating mayors – in a hybrid geography.

Welcoming spaces for migrants as a challenge for local development policy (case study of Lubelskie Voivodeship) *Dominik Wach (Warsaw School of Economics), Marta Pachocka (Warsaw School of Economics), Ewa Jastrzębska (Warsaw School of Economics), Paulina Legutko-Kobus (Warsaw School of Economics) & Joanna Zuzanna Popławska (Warsaw School of Economics*

The demographic situation of Lubelskie Voivodeship and the functional and spatial structure of the region, as well as its agricultural character are challenges for the development policy also at the local (municipal) level. Population forecasts for Lubelskie Voivodeship predict the worsening of unfavourable demographic phenomena until 2050, including population decline by 0.4 million people (i.e. 20.7%) in relation to 2013, increase in the feminisation rate and increase in the share of people aged 65+ and 80+. All this means that the phenomenon of depopulation and population ageing will intensify in the Lublin Voivodeship. These processes will take place faster in cities than in rural areas (the urbanisation rate will decrease to 43.2%, although it is already much lower there than on average in Poland, i.e. 61%). Lubelskie region for almost two decades has been among the regions with the lowest immigration for permanent residence (e.g. 2% in 2014). In October 2021, the number of foreigners holding valid documents authorizing their stay in Poland amounted to 19.7 thousand, slightly more than in 2020. Based on these premises, the authors concluded that local policies should address both depopulation and migration problems. Moreover, international migration (including migration from outside the EU) is a chance for the Lublin region, especially for small towns (e.g. Łuków) to partially stop the unfavourable demographic phenomena. The presentation will show the results of the research on: - analysis of stakeholders in activities and projects for social inclusion of migrants; - evaluation of the quality of life in the analysed communes; - inclusion of demographic and migration issues in development policies; - identification of challenges related to local development policy in the context of depopulation and migration. Methods used to develop the topic: analysis of local strategic documents, material from direct interviews, analysis of municipalities in the context of quality of life.

Session 29 Messy smart cities: Comparative perspectives and methodological challenges

Chairs: Lorena Melgaço (Lund University), Chiara Valli (Malmö University) & Claudia Fonseca Alfaro (Malmö University)

Auditorium F103, Monday

Tracing Brazilian (social) smart cities - on conceptualization, implementation, and practices *Lorena Melgaço (Lund University) & Camila Freitas (Lund University)*

Smart cities promise new digitalised forms of urban management that boost cities towards a sustainable future. In the global South, smart city discourses are reinforced through a technological imaginary and their idea encompasses Western notions of development and progress (Melgaço and Milagres forthcoming; Escobar 1992). Further, smart city hegemony is enabled by a 'rhetoric of urgency' that accentuates uncontrolled urbanisation and climate

change as challenges to be overcome through a smart approach (Datta, 2018). However, whereas cities positioned in the centre of capitalism possess a relatively superior distribution of resources, peripheral and semi-peripheral cities are rooted on deeper levels of social and spatial inequalities (Melgaço and Milagres forthcoming; Caldeira, 2017). By ignoring such inequalities, smart cities are imagined as "fantasy cities" (Watson 2015) that further a Western idea of modernity that is often inspired in futuristic landscapes targeting an urban elite whereas displacing the poor. Furthermore, the smart city discourse has been given much less consideration to smart projects that claim to centre their attention on the poor. In Brazil, these projects are enabled by Minha Casa Minha Vida (MCMV – My House My Life), a federal government measure that aims to overcome the housing deficit for lower-incomers by providing large subsidies to construction conglomerates. The program is based on social housing large-scale provision that is led by big construction companies and this federal plan has been criticised for reproducing segregation in Brazilian cities (Rolnik et al., 2015). In this paper we reflect on an ongoing project that has been nationally praised by the private sector, the media, and local governments in Brazil as "social smart city" – a growing market niche that builds entire neighbourhoods from the ground with the argument of providing social and technological inclusion for low-incomers. We deliberate on the meanings of constructing a smart city for this group, encompassing the vision of corporations' representatives leading these projects, their discourse, together with the elements of urban practice happening on the ground that are produced by the inhabitants. We, then, argue how the use of the term "social" becomes a powerful tool to tap into a very profitable market.

Pilots and digital platforms: insights into public capacity to plan and govern smart mobility towards sustainable urban mobility *Kelsey Oldbury (Swedish National Road and Transport Research Institute)*

The influx of digital platforms into the mobility sector has created a myriad of new forms of mobility services in urban transport. Public actors working with land use and public transport planning are increasingly turning to experimental practices to test and implement smart mobility. Pilots and demonstration projects are being used to learn and respond to the possibilities and challenges that platformisation poses. The ongoing developments are collapsing previous distinctions between built and digital infrastructures, and also challenge previous scales of governance. The proliferation of platforms raises questions regarding the agency of local and regional public actors, and the effects platforms will have on transport and mobility planning. In this article we focus on Mobility as a Service (MaaS) as an example of platform-based smart mobility. Based on qualitative research into a pilot project for MaaS in the Stockholm region, we aim to explore how platform-based mobility services influence the capacity of public actors to plan and govern urban mobility. We ask how different governance scales influence governance capacities, and how public actors navigate in an unfolding governance landscape. The paper leads to insights regarding how the introduction of platform-based services within a pilot context may disguise the scope across which digital platforms operate. We conclude that this case highlights an ongoing shift and reshaping of responsibilities between public actors and market actors. The public capacity to steer urban mobility towards public sustainability goals may be undermined due to the complex and fragmented governance challenges which platform-based mobilities pose. Altogether, we see a need for new forms of governance approaches and planning expertise in order to establish sustainable urban mobilities.

Knowledge gap, system maturity and end-user practises in the deployment of energy applications in Smart Tampere and Smart *Tartu Antti Roose (University of Tartu)*

The evolution of Smart Tampere in Finland and Smart Tartu in Estonia is explored in the comparative study on datafication of urban energy systems. A holistic system tool for real-time monitoring developed in Tampere, and the benchmarking tool for building energy and renovation, introduced in Tartu, are contextualized in the advancing smart city concept and urban practises. Urban energy innovation offers new- generation heating systems that include low temperature heating with advanced two-way transmission, exchange and recycling, as well as building innovations such as smart metering, and adaptive indoor climate controls. Combined with smart energy technologies such as renewables, energy storage and intelligent control systems, smart urban energy systems encompass a wide range of ICT-enabled technologies that need to be coordinated within the framework of urban governance enabled by open and inclusive participatory modules. Understanding the ICT potential and impact ofapplications ranges from the scale of individual systems and the quality of hardware and software to socio-economic factors. The energy consumer awareness loop starts with monitoring consumption, continues with identifying problems, and leads to expected changes in installations, technologies, and user behavior. As noted in the pilots, household interest and experimentation in energy management remains limited. Demand-side energy planning, complementing traditional supply-side planning, should have a much stronger and broader impact. Many smart city instruments have been initiated by the public sector, involving research partners, and less often by private companies. Admittedly, many such project initiatives end up in the tool graveyard due to their weak sustainability and experimental nature. The Big Data is held back by the lack of interoperability of real-time systems and data protection issues. The use of ICT services for energy efficiency should support the provision of understandable information together with appropriate incentives to encourage people to act. The pilot projects in Tampere and Tartu led to the call for creating an ecosystem of urban stakeholders to program and facilitate energy transition linked to the smart city concept. The knowledge gap between city engineers, the smart city community, climate change activists and urban households needs to be addressed through further, more coordinated research and development.

Spatial-temporal analysis of retail and services using Facebook Places data *Jiří Hladík (Masaryk University)*

The topic of using location-based network data is currently very popular and widespread among a whole spectrum of scientific disciplines. Social networks are a powerful source of interesting geographic data. However, their use is significantly linked to sufficient use of the network in the studied locality and also to the conditions under which the data are available for download and use. This study analyzes and discusses the potential and limits of using Facebook data to analyse spatial-temporal urban rhythms and city centrality through the availability of services and retail. During September 2020, we harvested Facebook Places data for the area comprising the city of Brno in the Czech Republic. Alongside geographical position (spatial component), place category and name, we also obtained the opening hours (temporal component) of the places. This study provides a detailed description of data collection using Facebook Graph API and further processing in the Geographic Information System (GIS). Further, we focused on the subcategories 'Food & Beverage', 'Shopping & Retail' and 'Medical & Health' and analysed their spatial and temporal distribution in the context of predefined regions of the city. In our pilot study, we present possible methods of spatial-temporal analysis and data visualization. Finally,

we evaluate the benefits, limitations, and further potential of Facebook Places data for social geography. The main objective of this study is to demonstrate the possibility of using data from social networks such as Facebook concerning the background of social geography concepts. Attention is paid especially to the extraction of spatial data, which are subsequently used for analyses focused on the temporal characteristics (time curves) and intra-urban structures. Results of these analyses are crucial for interpreting the dynamics of post-industrial cities.

Session 30 Forests and capital in the urbanizing Nordics

Chairs: Eija Meriläinen (University of College London), Ville Kellokumpu (University of Oulu), Heikki Sirviö (University of Helsinki) & Ari Lehtinen (University of Eastern Finland)

Auditorium M103, Monday

Recovering consequential urban-rural interdependencies in Finland's contested forests

Eeva Berglund (Aalto University)

Political rhetoric in Finland presents urbanization as an unquestioned mega-trend while making rural areas appear problematic. The country's forested landscapes and industrial heritage are, however, increasingly viewed as opportunities for designing better futures under the rubrics of the bioeconomy, tourism and alternative, multilocal, ways of living. This paper shows that this means simultaneously celebrating and forgetting consequential forms of inter-dependence, while fostering false assumptions about the immateriality and other presumed benefits of forest-based green growth. The paper also highlights that there are contestations and complications as diverse activist initiatives, both rural and urban, keep the resulting place-based tensions in view, and make confident challenges to the incumbent mainstream. Besides conflicts over specific land-use projects, these involve developing discourses that point to radical alternatives to the modern universalism that underpins academic research and official policy. Significantly, these challenges are often rooted in an appreciation of local histories and the worlds they make, ideas helpfully articulated in the academic-activist language of the pluriverse (Escobar). My entry point into forests and capital is North-East Finland's Kainuu, long considered a resource periphery and a place where discourses of internal colonialism and unfair economic exchange periodically surface. Research I conducted in the 1990s showed how a history of many forest conflicts and much amnesia about centre-periphery independence, shapes everyday life and politics. Today, as efforts to harness everything to designing better, more sustainable, futures generate new conditions and new conflicts, I draw on recent heuristics - the Anthropocene and pluriversal design - to examine emerging local futures. I draw on ongoing ethnographic research on tourism and more broadly the shifting cultural and economic roles of forests. In recovering the long-standing interdependencies of rural and urban economies, livelihoods and cultural identities, I build on local voices to temper the urbanization hype. It too easily aligns with a flimsily grounded knowledge-based future imaginary and broadly neoliberal logics that call for transformation but change little. Although this narrows down options and fosters resentment, I argue that it also provokes creative world making. Escobar, A. (2018). Designs for the pluriverse: Radical interdependence, autonomy, and the making of worlds.

From greenwashing pulpwood capitalism to anti-capitalist bioeconomies *Janne Säynäjäkangas (University of Jyväskylä) & Ville Kellokumpu (University of Oulu)*

In Finland, the term "bioeconomy" is used regularly in reference to the forest industry, offering a promise of more value from forest products while at the same advancing the transition to a more sustainable economy. In reality, however, the profitability of the forest sector is in constant decline and the ecological concerns relating to forest use have become ever more pressing. The actually existing forest bioeconomy remains largely a case of greenwashing the attempts to expand and accelerate the use of biomass by industries that rely on classical capitalist forms of resource use. Thus, the imaginary of the Finnish forest bioeconomy is, in earnest, an imaginary of pulpwood capitalism. We conceptualize pulpwood capitalism as an inherent tendency of capitalist production to undermine its ecological and material bases and homogenize forest ecologies as well as forest economies. Through forest industry statistical data, we show how this tendency is explained by two key processes of capitalist production already outlined in early Marxist political economy: the rising organic composition of capital (OCC) and the tendency of the rate of profit to fall. The rising OCC denotes the process where the share of constant capital (fixed capital i.e. machines, plants, components) increases in relation to variable capital (labour) leading to a decline in the rate of profit. Forest industry's rising OCC (mechanization and automation) and declining rate of profit leads to a search for temporally accelerating value creation. However, this leads to detrimental ecological, economic and social effects in and on forests as they are molded to the temporalities of capital. Recognizing the appropriation of bioeconomy by capitalist interests, we point towards the reappropriation of the concept under the rubric of anticapitalist bioeconomies. The multiple and variegated "bios" of bioeconomy that resist the spatiotemporal drives of capitalist production have been buried under the biomass. The oxymoronic nature of anticapitalist bioeconomies lends its weight to a fierce critique of pulpwood capitalism while at the same time recognizing the need to reaffirm the multiple ways of working/living in and with forests that resist capitalist appropriation of life.

Regional differences in promotion of different forest-based businesses in Finland *Emmi Salmivuori (University of Eastern Finland)*

In Nordic countries the strong position of forest industry in national forest policies has been based on its strong impact on political economies and the tight bond between forest sector and the states during the 20th century: states controlled the forest industry and used the forest sector generally as a tool for their regional and employment policies (Keskitalo ym. 2019). This affected the development of the economic structure of forested remote areas in Finland (Kotilainen & Rytteri 2011). With globalization and technological development, structural changes in forest sector have reduced its employability and made it more market-oriented weakening states' ability to control the forest industry and use it as a tool to promote their other political goals (Keskitalo 2019; Keskitalo 2008; Tervo 2008). Areas built on the forest sector have faced difficulties in adapting to these fast changes due to their unilateral economic structure and the lack of social support, which has led to regional declines (Kotilainen ym. 2016; Tervo 2008). At the same time, the ongoing sustainability crisis is changing social values and diversifying the field of actors related to forest use. This is challenging both the forest policy and the forest sector for adaptation, and it's providing new opportunities for actors and regions related to utilizing of forests. (Eckerberg 2015; Lindahl 2015). In this study I'm searching out how forest-based economic structures of different regions are adapting to these changes and how different regions are recognizing new regional business opportunities – what different forest-based

businesses have been taking into account, how they've been promoted, and what kind of differences there can be found between regions in these promotion measures. My research material consists of current 14 regional forest programs of Finland, which I analyze using content analysis methods. According to preliminary results, the emphasis of measures related to the development of different forest-based businesses varies from region to region, and different regions have different aspirations in developing their forest-based economies. That might reflect the relations and changes in these relations between the regions and the forest sector.

Anxious architectures of sustainability: Deconstructing the urban imaginary of wood construction *Heini-Emilia Saari (London School of Economics and Political Science)*

Wood construction has emerged as a key theme of sustainable urbanism in recent years. Following prominent investment from government programmes and industry organizations, the promise of wood as material has been to reconcile urban growth with the pursuit of a low-carbon future. Moreover, in the Finnish context, it effectively bridges two key forms of 'national' capital: the (urban) built environment and the vast forest resources. Despite pressure from preservationists and climate agencies to account for the loss of carbon sequestration and biodiversity caused by industrial wood production, the use of wood in construction is imagined as a fix to redeem the environmental cost of new urban development, all the while benefiting the Finnish bioeconomy sector. In effect, the advancement of wood construction is widely framed as an inherently good objective for all, or at least better than the imagined alternatives, and thus difficult to contest. This presentation draws on ethnographic research to unpack the diverse and often contradictory interests, ideals and assumptions wood construction embodies in the urbanizing society. New wood architecture effectively mobilizes nostalgic cultural codes associated with national prosperity, progress and modernization, reinterpreting ideas of industrialization founded on forestry on the one hand, and aspirations of modern architecture which accompanied urbanization and welfare state construction in the 20th century on the other. However, I argue that the use of wood can also be used to gloss over and legitimate extractive strategies in urban accumulation. At the same time, the use of wood foregrounds the increasingly contentious center-periphery relations characterized by uneven development. As Ahlqvist and Sirviö (2019) have pointed out, 'the forest cleared in the rural periphery creates new real estate value in the urban core'. Contemporary wood construction thus renders visible the anxious yet interconnected relationship between nature and urban space in capitalist urbanization, inviting critical attention as part of deconstructing hegemonic 'sustainability' narratives – or imagining their alternatives.

Session 31 Nordic Geography Education: Educational continuum from school geography to higher education and continuous learning

Chairs: Sanna Mäki (University of Turku) & Minna Tanskanen (University of Eastern Finland)

Auditorium M105, Tuesday, Wednesday

Perspectives on geography education: Current state and future challenges *Gabriel Bladh (Karlstad University), Tine Béneker (Utrecht University), Martin Hanus (Charles University) & Sirpa Tani (Helsinki University)*

In this presentation we will discuss major challenges for the Geography Education Research (GER) community. As a start, we identify four 'gaps' related to geographical knowledge and geography education: • First, we recognize a gap between the public image of school geography and the school geography discussed in the GER community. The public image builds on a long tradition of geography presented as descriptive factual knowledge, which is partly reflected in different national curricula and teaching traditions in Geography. In contrast, (parts of) the GER community works on the equipment of geography education with high epistemic quality curriculum development for a changing world in the Anthropocene. In line with the heuristic framework from Young & Muller, we can think of this as a gap between a future 1 and a future 3 curriculum. • Second, we identify a related gap between disciplinary knowledge and school geography. In school geography, a stark division in content and perspectives tend too often to present the world into isolated topics and in a static way and recent disciplinary developments and complexity of the knowledge are less visible. • Third, geographical knowledge can be placed in between Bernstein's horizontal and vertical knowledge structures making geographical thinking build on combinations of different kinds of knowledge. This leads to specific challenges for developing learning progressions in the curriculum. • Fourth, while acknowledging the role of specialized knowledge, an enacted curriculum of engagement also needs to bridge the gap between academic and everyday knowledge in the classroom. This includes giving "critical hope" to young people to be able to navigate in a complex world with many "wicked problems" to handle. In the presentation we will use the framework of GeoCapabilities (combining the Capability Approach with ideas of powerful/specialized knowledge and teacher leadership) to put the challenges presented by the gaps in the context of current and prospective geography education research, and to raise some questions for further discussion. We will explicitly pay attention to the implications of these challenges for geography teachers, their roles and the need to support teachers' professional knowledge development in fruitful ways.

Geography's three problems seen through the prism of one educational challenge *Rene Brauer (University of Eastern Finland)*

As the modern society becomes larger and increasingly diverse, its problems become more elusive and solutions far-fetched. This puts pressure on relevant education. Geographical knowledge, whose raison d'être has always been to deal with complexity, should therefore be in high demand, but isn't. In this presentation we want to investigate why this is the case, by outlining three major problems geography education faces today and what potential solutions there might be. Geography as a societal need: Geography's traditional status as a synthesizing science is not well translated to the "sustainability mindset" that currently saturates educational

curricula. This leads to decreasing numbers of geography students who seek out explicitly "sustainability-oriented" courses, which are often taught by teachers without a solid synthesizing background. Simultaneously, geography's potential is reduced at pre-university levels where it is still associated with a stereotype (mostly cartography and 'pub quiz' knowledge). Geography as an identity: Being "a specialist on being a generalist" is a frustrating motto for many geography students, who are inculcated that expertise is usually vertical. Inability to capitalize on horizontal expertise causes a personal crisis that impedes learning and embracing geography as a professional identity. Geography as a competence: Being a holistic "for real" cannot be reduced to knowing a multitude of facts but requires foremost an understanding of how differences in opinion (underlying diametrically different sustainability strategies and solutions) arise. This requires a broad epistemological base. However, philosophy of science is not taught at pre-graduate level, while new students are becoming increasingly opinionated on contested topics. Departing from teaching experience at 4 Nordic universities, we suggest adding a "sensitizing phase" to the most critical stages of geography's first-year education. A sensitizing phase is a targeted and deepened/extended course introduction, designed to a) focus on the strengths of geography and its boundaries to other realms of knowledge; b) providing continuous moral support to students to instill geography's identity; c) teaching techniques how to handle complexity (knowledge reduction, extrapolation, epistemological breadth). We conclude that this approach allays confusion, primes the students towards the relevance of geography knowledge, and inculcates them into a spirit of life-long learning.

Taking back geography: The changing content of geography in Norwegian education *Erlend Eidsvik (Western Norway University of Applied Sciences)*

This article critically discusses the changing content of social sciences in the renewal of the Norwegian curricula in primary and secondary school, with a particular emphasis on the content of geography as a discipline and sustainability as a theme. First, changes in the content and composition of social sciences as a subject in the new curriculum are identified. Second, the article analyses statements submitted by teacher education universities during the curriculum renewal hearing processes. The statements assert that the content of geography as a discipline has been undermined, and that the interaction between nature and society is absent. Finally, the presentation will invite to discussions on various forms of geographic literacy as a viable way to operationalise sustainability in education to connect interactions between nature and society and between systemic and individual actions.

Dealing with misconceptions and conceptual change in geography teacher education: a case of cartography course *Martin Hanus (Charles University)*

Becoming a good geography teacher requires developing knowledge, understanding, skills, and attitudes in the field of geography and pedagogical principles. When preparing future teachers, their conceptual understanding of fundamental geographic concepts must be considered. Given that, the identification of teachers' understanding and their misconceptions should be used to adapt the courses. Otherwise, teachers' misconceptions might not be refuted during their training. Such misconceptions could subsequently be transmitted to pupils after the pre-service teachers start their teaching careers. Therefore, it is crucial to encourage conceptual change in pre-service teachers' thinking to avoid the snowball effect of passing on misunderstandings of important geographic concepts. This paper focuses on geography pre-service teachers'

misconceptions related to maps. It reports on an example of how to identify misconceptions (using empirical data as evidence) and encourage conceptual change. Firstly, the theoretical assumptions and the methodological approach resulting in developing a two-tier close-ended conceptual test will be presented. Subsequently, the most frequent teachers' misconceptions will be discussed, and possible ways to adapt the course accordingly to achieve the conceptual change will be introduced.

Geographical competences in Europe for lifelong learning, from school education to higher education. *Rafael de Miguel González (University of Zaragoza)*

Digital Agenda for Europe was published in May 2010, to define the key enabling role that the use of ICTs can play in European economy, politics and social cohesion. Digital Agenda highlights that enhancing digital literacy and skills contributes to European citizenship and inclusion through a socio-economic factor (employability) and a socio-politic target (empowerment). Bridging this digital divide can help members of social groups to participate on a more equal foundation in digital society. Digital competence is thus one of the eight key competences, which are fundamental for individuals in a knowledge-based society. Empowering people through education and digital skills is also one of the European Commission key strategies for the current decade 2020-2030. EU's new Digital Strategy reinforces the impact of digital competences to improve every citizen's daily life, prosperity and welfare face to updated challenges like Artificial Intelligence, 5G, data access and protection or carbon-neutral target. How can geography contribute to this? In particular geography education, both higher education and school education, is responsible to train young people and to deal with the teaching and learning of the processes of spatial organization of human societies. Geography is able to face the complexity and diversity of processes, systems, and interconnections between human and natural environments by developing critical thinking (judgment, assessment) and lateral thinking (creative, problem- solving), but in particular analytical thinking (data, visualization), in which digital instructional resources like geospatial technologies and geo-media are essential. This paper describes the a set of geographical competences for lifelong learning, based in several European funded projects run by EUROGEO, in which the acquisition and digital skills based on geospatial information contributes decisively to the empowerment and the employability of the students in their continuum from school education to higher education and to adult education.

Geography education: making workers or fostering active citizens? *Marika Kettunen (University of Oulu)*

Geographers, among other scholars, have contributed to enhancing our understanding about the ways in which education is linked to various processes and practices of state building and intertwined citizen-subject formation. Increasing concerns have been voiced over the neoliberalization of educational policies that is argued to narrow the definition of learning itself as well as the underlying ideals of desirable citizens constructed through education. In Finland and other Nordic countries as well, education is increasingly tied to market-oriented ideals highlighting efficiency, employability, and students' smooth transitions to the labour market at the expense of fostering more inclusive, active and engaged forms of citizenship. Perhaps less attention has been paid to the ways in which geography education and teaching contributes to the creation of specific citizen-subjects especially in higher education. Against this background, the aim of this presentation is twofold: first, to spark a discussion about the geographies of

citizen-subject formation and second, pave the way for expanding our understandings of citizenship beyond the narrow definition of 'making workers' especially in higher education. What other societal aspects, ranging from local to global, are rendered invisible if the focus is merely on working life skills and fostering employability? Rather than providing straight forward answers, I wish to leave room for session participants' comments and experiences; hopefully we will also hear about the already existing approaches, initiatives and practices in everyday pedagogical life to promote engaged citizenship in geography education.

Exploring the gap between academic geography and school geography in the context of a competencies-based curriculum *He Yujing (University of Helsinki)*

Abstract not published.

Digital school-going environments as equalizers of geographies of education? *Päivi Armila (University of Eastern Finland)*

This presentation is based on 1) a research project Youth in Time and its sub-project where Finnish youth from a remote periphery (n=18) form the target group and 2) an ethnographic excursion made among youth of a remote border village (n=9) in the same area. We focus on geographic distances between homes and schools of school-aged youth and the inequality they face when educational possibilities are under scrutiny. There is a tendency within which educational organizations are intensively moved into urban centers. In this tendency ways to schools can become extremely long (even more than 100 kilometers) for youth who live in remote and sparsely populated peripheries. In our presentation we first describe the obstacles that geographical distances put in front of young people's educational choices and thus effect on their educational paths in the long run. We also pay attention to the hardness of school days that last even 12 hours because of the distance. Our data sets show that stepping out from formal education is not a choice for the young ones who have grown up in a learning society that forms a discursive imperative and structure. Secondly, we reflect the possibilities of distant learning to offer youth educational possibilities that tackle the problem of kilometers and their unfairness. However, digital learning environments or other ways of distant learning have not been developed yet in a way that serve youth in a tempting way – maybe because the experienced meanings of school days among youth have a lot to do with social encounters and concrete peer interaction. We still raise a question about distant education as a part-time solution for the young ones who have lost schools from their neighborhood and sometimes must spend even four hours daily to travel to school and back home.

Didactic choices and sustainability issues *Andreas Grahn (Mälardalen University)*

The study is about the didactic choices that must be made by geography teachers in middle schools in Sweden concerning sustainability issues. When making the didactic choices the teacher must answer the crucial questions why, what, and how? The didactic choices are vital for the outcome of education and therefore important for the process towards sustainability. Sustainability issues are characterized by uncertainty and controversy about the scientific facts and disagreement on what values and norms that underlies the problem which complicates the didactic choices. The theory that underpins the study is inspired by the Nordic and German tradition of didactics, especially the works from Wolfgang Klafki and the American pedagog and

philosopher John Dewey. Geography is a subject with potential to contribute to education about sustainability issues. Its spans, like few other subjects, over both natural and human sciences and is interdisciplinary. Education at intermediate stages can be level well suited for introducing pupils to sustainability issues but studies have shown that teachers at intermediate stages often choose not teach about such complex issues. Focus for my research is to identify the didactic choices and in later to investigate the choices made by teachers. The result will be presented in the form of different fields of tension where the teachers' choices can be made. This study is part of my forthcoming thesis. The thesis will also contain a interview study with teachers about their didactic choices.

Attuning to geostories: Learning encounters with urban plant *William Smolander (University of Helsinki) & Noora Pyyry (University of Helsinki)*

In this paper, we call for educators to respond to the problematics that stem from reducing the Earth to a backdrop and resource. For us, the concept of "Anthropocene" is a burning invitation to rethink education by putting the human to its place. We therefore argue for a geographical conceptualization of learning that includes the more-than-human and the nonrepresentational. In this endeavour, we use Latour's concept of "geostories" to experiment with the prevailing anthropocentrism in education. To discuss the power of experimentation, we introduce a learning exercise that was conducted at an urban pop-up greenhouse in Helsinki. The idea was to encourage high school geography students to playfully discard their habitual human perspective to urban life and study it from the viewpoint of plants. In the experiment, the aim was to probe the assumed human/nature divide through brief but moving encounters with "others". We argue that through affective encounters with nonhuman others, the Earth speaks: it tells stories with us. If we let ourselves be addressed by these encounters, these geostories can re-place human-centered narrative storytelling practices (histories), voiced by the modernist "I", and generate alternative forms of knowledge that emerge from our belonging together.

Environmental education through Geography? Barriers and enablers of pro-environmental behavior in a school context *Anssi Huoponen (University of Eastern Finland)*

Environmental education was set decades ago to enable individuals to take action for the environment. Geography serves a unique role in this matter as often environmental education is applied through geography lessons. However, despite this aim, the educational system often fails to transfer students' pro-environmental attitudes to pro-environmental behavior. This paper presents findings of two different data gathering. First, the results of a qualitative meta-analysis are presented. The metastudies in environmental education are usually carried out with quantitative methods. Thus, this qualitative meta-analysis is a relatively new method in environmental education. This meta-analysis helped to reveal barriers and enablers of adolescents' environmental behavior in a school context. Barriers represent factors that prevent students' environmental concern from transferring as pro-environmental actions. Enablers, on the other hand, represent factors that may help students to overcome these barriers. Further, the possibility of fostering factors that may foster students' future environmental actions is discussed. As second data, the preliminary results of expert teachers' interviews are presented. These interviews serve a unique data as the participating teachers represent over 40 nations and different school levels from kindergarten to university level. Compared to meta-analysis, this data presents teachers' views on elements of effective environmental education and their

opinions on students' environmental literacy. Last, these theoretical and practical data results are compared, and the possibilities for high school geography are discussed.

Development of climate change discourse at Finnish upper secondary textbooks and curricula 1985–2019 *Ikonen Paavo (University of Helsinki)*

Development of climate change discourse in Finnish upper secondary geography textbooks and curricula 1985–2019. Climate chance can be seen as the most important environmental problem of our time. Climate chance is affecting in a negative way to ecosystems and societies. According to IPCC it is essential to control climate chance. Aim of the research is to bring new perspectives to understand climate chance discourse of present and past and to open critical social conversation about climate chance. Results can be utilized by book authors and within educational science. Research questions are: 1) What role human is given in causing climate change? 2) How are consequences described? 3) What role are given to individuals and societies to controlling climate chance? Study uses a critical discourse analysis (CDA) to study climate change discourse in Finnish upper secondary geography textbooks and curricula from 1985 to present day. Research material consist five curricula (1985, 1994, 2003, 2015 and 2019) and 18 obligatory courses textbooks. Study uses CDA developed by Norman Fairclough. According to Michel Foucault, institutions, like school, are using power via discourse to students. It is vital to understand the power of discourse because discourse is affecting student's world view. World view is the basis how student see and act in the world. There are some earlier studies of climate change in textbooks, but in those there were no discourse analysis method. My PhD study can be seen as societal study that lightens up past and present attitudes, values, and knowledge about climate change in Finnish society.

How to teach geographers about landscape in a virtual environment: Opportunities and limitations of online teaching and learning *Iwona Markuszewska (Adam Mickiewicz University Poznan)*

This paper presents my experiences and reflections on the teaching and learning on a landscape-oriented course during the COVID-19 pandemic. I share my thoughts about the opportunities and limitations of online education, as well as the challenges and areas for improvement for online teaching-learning environments. I explain how the different teaching-learning methods which I used can help online and/or blended techniques for landscape-related teaching in the future. In addition, I share my observations from interactions with groups of students attending online courses during the COVID-19 lockdown. My findings support learning processes, with a special focus on distance learning about landscape. In particular, my research aimed to identify students' visions of future agricultural landscapes and to examine how these visions contribute a new perspective to the multifunctional and sustainable development of rural landscapes. The study involved geographers – participants on an academic course in 'Development and Planning of Rural Areas'. Students were asked to undertake a project on how they imagine rural areas will develop in the future. They were obliged to prepare a collage and a description. This task was preceded by a theoretical introduction to familiarise the students with the concept of the multifunctional development of rural areas, as well as the learning method, which was new for them. In total, 23 students were involved. The projects were completed in teams. Seven teams worked on this in April 2019, during the COVID-19 lockdown. The student learning methods used here were based on expeditionary learning methods.

Teaching-learning environments in geography: Organizing a geography field course remotely during the pandemic *Heli Kainulainen (University of Helsinki)*

In the University of Helsinki, the first year of geography studies traditionally ends with a mandatory field course in Lammi biological station. As the COVID-19 pandemic caused the transition of almost all teaching online in spring 2020, and the situation continued in 2021, we teachers faced a dilemma: how to organize a field course with remote learning tools, and still achieve the learning objectives of the course? In 2020, the students were given pre-recorded instructions with which they completed three mini studies on their own, and reported them during the two-week period. We felt that the learning objectives related to geographical knowledge were reached adequately, but especially interaction between the students and the teachers was lacking. After the emergency remote teaching approach in 2020, we used what we had learned during the year of remote teaching, and made a new iteration for 2021. So, in 2021 we took elements from the traditional in person field course: students were divided into groups, which had real time remote teaching together with teachers, and depending on the theme, they worked either individually or in groups. During the two weeks, the students participated in four themes related to biogeography, hydrogeography, human geography and terrain modelling. Each theme was taught by a pair of teachers, who planned different solutions for the remote teaching, such as terrain modelling with phones or measuring the flow velocity of a river with oranges, to achieve the learning objectives of the field course. In the end 2021 field course was a good remotely taught field course, which managed to teach the students geographical knowledge and skills in different research areas and themes using only materials the students had at home. Social aspects of the course, especially the interaction between the individual students as well as the students and the teachers, worked much better thanks to real time teaching using different solutions. However, even if the remote field course was good in the emergency remote teaching situation, we feel that it cannot replace the more traditional approach of gathering all the students and teachers on the field course to Lammi biological station.

Learning ladder of critical geomedia literacy *Panu Lammi (University of Helsinki), Tua Nylén (University of Helsinki), Virpi Hirvensalo (University of Helsinki), Laura Hynynen (University of Helsinki) & Petteri Muukkonen (University of Helsinki)*

Geomedia, i.e., maps, diagrams, photographs, and other representations of spatial information, is a powerful means of communication. Children of all ages face geomedia in their everyday lives and thus need geomedia skills from an early age, as part of their citizenship skillset. The increasing supply of misinformation in the web demands skills to critically examine geomedia. Our study aimed at supporting an equal and age-appropriate development of geomedia skills in the Internet era. In practice, we aimed at defining the concept of “critical geomedia literacy” and detailing geomedia learning goals. We aimed for describing the “learning ladder of critical geomedia literacy” and age-specific proficiency levels. First, we reviewed scientific literature and previous classifications on geomedia education, spatial thinking, and critical literacy. Second, we examined the national core curriculums for basic education 2014 and for general upper secondary schools 2015 and 2019 by the Finnish National Board of Education. Finally, we gained insights on the classroom reality by conducting expert interviews of Finnish primary school (n=4), middle school (5), and general upper secondary school (5) teachers, and teachers (7) with a national-scale perspective on geography education. As a result, we define a concept of critical geomedia literacy as a set of skills to examine, evaluate, and interpret the sources (producers

and data sources) and intentions behind geomedia and the information they communicate. While these include general critical reading skills, critical geomedia literacy also builds upon solid geomedia literacy, i.e., skills to use, create and act upon geomedia, and on thematic geographical knowledge. We propose and subject to further discussion the learning ladder of critical geomedia literacy. It consists of 10 geomedia skill classes, that can all be learned at the most basic level in primary school, and deepened e.g. with critical viewpoints throughout the learning ladder. We also describe age-specific proficiency levels in using and creating geomedia, dividing an age group into baseline, elementary, intermediate, and advanced level users/creators. The study participates in the progress of geography education research in the Internet era, at the same time providing concrete tools for teachers, production of learning materials and curriculum development.

Self-assessment of skills in learning and teaching geoinformatics - case of Geoportti tool

Tua Nylén (University of Helsinki), Nora Fagerholm (University of Turku), Eliisa Lotsari (University of Eastern Finland & Aalto University), Niina Käyhkö (University of Turku), Jussi Nikander (Aalto University), Vesa Arki (University of Turku) & Risto Kalliola (University of Turku)

In this presentation, we examine the usefulness of a skills self-assessment tool in teaching geoinformatics. Our case stems from the Geoportti (http://www.geoportti.fi/), the national hub for geospatial research and academic education resources in Finland, established in 2019. The skills development section of Geoportti contains the self-assessment survey tool designed to help anyone get immediate feedback on their skills and competence. Teachers can effectively determine the competence levels of their students both before and after teaching a particular subject. This allows them, in principle at least, to assess authentic learning based on each student's self-confidence. In the present article, we explore what insights can actually be drawn from the results and how they help geoinformatics teachers to further develop their teaching. As teachers in geoinformatics, we have applied the self-assessment in two Finnish universities in five courses (n=23-75 students/course) over one or two years. We have systematically gathered evidence to assess 1) how self-confidence in geoinformatics skills changed during the course, 2) how students evaluated their overall self-confidence after different geoinformatics courses and how this changed between years, and 3) what the perceived effects of the use of the self-assessment tool are on studying and learning among students. We discuss the benefits and challenges in the implementation of the Geoportti self-assessment tool from the perspective of the teachers and the students. Based on teacher experience, planning the content of the self-assessment prior to the course helps to constructively align the learning objectives of the course. The comparison of pre- and post-course self-assessment results prove to be valuable for identifying themes that require specific attention. The post-course results bring up useful information on the overall self-efficacy and satisfaction of the students (including a few justifications and suggestions resulting from open-ended questions), and how they vary between themes, courses and years. Our results show that the self-assessment task was a positive experience for half of the students, helping them focus on learning. However, the teacher's role is important in motivating the students to understand the relevance of the self-assessment and learn from it.

Research plan: Design- based study in geography education in nonformal learning environment. *Noora Kivikko (University of Helsinki)*

Research plan: Design- based study in geography education in nonformal learning environment. Activities in nonformal out-of-school learning environments are a part of geography teaching in Finland, but we have little knowledge on their effects. This is design-based study on those effects that focuses on 1) pupils´ ideas on geography and 2) pupils´ perceptions on the relevance of the subject. Nonformal education has been recognized as a valuable addition to the formal education and it is included in the Finnish National Core Curriculum. Nonformal learning environments can offer knowledge, contents, activities, and resources that are not available in schools. Previous studies indicate that nonformal science education in out-of-school learning environments can have a positive impact on what pupils think about the subject and how relevant they think it is. Despite this, geography-specific research is still inadequate. Geography is a part of the natural sciences in the Finnish National Core Curriculum. However, the role of experimentation in its teaching is smaller than in other natural sciences, because the subject has equally strong elements from humanities and social sciences. The main research questions of this study are 1) How do pupils perceive geography education and how relevant subject do they consider it to be? 2) How do different teaching methods in nonformal learning environments effect pupils´ ideas and perceptions of geography? Hypothesis: A nonformal teaching in out-of-school learning environment have positive impact on pupils´ ideas and perceptions of subject relevance in geography. This study in design-based research. It has three parts: 1) the problem analysis 2) the design process and 3) the design product. The data for the problem analysis will be collected via survey to 9th grade students in Lahti (n=1100) while they are visiting in local nonformal learning environment Tiedeluokka SOLU. The results from the problem analyses will give direction and aims to the design process. Didactic teaching methods will be developed in co-operation with students and teachers during the design process. Designed didactic teaching methods will give an answer to the second research question.

Session 34 Varieties of Nordic neoliberalisms: Changing urban political economies in Northern Europe

Chairs: Özlem Çelik (University of Helsinki) and Lina Olsson (Malmö University)

Auditorium F103, Tuesday

The role of Finnish land-use planning legislation in the ordering of neoliberal environmental governance *Uula Saastamoinen (Finnish Environment Institute)*

The drafting of land-use legislation operates as a site for negotiation over the rules and arrangements of neoliberalism and its materialisation. The currently revised Finnish Land Use and Building Act seeks to establish comprehensive legislation for the governing of land use through a series of hierarchical planning layers, from national to regional and municipal. A new piece of legislation evolves along a conceptualisation of the unstable junctures (after Stripple and Bulkeley, 2019; Valve et al., 2022), critical for public steering. For example, the draft includes a new obligation to take climate change and biodiversity into account in all levels of the planning hierarchy. The revision of the Act enacts a landscape for the integration of values and practices. It is a map within which the neoliberal governance navigates. As the map is created, legislation performs ontological work, materialising some interaction while fading out others. Thus a way is

prepared for ignoring forms of separation or dissolving tensions by creating a symbolic veil of governance. The new draft of the legislation has gone through two rounds of commentary, the latest resulting in nearly 550 comments submitted by organisations, businesses and individuals. The comments will be analysed for their stance on environmental values; which points of tension, deliberation and tools are emphasised, and what kinds of expectations exist for the new legislation. In the analysis, the actors are divided into governmental and non-governmental actors, which differ in terms of their position, influence and resources. The themes rising from the analysis closely circle around neoliberal environmental governance related to land use, a shift from managerial to entrepreneurial mode of governance, as well as the 'post-political' nature of economic growth, the rationale against which is nearly excluded from the discussion. Stripple, J. & Bulkeley, H. (2019). Towards a material politics of socio-technical transitions: navigating decarbonisation pathways in Malmö. Polit. Geogr. 72, 52–63. https://doi.org/10.1016/j.polgeo.2019.04.001. Valve, H., Lazarevic, D. & Pitzén, S. (2022) 'The co-evolution of policy realities and environmental liabilities: Analysing the ontological work of policy documents', Geoforum, 128, 68–77. doi:10.1016/j.geoforum.2021.12.005.

The neoliberalisation of spatial planning in Denmark – a 30-year perspective *Kristian Olesen (Aalborg University)*

This paper reflects on how spatial planning in Denmark has undergone a concerted reorientation since the beginning of the 1990s, in which spatial planning's welfare ambitions have been abandoned for a more 'strategic' approach, focusing primarily on the promotion of economic growth. The paper argues that this reorientation can be interpreted and analysed as a neoliberalisation of spatial planning, which effectively has transformed the Danish planning culture. Drawing on a range of studies of how spatial planning in Denmark has been transformed in the last 30 years, this paper builds a framework for understanding and analysing the neoliberalisation of spatial planning in its multiple dimensions. It is argued that the process of neoliberalisation consists of (at least) five dimensions: 1) neoliberalisation as context dependent process, 2) neoliberalisation as reterritorialization, 3) neoliberalisation as strategic planning, 4) neoliberalisation as mobile urbanism, and 5) neoliberalisation as infrastructuralism. The paper demonstrates how each of these five dimensions have contributed to transform spatial planning in Denmark. Whilst neoliberalism is often described as a 'global thought virus', this paper argues that spaces of resistance do exist, which appear to be 'immune' to a more widespread neoliberalisation. In some cases, the much criticised 'inertia' or 'slowness' in spatial planning seems to constitute a counter force to the otherwise all-encompassing neoliberalisation.

Political Institutions, Local Governance, and Land-Use Changes: A Comparative Study of Norway and Sweden *Katarzyna Szmigiel-Rawska (University of Warsaw), António F. Tavares (University of Minho) & Emanuel Wittberg (Linköping University)*

Sustainable development, land use and sprawl represent a critical front in global efforts to combat climate change as the planet continues to urbanize. However, prior studies have rarely examined the role played by political institutions in facilitating or hindering the preferences of land use-based interests. This article investigates land use changes in Sweden and Norway. We employ the political market framework to discuss the role played by local political institutions and actors in mediating the pressures exerted by interest groups in the political market for

developable land (Keohane et al., 1998; Lubell et al., 2005; 2009). The key hypothesis argues that political institutions are permeable to the influence of land use interests, particularly those valuing the exchange value of land. The study describes the land use management systems in Sweden and Norway and shows satellite-based evidence illustrating the major land use changes during two periods of analysis (2006-2012 and 2012-2018). Using a Land Use Change Index (LUCI) calculated for each municipality and measuring the change towards more intensive land-uses in the years 2006-2018, we test the key hypothesis by employing spatial econometrics models. The evidence suggests that local political institutions interact with land-based interest groups to influence more-intensive landscape changes over the study period. Our paper provides important insights into the complexity that heterogeneity in political institutions and land use interests add to public policy aimed towards sustainable development.

Design, Everyday Experiments and Nordic Neoliberalism *Guy Julier (Aalto University)*

This paper provides a critical reflection on the Finnish pavilion for the 2019 Triennale di Milano, entitled 'Everyday Experiments'. It contributes a discussion on the role of design in the neoliberalisation of the Nordics. The Triennale di Milano featured 26 national pavilions and a central design exhibition of design that responded to the theme of 'Broken Nature'. As the Commissioner of the Finnish pavilion, and with its Curator, Kaisu Savola, our aim was to shift perceptions of Finnish design culture away from elite manufactured objects to participatory experiments in confronting questions of equality and sustainability. Everyday Experiments was supported financially by two government ministries and Aalto University. The show narrated twelve projects, ranging from activist initiatives, citizen science, government-sponsored platforms to experimentation in finance-driven urban and technological fixes. The 'Everyday Experiments' pavilion thus showed conflicting motivations while highlighting the on-going work of the actors who were featured.

The notion of experimentation in the Finnish context is active across a broad political spectrum and contains various historical threads. Nonetheless, several scholars have drawn attention to ideological function of experimentation in enacting and disciplining dispositions towards emergence in the post-welfare state context. The design of platforms for citizen participation in testing ideas in situ and at scale, produces a certain responsibilitisation in and for certain structural processes. More straightforwardly, the experiment becomes a locus for the downloading of accountability while upholding neoliberal priorities of financialisation and deregulation. Enrolment of neighbours in the experimentation of smart city services in Helsinki's Kalasatama district is an example.

This approach draws on Nordic enthusiasms for participatory design that have their origin in the 1960s. Inspiration is also taken from more recent developments in design for public sector innovation. The blurring of boundaries between different political modalities here, is, to be expected. In this state of 'fuzzy neoliberalism', design normalises and 'makes reasonable', unstable conditions. It also functions as a trope for national and localised place branding. Moving the focus away from manufactured design objects to foregrounding the role of design experiments that are tied to place, opens up new layers for the inspection of Nordic neoliberalism.

Finance, Capital Accumulation, and the Production of the Built Environment in Sweden
Maja Stalevska (Uppsala University)

A growing body of literature concerned with contemporary political-economic transformations claims that the Swedish economy is undergoing a progressive financialization in conjunction with an ideologically propped neoliberal restructuring, underway since the early 1990s. Moreover, several scholars have argued that the reversal of the post-war welfare model and the gradual shift toward a finance-led accumulation regime have been premised on a progressive credit expansion and the promotion of a mass investment culture, reflected in the increasing commodification and financialization of the built environment. The latter has been further accelerated by the increasing integration of real estate in global capital markets since the early 1980s, a trend that has continued apace after the Global Financial Crisis. Despite its implication in broader structural changes, however, the spatial, economic, and political contours of the putative financialization of the built environment in Sweden have remained infrequently spelled out. This paper aims to contribute to these debates by critically interrogating the growing influence of financial imperatives in city-building processes through a systematic historical-geographical analysis of property developers' evolving relationship with financial capital. The main focus lies squarely on the relationship between financial changes and the pace and form of commercial property development in Stockholm, mediated through the collective practices of developers, investors, and financial intermediaries. I draw on semi-structured interviews, archival sources, and secondary data pertaining to the history of development financing regimes, to trace the macroeconomic changes and local contingencies through which developers have forged their relationships with increasingly globalized financial circuits. The aim of the study is to situate the present conjuncture of ostensibly financialized urban development in Sweden in its 'financial context' (Christophers 2019), and shed light on contemporary processes of urban production in relation to broader political-economic changes.

Light Rail Transit as Spatial Fix: Regulatory and Accumulative Strategies in the Transit-Oriented Neoliberal City in Sweden *Lina Olsson (Malmö University)*

Over recent decades, light rail transit (LRT) has seen a revival in cities worldwide. The LRT 'renaissance' not only reflects a political determination to build cities around more sustainable transport systems; LRT is often also promoted as a branding strategy and a tool for leveraging property development. The increasing popularity of financing LRT with land value capture and new debt instruments is a part of this trend. Departing in David Harvey's spatial fix concept, this paper analyses how the construction of a new tramway in Lund, Sweden, was adopted as a spatial strategy to 'fix' property development in an urban fringe area – Brunnshög – with weak development demand. While Harvey's elaboration on the spatial fix concept has focused mainly on capturing the general contradicting yet productive tendencies whereby overaccumulation is temporarily resolved, this paper deploys the concept to illuminate how shifting regulatory practices could be understood as strategies to overcome local accumulation barriers. By discussing and illustrating how rent-seeking accumulation is necessarily supported by local regulatory practices, the paper expands on a regulatory understanding of the spatial fix concept. Empirically, the paper argues that the defining regulatory features of the Lund tramway as a spatial fix were the adoption of two new sets of entrepreneurial regulatory strategies that make institutional support of uneven land valorisation and uneven provision of public transit and other public facilities a necessary goal and outcome. Two key strategies were: 1) an entrepreneurial financing strategy based on a land value capture scheme combined with green

municipal bonds, and 2) a land-use planning and urban investment policy, which aestheticises urban space. Together with the tramway investment, these two strategies support the making of Brunnshög as a high rent area. The case reflects how urban entrepreneurialism in Sweden today is increasingly marked by shifting regulatory practices that support and prioritises the accumulative logics of rent-seeking financial and property capital over redistributive measures. The result of these shifting practices is the production of an increasingly segregated urban landscape. The lessons from this case also shed light on the regulatory and accumulative underpinnings of the global LRT trend.

Solutions in search of a problem. Translating BIDs into the Nordic countries *Chiara Valli (Malmö University) & Kristian Olesen (Aalborg University)*

In Denmark and Sweden discussions about introducing Business Improvement Districts (BIDs) have recently intensified, but the problems that the BID model is being proposed to solve in these two contexts are quite different. Whilst the BID model is being promoted in Denmark to support the city centre shopping environment, the BID model is being put forward in Sweden as a means to uplift socio-economically challenged neighbourhoods. In this paper, we explore how, when and why a policy concept, such as the BID-model, is being promoted as a 'recipe' for solving quite different problems almost simultaneously in two very similar geographical contexts. In our analysis, we combine a comparative policy mobility (PM) perspective with the Multiple Streams Approach (MSA), in order to understand how the BID-model is translated into each country and also to show how this translation is embedded in the local political context. From our critical comparative analysis, we argue that the BID-model, whilst gaining political attention in the Nordic countries, at the same time, is increasingly losing its original meaning and becoming somewhat of an empty signifier. Its main appeal to policymakers is its inherently neoliberal rationality (leading to a reinvigorated role of private actors in urban policy) and its international status. It is also peculiar how the BID-model in both contexts is promoted as a solution to problems directly derived from previous rounds of deregulation and dismantling of the public sector. This illustrates the irony of how neoliberalisation unfolds, and how problems derived from neoliberalisation are framed and acted on.

How does the struggle to define homes value drive transformation of the post-crisis national housing finance? The case of Sweden *Anetta Proskurovska (Luxembourg Institute of Socio-Economic Research)*

This article centers the role of the socio-technical organization of housing transactions in extending financial accumulation into new sectors of the housing market and the structuring of the housing finance. The analysis is based on the case of Sweden – a country where housing indebtedness is one of the highest in the world and where home sale workflows, coupled with their mortgaging procedures, have recently undergone a major transformation (Proskurovska & Dörry, upcoming). I argue, that the current socio-technical arrangements were largely shaped by a longer trajectory of attempts to harmonise valuation practices of homes owned directly and indirectly, that is, tenant-owned homes. This effort was vital to ensure the comparability of mortgage debt secured on these different types of collateral but has evidenced different and frequently contending outcomes. On the one hand, it helped to expand financial accumulation into tenant-owned housing sectors, boosting housing price growth along with household indebtedness. On the other hand, it created the ambivalent reality in which the state's capacity to ensure financial stability and regulate the exposure of housing cooperatives and its member-households to credit risk, relies on housing valuations performed by increasingly autonomous

private agents. I conclude with a discussion of limitations that such methodological focus on geographically embedded transactional practices, their outcomes and socio-technical organization implies. However, I also highlight its contribution to a better understanding of neoliberal urban transformations and the mechanisms through which financialisation of residential real estate occurs.

Problematizing urban segregation – a genealogy of the question of vulnerable urban areas in Denmark *Martin Severin Frandsen (Roskilde University)*

This article draws on the late Michel Foucault's notion of problematization as a theoretical lens for studying policies targeting disadvantaged neighborhoods and urban segregation. While the concept of problematization in recent years has become the object of increasing attention in critical urban research, it seems to have gone unnoticed, how Foucault's mode of "thinking problematically" has given direction to the urban sociology of Foucault's former pupil and collaborator Jacques Donzelot during the last three decades. The work of Donzelot can be characterized as an effort to grasp what he terms "the new urban question" and to analyze and evaluate the shifting forms of French urban policy as conflictual responses to this new problematic oscillating between renewed welfare policies and neo-liberal and authoritarian measures. The first part of the article will give an overview of Donzelot's work on the new urban question and urban policy in France and compare this to the more well-known studies of the problematizations of urban poverty and disadvantage and the rise of localist neo-liberal urban policies in Great Britain by Foucauldian analysts such as Nicolas Rose, Ash Amin and Mitchell Dean. In the second part of the article, we will apply the theoretical lens of problematization in a genealogical study of the question of vulnerable urban areas in Denmark from the establishment of the national Urban Committee in 1993 to the plan for A Denmark without Parallel Societies and the "ghetto deal" from 2018 and its implementation and revision under the current Social Democrat government. The empirical object of the historical analysis is thus the changing understandings of "the new urban question" in Denmark and the implications of the shifting problematizations for political initiatives and interventions in the context of a Scandinavian welfare state. The empirical analysis of the Danish urban policies is based on a wide selection of primarily national policy documents and agreements. The documents reveal the conflictual and composite nature of Danish urban policies since the Nineties, while at the same time identifying overall trends towards an authoritarian turn and an increased targeting of ethnic minorities.

Neoliberal discourse and the state-driven gentrification of Danish housing association areas *Matthew Howells (Aalborg University)*

Housing is an essential component of the welfare state (Torgersen, 1987; Kristensen, 2002), a component impacted by neoliberalisation in many European welfare states, especially in relation to the provision of affordable housing (Hodkinson et al, 2013; van Gent & Hostenbach, 2019; Thörn & Thörn, 2017). Danish housing associations are often seen as bastions of welfare that have successfully survived rounds of neoliberal disciplining (Larsen and Hansen, 2015), but have recently come under renewed threat. Taking a discursive approach to neoliberalisation that attempts to marry political economic and poststructural conceptualizations of neoliberalism (Springer, 2012), this research explores how neoliberal discourse influences the problematization of certain housing areas/tenure types and justifies a specific form of

intervention, namely, gentrification. This article argues that the recent 'ghetto legislation' in Denmark forcing the redevelopment of various housing association areas (including forced demolition) is an explicit gentrification policy. Forced diversification and competition against arbitrary and changeable statistical signifiers of deprivation imposes neoliberal logics of accumulation, entrepreneurialism and entrepreneurial urban governance on housing associations and their estates. This policy further creates a particular 'commonsense' among housing associations and associated actors. Housing associations internalize a neoliberal governmentality that constructs certain residents as problematic, acting as a driving force for (re)action to avoid being listed as a problematic area. The perspective of the Danish government, supposing gentrification to be the only alternative to 'decay', can be interpreted as an example of what Tom Slater calls 'false choice urbanism' (2021). This Danish 'false choice urbanism' exemplifies a Danish 'actually existing neoliberalism' (Brenner and Theodore, 2002) strongly influenced by political discourse and debate around race and integration.

Renoviction, Class, and Contested Urban Redevelopment in a Swedish Neighborhood

Miguel Martínez (Uppsala University) & Christoffer Berg (Uppsala University)

The generalised renovation of rental housing estates built in the 1960s and 1970s in Sweden has recently led to high rent increases and the socio-spatial displacement of those tenants unable to afford them. This process has been designated as 'renoviction' (a compound of renovation and eviction). Previous research has shown that working-class tenants, intersecting with gender and migrant-background, have been most vulnerable to renoviction processes. Furthermore, renoviction processes have been questioned by tenants and housing organisations such as the Tenants' Union, but to legally challenge renovation decisions in the Rent Tribunal has proved to be a dead end for tenants. In this paper we add a new angle to understand how renovictions are crucially implemented and contested given the local class structure. In doing so, we examine the Swedish neighbourhood of Eriksberg (Uppsala municipality). Firstly, because renovictions have predominantly occurred in ethnic and economic segregated areas, our focus on the socially mixed Eriksberg provides new insights. Thus, we investigate the municipal strategy of framing renovations of rental housing within a broader process of urban redevelopment. Secondly, we analyse the class character of grassroots' contestations to urban redevelopment and renovictions, involving both city-owned and privately-owned properties. In particular, we aim at problematising to what extent certain urban conditions under threat such as low-density urbanisation and green areas, triggered more protests than affordable renovations for the working-class. Thirdly, we discuss the limitations of institutional channels of citizen participation and their sustainability rhetoric as a response to the residents' say and will to stay put according to their conditions of class reproduction.

Session 35 Racism and far right in times of crises: the political ecology of the far right

Chair: Sonja Pietiläinen (University of Oulu)

Auditorium M105, Tuesday

Strategic Whiteness: How Ethnonationalism is Shaping Land Reform & Food Security Discourse in South Africa *Lisa Santosa (University of Minnesota)*

In South Africa, racialization and its connection to the environment and resource use has been utilized to prop up regimes of dispossession across its settler colonial history. There are disturbing parallels in the rhetoric being used historically and contemporarily to legitimize the continued monopoly of land distribution. Lockean principles of labor and private property have provided a foundation for much of the post-apartheid policy for land reform as the South African economy has opened up to the international market. The willing-buyer, willing-seller model for repatriating land has made land reform prohibitively expensive as it gives historically hegemonic groups the advantage in land reform negotiations because it subjects land valuation to market rates (Aliber & Cousins 2013). Tension around land reform in South Africa has garnered international attention in the last year due to the controversial amendment to the South African constitution, article 25, proposing expropriation without compensation. This amendment is a response to the long-standing problem of structural inequality in a country that has one of the highest levels of income inequality in the world and remains largely unchanged despite the transfer of power to an inclusive democracy over 20 years ago. Alarmist rhetoric is used by far right ethnonationalists in South Africa in order to instigate racial panic through a number of particular narratives, notably those of white genocide and farm attacks. I will use the framework of epistemologies of ignorance (Steyn 2012) to describe the strategic moves made by white nationalist groups to engage in democratic processes without forgoing any power or resources gained through the legacy of colonialism. The narrative of white genocide also provides a bridge to other far right movements globally, with South Africa held as an example of the inevitable progression of race wars. This has mobilized far right movements to organize under the pretense of impending extinction. The case of South Africa provides an example of how whiteness as property (Harris 1993) continues to exert a powerful political influence on contemporary policymaking within liberal democratic regimes despite legal efforts to reverse the legacy of apartheid.

Periphery, Discontent and Exclusive Regional Identities. The Example of SMEs in East Thuringia, Germany *Matthias Hannemann (Friedrich Schiller University Jena), Sebastian Henn (Friedrich Schiller University Jena) & Susann Schäfer (Friedrich-Schiller-University Jena)*

The rise of right-wing populist attitudes and the consolidation of so-called 'geographies of discontent' have become central aspects of the ongoing debate on regional inequalities. While existing studies have made important contributions to understanding regional inequalities on a macro-level, the social and economic dynamics underlying them at the micro-level have not been sufficiently addressed so far. This paper seeks to fill this research gap by analyzing how regional identities contribute to resentments towards foreigners in SMEs. Based on 400 CATI surveys and 65 guided interviews with firm managers and other actors in East Thuringia, Germany, we seek to characterize these identities, explore how they emerge and discuss how they differ according to the regional settings. The results of our study show that xenophobic attitudes in SMEs are

related to exclusive regional identities formed as a result of a perceived peripheralization of the respective region.

The far-right on ice: National identity, whiteness and masculinity in the visual politics of Izborskii Club in Russia *Sonja Pietiläinen (University of Oulu)*

The paper investigates gendered and racialised notions of national identity in the context of the far-right politics in the Russian Arctic. The research focuses on three interconnected concepts – nature, national identity and masculinity – in examining how Izborskii Club, one of the most prominent far-right organisations in Russia, imagines and politicises Arctic nature. The club promotes authoritarianism, anti-liberalism and ethno-nationalism and plays an influential role in defining national geopolitical imaginary as it operates in tandem with the authoritarian Russian state. By drawing on visual content analysis and iconographical interpretation, the research asks more specifically how these images produce gendered and racialised national identities around spatially and historically specific narratives. The research shows that the club portrays the Arctic in the context of technological and scientific activity and defines nature in terms of its untapped potentialities. The club advocates for more profitable state-led use of resources defined by national interests and, in doing so, presents hydrocarbons as the key in unlocking the 'Arctic civilisation'. Through national iconographies, such as flags and military submarines, the act of resource exploration is presented as an expression of national identity but also whiteness and masculinity. The construction of racialised and gendered national identities and the process of the production of natural resources are intertwined at spatial but also temporal levels. Resource exploration is constituted as a performative act of white national identity and it constructs a link between socially produced collective identity and land/resources. The act of resource extraction is also framed temporally, as it is framed in terms of national wealth, progress and prosperity.

On the relation between far-right support, populism, and climate change denial *Kirsti M. Jylhä (Institute for Futures Studies)*

Disinformation about climate science has spread doubt and denial in society. It should be noted, however, that some segments of the public are more prone to denying climate change than others. Research has consistently found that political right-wing identification and orientation correlate with anti-environmentalism in several Western countries. Recent analyses suggest that right-wing populist and far-right (i.e., extreme and radical) parties and voters tend to be more prone to dismiss climate change than the mainstream right. In this talk, I present findings from two papers investigating psychological factors that could explain this (Jylhä & Hellmer, 2020; Jylhä, Strimling, & Rydgren, 2020). I will also discuss how some research results on mainstream sociopolitical views could be applied to understand anti-environmentalism that is expressed by the far right. More specifically, the talk will review the effects of sociopolitical issue preferences (e.g., socioeconomic attitudes, opposition to immigration, anti-feminism), conservative ideologies (Right-Wing Authoritarianism, Social Dominance Orientation, System Justification), personality factors (openness, agreeableness, empathic concern), and populist anti-establishment attitudes and institutional distrust. Based on the findings and theoretical considerations, I conclude that conservative, exclusionary, and anti-egalitarian worldviews are important explanations for climate change denial. Moreover, I argue that merely being distrustful, or expressing populist views, is not strongly linked to climate change denial. Thus, antiestablishment views could be considered when selecting the channels and methods for climate communication, but the content of the communications could focus on the worldviews and lifestyles that are protected

by climate change denial. Nevertheless, there is a need for more cross-cultural research that will take into consideration the cultural context and the relevant climate discourses. I will also discuss the need to disentangle the effects of populist ideology (or rhetoric) and the "host ideology" (e.g., anti-immigration) of far-right parties to enhance understanding of the underpinnings of climate change denial. I invite discussions and comments on the conceptual and methodological issues, and interdisciplinary and cross-cultural perspectives on this research topic that is still relatively little studied.

Heteronormativity and Claims to Cheap Fuel as a Rural Right in Sweden *Julia Lagerman (Uppsala University)*

Increasing fuel prices are reported and debated closely in news media and in far-right alternative media. Compared to increasing costs of other commodities many of us need in our daily lives, such as housing and collective transports; petrol and diesel are often framed and debated among conservatives and the far-right as being within public control of price regulation. As part of the Swedish far-right are particularly keen on positioning themselves against high fuel costs, framing it for example as "a punishment of the Swedish countryside" or "ordinary Swedes" (Jimmie Åkesson, 2021). The far-right love for fossil fuels has in feminist analyses been traced to petro-masculinity and fascist dreams of destruction, where the white masculine subject desires burning fossil fuels because it punishes others and strengthens the patriarchal status quo (Daggett, 2018). The fascist desire for fossil fuels and the machines consuming them have further been explained as a male endeavor and a way to overpower and harm Others- black people, Muslims, immigrants, women, and LGBTQ people (Malm and the Zetkin collective, 2020, p. 391, 448). Agreeing with above cited theories of fascist desire for fuels as destructive in both psychological drive and in enacted practice, I would like to add an aspect to the analysis of gender, sexuality and fossil fascism, namely how petro-masculine destructivity is often presented as protective. Drawing upon examples of various statements from Swedish far-right actors on fuel prices, I ask what role their discourses of protection and of heteronormative family reproduction play in these debates. References Daggett, C. 2018. Petro-masculinity: Fossil Fuels and Authoritarian Desire. Millenium: Journal of International Studies. 47(1). Malm, A, and the Zetkin Collective. 2021. White Skin, Black Fuel. On the Danger of Fossil Fascism. London: Verso.

The imagined homogenous, patriarchal, and industrial far-right community *Kjell Vowles (Chalmers University of Technology)*

During the late 2010's, Greta Thunberg became one of the main adversaries of Swedish far-right alternative media. With the online video channel SwebbTV as a nexus connecting the climate change countermovement with the far-right media ecosystem, the latter went from being agnostic about climate change, to being antagonistic, creating a discourse where climate change was taken for granted as a hoax. By scare-quoting climate, using anti-establishment rhetoric and spreading conspiracy theories in the propaganda feed-back loop (Benkler, Farris, and Roberts 2018), they attacked Greta Thunberg and anyone backing her message. In this paper, I argue that our understanding of far-right denial of climate change can be helped by looking at the imagined community of the far right. The dream nation of the far-right is ethnically homogenous, culturally patriarchal, and industrially prosperous, and while immigration has been seen to threaten the ethnical aspect and feminism the patriarchal one, it is the climate change movement and the

transition away from fossil fuels that is challenging industrial prosperity. Swedish far-right alternative media, both outlets within the propaganda loop and those more adhering to traditional journalistic norms, have been trying to appeal to petro- and industrial/breadwinner-masculinities (Hultman and Pulé 2018; Daggett 2018). They have been flying the flag of male coded engineering, claiming that we should listen to the men who it claims built the (imagined) nation, rather than to young women such as Greta Thunberg. The paper builds on three empirical case studies of climate change discourses within Swedish far-right alternative media during the years 2018-2019. Analysing the discourses through Benedict Anderson's (2016) work, helps us understand how the imagined communities of the far-right becomes an obstacle to climate change mitigation. Anderson, Benedict R. O'G. 2016. Imagined Communities: Reflections on the Origin and Spread of Nationalism. Revised edition. London New York: Verso. Benkler, Yochai, Robert Farris, and Hal Roberts. 2018. Network Propaganda. Oxford: Oxford University Press. https://doi.org/10.1093/oso/9780190923624.001.0001.Daggett, Cara. 2018. 'Petro-Masculinity: Fossil Fuels and Authoritarian Desire'. Millennium: Journal of International Studies 47 (1): 25–44. https://doi.org/10.1177/0305829818775817. Hultman, Martin, and Paul M. Pulé. 2018. Ecological Masculinities: Theoretical Foundations and Practical Guidance. Routledge Studies in Gender and Environments. New York: Routledge.

Session 36 Lively terrains and matters of care in socioecological transformations

Chair: Tarmo Pikner (Tallinn University)

Auditorium F101, Wednesday

Encounters, enchantment, and eventual learning: a qualitative analysis of the new Finnish curriculum for basic education *Raine Aiava (University of Helsinki), Heikki Juhana Sirviö (University of Helsinki), Noora Pyyry (University of Helsinki)*

The notion of the encounter has become an increasingly important political concept to evaluate how relations, subjectivities, and agencies are constructed and negotiated through the immanent (self-organizing) coming-together of bodies, doings, and sayings in eventual unfoldings. As distinctive events of relation, encounters exceed the boundaries of reified identities, redrawing the ontological cartography of force relations within the world, and are thus fundamentally about difference. In this paper we attempt to think learning in terms of the event, with the transformative potential for becoming-otherwise taken to be fundamental in conceptualizing learning beyond traditional epistemological acquisition of skills, the linear transmission of knowledge, and the articulation of coherent subjects. However, insofar as sites of encounter are pervasive – gatherings in which we find ourselves constantly immersed – what becomes paramount in thinking "eventual learning," is not the production of sites of encounter, but the permission to dwell within them rather than to prescribe their arrival and regiment their interpretation. Unfortunately, too often the ontological energy of the event is drained by dominant social realities, which find ways to either instrumentalize the event towards their own operations, re-direct its force of rupture, or foreclose on it altogether through a techno-economic logic that works to delineate the world in advance as mere resources to be ordered and optimized. In order to think learning in relation to the disclosive event of becoming-otherwise, this paper looks to the presuppositions and substantiations about the learning subject in Finnish basic education through a qualitative analysis of the renewed Finnish curriculum for upper secondary education, commissioned in 2017 (effected August, 2021).

Understanding such legislative documents to also exert an affective force in the landscape of education, we aim to think with the complicated and shifting notions of subjectivity and learning within the document to reveal how they simultaneously presuppose and condition understandings of subjectivities, worlds, and educational parameters, and how they either facilitate or foreclose on eventual learning. We probe the document for openings – for moments of enchantment, hesitation, dwelling, care, and not-knowing – where non-linear knowing-in-being could challenge dominate drives of economic instrumentalism and measurement imperatives that condition teaching and learning.

The street and the shelter: Landscapes of interspecies care in transnational animal rescue and rehoming *Nora Schuurman (University of Turku)*

In transnational animal rescue and rehoming practices, homeless dogs are rescued to shelters and subsequently offered for adoption by animal rescue charities in other countries. Through these practices, an increasing number of animals are rehomed from Southern and Eastern Europe to more affluent countries in the North and West of Europe, one of them being Finland. The Finnish charities almost exclusively operate on a voluntary basis and collaborate with local volunteers, groups, and charity organisations, supporting them in the daily care of the animals in shelters and in the preparation of their rehoming. In this presentation, I analyse these international landscapes of interspecies care. Drawing on interviews with volunteers from Finnish animal rescue charities, I explore the practices and spaces of caring for – and with – homeless dogs in their countries of origin. The spaces observed include the places where the dogs are found and the shelters and foster homes where they are placed. Many of the rescue dogs have been found on the street, in the woods or in abandoned buildings, but some are brought to shelters with no clue of their background. There are also those who seem to have lived as a pet in a human home. Some of the dogs are later chosen to be transported to Finland for rehoming, while others stay in the shelters permanently. In the analysis, I focus on the spaces and situated practices of care, as well as on interpretations by the Finnish volunteers of the subjective experiences and agency of the dogs. I pay special attention to the dynamics between the volunteers' experiences of rescue work and the expectations of donators and potential rehomers. In the case of dogs, their subjectivity and agency are constructed by interpreting their actions situationally. Thus, they come to be understood as individuals with their own ways of responding to care, spaces, and other actors, as well as a life history and, for some of them, a possible future as a pet.

Product care stories – unfolding citizens' agency in circular economy *Taru Peltola (University of Eastern Finland) & Kati Pitkänen (Finnish Environment Institute)*

Circular economy bundles up ideas about a positive socio-technological future based on re- and upcycling of materials. Much of the focus in circular economy has been on the development of new business models and managing waste to enhance material circularity. Less attention has been paid to the social dimension and citizen's active engagement in the material flows. In this paper, we study which materials and why end up as waste in the first place by exploring narratives collected by a group discussion method called 'product care stories'. These everyday stories of people taking care of their products to prolong their lifecycle extend the prevailing narratives of circular economy. They turn attention to citizens' active role and agency in circular economy and offer a window to the aspects of economic activities that have remained marginal. Yet, these narratives are not separate from the mainstream ones but citizen's accounts of their

everyday actions connect to the prevailing visions of circular economy in many ways. Theoretically, we focus on care as a conceptual lens to circular economies. We offer an interpretation of circular economy enriched by four aspects arising from conceptualisations of care in feminist studies and critical economic geographies: product care as a moral theory, as affective attachment to products, as commitments arising from socio-material practices and collectives and as (marginal) economic action/work.

Session 37 Farming, farmers, and food: transformation towards sustainable and resilient agricultural livelihoods

Chair: Pontus Ambros (Uppsala University & University of Helsinki)

Auditorium M107, Monday

Untangling the global-national-local interactions in the context of commercial land appropriation in Ethiopia: Implications for women's food production and rural livelihoods. *Frankline Ndi (Örebro University)*

This proposed project revolves around the wellbeing of agrarian and forest-based communities in Ethiopia, and the challenges that they are exposed to, as a result of the loss of farmland for commercial agricultural purposes. In the current situation of food insecurity and climate change in Ethiopia, the study interrogates the outcomes of the federal government's developmental agenda – to promote an inclusive socio-economic development. It focuses on western Ethiopia where over 80% of people depend on land to generate livelihoods mostly through subsistence agriculture and the harvesting of forest resources. It examines the political economy / political ecology of land to uncover the [actual and future] distortions in communities' traditional land-based social relations caused by land appropriation, and the implications for women's abilities to effectively practice agriculture and rural livelihoods. It raises gender concerns aimed at addressing gender inequality over access to land and rural resources and ensuring that the attainment of local socio-economic development is inclusive and sustainable. The study will combine field research using interviews, group discussions and observation with secondary data, to provide a nuanced understanding of the micro politics accompanying land dispossession. The context, research questions, and methodological approaches seek local answers but inform global concerns.

The more labelled, the more resilient? The role of place-branding intangibles in Italian peripheral areas. *Giulia Urso (Gran Sasso Science Institute)*

Place branding has become a key factor in local and regional development against the backdrop of a global competition. Cities have massively invested on that, becoming the focus of the academic and policy debate. Less attention has been devoted to peripheral areas. Yet, the leveraging of traditional place-based assets is a key-issue when dealing with territories which are characterised by a long-lasting socioeconomic decline and by a marginal position in national and international networks, but which are often rich in placed-based intangibles. By investigating Italian inner areas, this paper aims to assess whether branding of context-specific intangibles can be associated with higher level of resilience to a recessionary shock. Using ISTAT data on population and employment by sector from 2004-2017 at municipal level, we explore whether the presence of highly recognised brands collected in three thematic areas (i.e. natural, eno-

gastronomic and cultural-historical capital) has been able to mitigate the effect of the 2008 Great Recession. Policy implications of such an evidence might be relevant, especially in light of the recent focus on peripheral areas in Italy and the EU. Preliminary results from the econometric analysis show that the production of PDO and PGI labels is significantly related to local resilience. A less important role, on the contrary, is played by natural and cultural-historical-architectural capital. This evidence seems to suggest that what really makes a place distinguishable to the extent that it makes it resistant to economic shocks is the branding of its eno-gastronomic and typical productions which enhances the local agri- food chain. This might open new scenarios for peripheral areas in their competition with core ones in their search for a place in the global economy.

Exploring diversity indices in the context of agricultural research; a case study of agricultural production diversity within EU countries of the Baltic Sea Region *Pontus Ambros (Uppsala University & University of Helsinki)*

The alternatives to the global food system, such as local, regional and national systems are becoming increasingly important with global food systems becoming more affected by climate irregularities, the COVID-pandemic and changed consumer behaviours. With the introduction of industrial agriculture, agricultural production diversity has seen a generally steady decline over the past decades accompanied by a gradual increase of monocultures. The decline in diversity is seen as a serious threat to the food security and self-sufficiency of regions and countries. Being able to study and compare changes in these trends is of significant importance in adapting to climate change and other crises. Using available statistics, this paper investigates the past 20 years of agricultural production diversity within EU countries of the Baltic Sea Region. The study intends to explore the usage of the diversity index in the context of agricultural research, where it is not commonly used. Use of this index, makes the study exploratory in its usage of methodology. The study discusses the selection of diversity indices and argues for use of Shannon's diversity index for comparative studies, such as the case study of EU countries in the Baltic Sea Region. This method will be evaluated and discussed, with reference to its relevance, shortcomings and potential. The results from the case study in relation to agricultural production trends over the past 20 years will be analysed concurrently.

Making quiet the new loud? A preliminary enquiry into an emerging field of food self-provisioning studies *Milla Suomalainen (University of Helsinki)*

Owing to the global system of food provisioning—which has altered world's terrestrial habitats and converted them into production ecosystems for a few harvestable species—socio-ecological resilience is in jeopardy. Local food self-provisioning, understood as a process in which food is provided for oneself, one's household or community, is claimed to offer a partial solution to making food production and consumption more resilient. In this emerging field of studies, namely "self-provisioning", some scholars suggest that food self-provisioning may, for example, enhance community resilience through nurturing and sharing of produce and skills, strengthening social bonds, and increasing trust. Other studies again have found that households growing their own vegetables and fruits also consume more vegetables and fruits compared to other households. In self-provisioning studies, gardening is also linked to many other health benefits. While it seems that much of the gardening practices on backyards and allotments in the global North are reported to be desirable from a sustainability point of view

due to their low or no use of industrial fertilisers or pesticides, environmental concerns seem not to be the primary motivators for these activities. Instead, many practitioners of food self-provisioning initiatives seem to be largely motivated by the desire to get food that is perceived as fresher and healthier than the produce available on the market, by the pure enjoyment of gardening as a leisure time activity, or the need to save money. Food self-provisioning has even been labelled as 'quiet sustainability' perhaps due to its somewhat unintentional nature regarding its environmental and social transformative potential. In this presentation, we provide an overview on food self-provisioning based on a systematic literature review. Our aim is to identify and analyse how this concept is embedded in diverse geographical contexts and across spatial scales and to critically evaluate what possibilities food self-provisioning provides and for whom. We ask: what is the role of food self-provisioning and informal food networks in the emergence of more socially and ecologically resilient systems of food provisioning; and to what extent and in what ways could food self-provisioning contribute to community resilience?

Organic Farming and New Food Values: The Case of Direct-Sales Network *Maija Usca (Institute of Agricultural Resources and Economics)*

With the world population growing, it is becoming an ever-greater challenge to provide safe and nutritious food for the people. At the same time new food values are increasingly appearing – customers search for healthy and sustainable diets that are health – promoting not only to humans, but also the environment. Healthy and sustainable food systems is one of the aims set by the European Union (EU) as well – in May 2020 the European Commission introduced Farm to Fork Strategy for a fair, healthy and environmentally friendly food system. The strategy highlights the need of consumers to have access to safe, healthy, high quality and affordable food at the same time promoting environmental goals – reducing dependency on pesticides and antimicrobials, reducing excess fertilization, increasing organic farming, improving animal welfare, and reversing biodiversity loss. Farming system that is nature, environment and human health friendly as well as constantly growing, is organic farming, nowadays covering 8.5% from total agricultural land in the EU and 14.5% in Latvia. In comparison to conventional farming, organic farming is characterized by nature and environment friendly farming methods – it is forbidden to use pesticides, grow genetically modified crops and the use of antibiotics is limited. Researches show that areas treated with the methods of organic farming have a higher biodiversity and higher diversity of habitats, have less pesticides and less nutrient pollution in the ground and surface waters, and the food produced has less or no pesticides in it, in comparison to conventionally farmed areas. Researches show that an increasing number of consumers are looking for alternative sources of food produced near their place of residence that can refer to the concept of short food supply chains. In the paper results of sociological case study of short food chain – direct sales network, will be depicted. The direct sales network includes both organic farms selling production through the abovementioned short food supply chain as well as community managed 14 direct sales points scattered in 7 towns throughout Latvia.

Last harvest? - earthly effects of the development of global integrated local agriculture. *Anders Wästfelt (Stockholm University)*

This paper theoretically investigates how agriculture is geographically space sensitive in the long term inside the global economic integration process and which earth effects are. The geographical localization and spatial size of farms and farm land is partly determined by natural

conditions, but it is equally dependent on ideology, techniques in use and access to capital, labor and markets. Unique for agriculture in the globally integrated world economy is agriculture's character of being dependent on fixed localization, and its sensitivity to often unique spatial dimensions. The farmer´s synchronization with local ecological processes as well as synchronization with national policies and evolving global economies are crucial. How the evolving liberalized economy since 1990 forced Swedish farmers into characteristic trajectories is empirically and principally presented in this paper. As starting point for the understanding of linkage of three relative spatial dimensions, relative farm and farm land scale and its value, relative labor-costs and relative transportation costs in-between farms. These relative variables create tensions, which together act as driving mechanisms in ongoing restructuring. From this principal and empirical analysis, the theoretical interlinking of economic geographical effects, returns to scale, declining distance friction, labor and land productivity together with the economic dimension of return to speed is presented as crucial to theoretically link the analysis of localized effects of globalized agriculture. The final argument is that the current global economic system with less decreasing distance friction, increased farm scale and decreased labor costs force farmers to soon take home the last harvest. The geographical amalgamation of local and global analysis presented is crucial for analysis and governance of localized earth effects of globalized agriculture.

How do Sustainable Agricultural Industries Evolve? – An Actor-Centered Approach to the Emergence of the Danish Wine Industry *Anika Zorn (Friedrich Schiller University Jena) & Susann Schäfer (Friedrich-Schiller-University Jena)*

Although modern agriculture manages to feed billions of people in the world, it is also a main driver of environmental and climate change. On the other hand, agricultural activities can be highly vulnerable to these changing environmental conditions. Thus, it is important to understand how new sustainable agricultural industries evolve. Approaches from Evolutionary Economic Geography may help to explain, how new sustainable economic paths are created in regions. However, there is still little knowledge about the role of agency in the context of path creation. There is a lack of understanding which motives, strategies and future expectations affect the development of new economic paths. This presentation aims to contribute to the question how new sustainable agricultural industries emerge by taking an actor-centered approach. The Danish wine industry serves as a case study for this question. Partly award-winning wine is grown and produced commercially in about 100 vineyards in Denmark today. This evolution was made possible by the development of new grape varieties suited to the Nordic environmental conditions. These varieties are often fungus resistant, which reduces their impact on the environment, because less fungicides are required. An explorative case study was conducted including several interviews, participant observations and document analysis to find out how this sustainable industry far away from traditional winegrowing regions evolved. The focus is on the motives and strategies of the actors. The results show that there are three different types of commercial Danish winegrowers: the extended hobby-grower, the adventurous enthusiast and the wealthy business drop-out. An important strategy for these Danish winemakers in the process of professionalization is the combination of local capital and knowledge transfer from abroad. Consultants, employed winemakers educated in other winegrowing regions or study trips abroad are different kinds of global knowledge transfer that played an important role in setting up the Danish wine industry. Expectations of increasing demand in Nordic and sustainable wine, more suitable climatic conditions and domestic tourism are drivers for professionalization and growth in this new industry. These findings indicate the

important role of different kinds of global knowledge transfers for emerging sustainable industries.

Privilege, power and social (in)justice in Berlin's community food spaces *Ophélie Véron (University of Sheffield)*

Over the last two decades, community-based practices such as guerrilla gardening, community gardens or community-supported agriculture have challenged conventional food cultivation, preparation, distribution and consumption in many cities around the world. The benefits of these grassroots practices are widely acknowledged, but they have also been shown to support neoliberal and exclusionary dynamics. This paper examines this contradiction on the ground by unpacking the processes and mechanisms through which urban grassroots food initiatives reproduce, reinforce or challenge social inequities and injustices in the city. For this purpose, I investigate the mechanisms through which power relations and socio-environmental injustices are reproduced, exacerbated or dismantled by these groups. I systematically explore the dynamics of exclusion and inclusion at work within community food spaces, and first assess the elements that shape diversity of participation and representation. Contending that diversity is not a sufficient indicator of social equity and justice, I then provide a nuanced unpacking of the interlocking workings of privilege and power in place. I expand these approaches by examining innovative ways of developing emancipatory food politics on the ground. By doing so, I shed light on the leverages and factors through which community food spaces challenge asymmetries of privilege and power, and work towards more socially and environmentally just cities. This dimension, less investigated by the critical literature on alternative food networks and urban agriculture, sheds light on the processes through which food might be used, not to privilege a few, but to enable a more equitable distribution of resources and rights among local communities. This study draws upon an ongoing militant ethnography in Berlin, Germany, initiated in 2019. Exploring the complex and diverse landscape of Berlin food activism, it illuminates the ways in which urban food production may be used to perpetuate unjust social configurations or, on the contrary, to advance social justice at both local and structural levels.

Sustainable Urban Farming at The Turku University Campus *Leena Erälinna (University of Turku)*

Environmental awareness is growing among urbanized consumers who want to know what they eat. In developed countries have a strong trend to develop urban farming, which offers many environmental, and social benefits. We present a concept of sustainable urban farming and circular food systems, which are recommended and supported by global and European policies and programs for sustainable development. The aim of this paper is to present the method of managing a circular food system in sustainable urban farming that was created as part of a project carried out at Turku University Campus (Finland), called "Less Waste, More Recycling" ("LeRe"). In the "LeRe" - project had two objectives. The first, reduce food waste at one of the biggest campus restaurants Macciavelli (about 1200 customers per day) by campaigns and communications between restaurant and students. The second, which support circular economy and the local recycling of nutrients i.e. composting food waste generated in the pilot restaurant Macciavelli and recycling the nutrients by urban farming. The group of students of Turku University organized themselves urban farming association. The compost was used in a community garden of the young urban farmers. The urban farming became very popular among the students. The development of urban farming skills by student cooperation was impressive.

By taking care of vegetables and fruits, the work became concrete and the appreciation of food increased substantially among these young farmers. The project had shown that urban farming is a way of increasing the sense of value of food, which is one key part of reducing food waste—both through growing one's own vegetables, as well reducing daily food waste. Urban farming is popular nowadays, and in Finland we have lot of people who are interested in it. Our concept could use also for local nutrient recycling, and that way we could rise the degree of self-sufficiency and security of supply in food production. Above all urban farming could increase the appreciation of food, and could decrease food waste also in a bigger scale, and promote more sustainable food system.

Session 38 Health and well-being from nature

Chairs: Riikka Puhakka (University of Helsinki) & Kati Pitkänen (Finnish Environment Institute)

Auditorium F100, Monday

Associations between neighbourhood characteristics, self-reported and accelerometer measured physical activity and depressive symptoms - Northern Finland Birth Cohort 1966

Marjo Seppänen (University of Oulu), Nina Rautio (University of Oulu), Markku Timonen (University of Oulu), Soile Puhakka (University of Oulu & Oulu Deaconess Institute Foundation sr.), Mikko Kärmeniemi (University of Oulu & Oulu Deaconess Institute Foundation sr.), Jouko Miettunen University of Oulu, Tiina Lankila (Oulu Deaconess Institute Foundation sr. & University of Oulu), Vahid Farrahi University of Oulu, Maisa Niemelä University of Oulu & Raija Korpelainen (University of Oulu & Oulu Deaconess Institute Foundation sr.)

Residential environment and physical activity (PA) have been suggested to be associated with depression. Associations of these factors are, however, still unclear. Due to rapid urbanization, there is a need for deeper understanding on the role of residential environment in development of depression. We aimed to examine whether neighbourhood characteristics are related to presence of depressive symptoms at midlife and whether the association is moderated by PA. We used the 46-year follow-up data from individuals participating in the Northern Finland Birth Cohort 1966 study. All those from whom data on depressive symptoms, measured by Beck Depression Inventory II (BDI-II) (n = 5 489), and self-reported (n = 4 936) and accelerometer measured (n = 5 193) PA were available were included in the study. Participants were categorized into low activity and moderate to high activity group based on PA quartiles and global recommendations on PA for health. Almost half (49.2%) of the study population lived in urban area and 9.3% had depressive symptoms. Results from multivariable logistic regression models suggest that urban environment characteristics are associated with increased risk of depressive symptoms in both self-reported light PA groups, low self-reported brisk PA group and high accelometer measured MVPA group. Semi-urban characteristics and green environment are associated with lower risk of depressive symptoms in low self-reported light and low self-reported brisk PA groups as well as in high accelerometer measured MVPA group. This population-based birth cohort study offers a comprehensive view on the associations between living environment, PA and depressive symptoms. Our study suggests that more diverse environment, which includes some facilities as well as greenness may be good from the point of reduction of depressive symptoms.

The multidimensionality of urban nature: A mixed-methods study on how to enhance the integration and wellbeing of immigrants in *Finland Miriam Tedeschi (University of Turku) & Hanna Heino (University of Vaasa)*

Activities in natural environments have considerable benefits for the health and well-being of humans, and they enhance and promote urban sustainability. This article explores how residents of Turku from different ethnic (Arabic-, Russian-, and Somali-speaking) backgrounds appreciated and engaged with their urban natural environment. Additionally, the article considers how this engagement benefitted their well-being and integration. All individuals enjoy activities in nature in particular ways, which may vary according to their physical, social, and psychological characteristics. This is especially true for immigrants, who apply their home country traditions to the ways in which they interact with their environment or enjoy activities in nature. Three dimensions of nature experience emerged from the research—social, emotional, and normative—which in turn supported different types of integration—interactive, identificational, and cognitive. We argue that because these dimensions are fully part of a person's identity and cultural background, becoming more familiar with them may prove pivotal in constructing more welcoming, intercultural urban natural environments. Engagement with the urban natural environment benefits the foreign-background population's well-being and integration if different approaches to nature are considered in the design of both the urban environment and urban nature, as well as in integration Programmes.

Adolescents' outdoor recreation and perceived well-being effects – a study in the city of Lahti, Finland *Riikka Puhakka (University of Helsinki), Katherine Irvine (The James Hutton Institute) & Sofia Kaipainen (University of Helsinki)*

It is increasingly recognized that contact with nature promotes our mental and physical well-being and health. Interacting with nature has been shown to increase self-esteem and mood, relieve stress, and improve the ability to concentrate. Natural settings can encourage exercise, and exposure to a diverse microbiota enhances immune regulation. Experiences in nature are positively associated with stronger pro-environmentalism. While nature-based tourism has recently grown, adolescents' decreasing contact with nature has also raised concerns in many urbanized societies. In this study, we explore adolescents' participation in outdoor recreation and their well-being experiences of and relationships with nature in the city of Lahti, Finland. The study is based on survey data collected from students in 7–9th grades (N=1121) in autumn 2020 during the COVID-19 pandemic. The online survey was delivered to five schools. The results suggest that the concern about the alienation from nature may be unfounded. Most adolescents in our study, especially girls, spent time in various natural environments several times a week. Nearby natural settings were particularly important to them. However, interest in nature and outdoor recreation slightly diminished during secondary school. Participation in outdoor recreation was also associated with socio-economic factors: adolescents from well-off and educated families, and those feeling healthy and satisfied with life spent time in nature more often than others. Most of the participants perceived their well-being to increase as a result of spending time in nature; they experienced positive emotions often and negative emotions rarely. Multisensory experiences, such as visual elements, smells and sounds of nature, were particularly important for the well-being of the adolescents in our study. The findings highlight the importance of engagement with nature for well-being during adolescence and draw attention to the value of multisensory experiences. This has implications for the design of natural settings, particularly those located nearby to where adolescents live and go to school. Active participation in outdoor recreation was not, however, universally experienced. Finding

ways to support engagement with nature during adolescence, particularly as young people get older and across socio-economic backgrounds, is therefore necessary to foster a lifelong nature connection and experiences of well-being.

How the elderly and the youth of Turku gain eudemonia from nature? *Johanna Jämsä (University of Turku), Nora Fagerholm (University of Turku) & Salla Eilola (University of Turku)*
In my PhD research, a central concept is eudemonia, which has not yet had the attention in the nature context that it deserves. Eudemonic perspective takes a long-term view on human wellbeing by focusing on the benefits that make life feel meaningful. My research asks how nature supports Turku inhabitants 1) self-acceptance, 2) autonomy, 3) meaningful life, 4) personal growth, 5) good social relations and 6) environmental mastery. All dimensions of eudemonic wellbeing. How do Turku inhabitants, specifically the elderly (60+ yo) and the youth (15-24 yo) gain eudemonia from contact with nature? Are there differences, what about similarities? How does the everyday rhythms of a student life or pensioner's life affect how they relate to nature? I have collected creative writings of the Turku inhabitants relationship to nature using Luovasti luonnosta – creative writing workshops developed with community artists Niina Aho and Satu Suvanto.

Wellbeing from nature as a skillful practice: exploring both recreation at seas and recreation in urban and semiurban places *Neva Lepoša (Swedish University of Agricultural Sciences)*
Exploring very different activities conducted at very different environments and times, i.e. recreational boating on the Swedish West Coast during the summer vacations on the one hand and everyday walking and running in urban and peri-urban on the Swedish East Coast lead to the same conclusion. Their recreation practice can be conducive to their wellbeing. In the interdisciplinary field of wellbeing, leisure, and urban planning the majority of studies focus either on the individuals' values, preferences and assume that certain activities (e.g. gardening, running) or certain places, such as green/blue areas will automatically have restorative effects and lead to wellbeing. Yet health geographical research shows that therapeutic/wellbeing benefits are not simply received, but emerge through active, material, bodily engagement and are contingent on a number of environmental and social factors. Therapeutic landscapes explore how social conditions, human perceptions, and the environmental aspects combine to conduce healing. In addition, Social practice theories stress the routinized behavior consisting of certain understanding, know-how/skills, and states of emotion. Focus on practices, allows us to see how the skills need to combine with the material environment, for wellbeing/therapy to happen. A combination of therapeutic landscapes and social practice theories inspire the analysis of the two sets of interviews with recreational boaters and urban and peri-urban recreationists. Exploring how the material structure of the environment and the equipment which is part of these very different practices, as well as skills, need to combine, we can see that wellbeing from nature is not a given. Instead, to 'be-well' through and from nature is a learned, skillful practice. A different set of skills and materials is required from the citizens living in more urbanized environments with a limited amount of green and the ones recreating in the vast and open blue spaces. Yet, through an application of skills, both, sea-based practices, situated in more rural areas, as well as land-based practices, situated in more urban places, can become therapeutic.

Geodiversity supporting human health and wellbeing *Janne Alahuhta (University of Oulu), Helena Tukiainen (University of Oulu) & Raija Korpelainen (University of Oulu)*

Human health and well-being are essentially dependent on a healthy nature, which provides people various ecosystem services and creates foundations for life on Earth. Evidence is accumulating that both physical and emotional contact with nature is beneficial for human health and wellbeing. For example, healthy nature reduces harm caused by environmental stressors like pollution and heat, has restoring capacities and facilitates social cohesion and encourages physical activity. Likewise, association with nature has also been found to be linked with lower mortality rate, lower risk of cardiovascular diseases and obesity and improved mental health. When the relationship between nature and human health and wellbeing are described and investigated, nature usually equals biodiversity. However, this is a highly simplified view of nature, as it completely neglects the diversity of non-living components of the Earth surface and sub-surface (i.e., geodiversity). Geodiversity is commonly defined as the natural variety of geological (rocks, minerals, fossils), geomorphological (landforms, topography, physical processes), soil and hydrological features or, more generally, the non-living diversity of the Earth's surface and subsurface. Simply, geodiversity is seen as the non-living equivalent of biodiversity. Together geodiversity and biodiversity constitute to ecosystem maintenance and functionality that also creates foundations for human existence on this planet. Here, we present geodiversity as a novel approach, which directly and indirectly can support human health and wellbeing. We define geodiversity and how it is related to both biodiversity and human health and wellbeing. We also discuss possible processes and pathways how geodiversity potentially supports human health and wellbeing.

Using green spaces from inner city to nearby wilderness areas - user and use characteristics, motivations and wilderness attitudes along an extended recreational opportunity spectrum *Berit Junker-Köhler (Norwegian Institute for Nature Research) & Vegard Gundersen (Norwegian Institute for Nature Research)*

The so-called recreational opportunity spectrum (ROS) identifies physical, social, and managerial settings for outdoor recreation, and is of the most commonly used framework to manage rural and city-near forests and nature areas for recreational use. It has scarcely been used for characterising inner city green spaces. We propose to adjust the existing ROS concept to an urban context and extend it with 3 inner city additional categories. We have tested this extended conceptual framework for the example of Oslo, Norway by means of representative web-survey data of the city population (N= 1130). Our hypothesis was that differences can be found between the recreational user groups and use characteristics, the motivations to use these different categories and the users` rating on a simplified, standardized version of the Wilderness Purism Scale (WPS; Vistad and Vorkinn 2012) measuring the desirability of and attitude towards wilderness. The results confirm earlier research on ROS categories that socio-demographic variables, use frequency and preferences on the WPS vary along the existing outside-city ROS categories. Further they show that this gradient does not stop at the city fringe but extends into the inner city. We found that many of the motivational factors why people use green spaces play an important role specifically for the categories inside the city. The results support research showing that the experience of nature and wilderness are a social construction and can be considered a relative notion depending on which experiences and background understanding users of these spaces have of nature. We discuss the findings of this study in terms of how such an extended ROS conceptual framework can be used as a tool to plan and manage for

recreational opportunities in green spaces at different spatial scales on a spectrum reaching from inside to outside areas of a city such as Oslo.

Session 39 'Autonomous' geographies

Chair: Ilkka Pyy (University of Eastern Finland)

Auditorium M101, Wednesday

Governing cities, governing selves: Compassionate individuals and autonomous projects
Derek Ruez (Tampere University)
From cognitive science to inter-religious dialogues and from self-help therapeutics to philanthrocapitalist projects, compassion has emerged as a potent object of identification and aspiration in the contemporary moment across a number of contexts. This paper critically examines ongoing efforts to promote compassion and build an international network of 'compassionate cities'. Drawing on participant observation at compassionate city network events, interviews with participants in compassionate city projects, and an analysis of key discourses encountered in the research, the paper examines how compassion—approached as an individual capacity that can be cultivated to maximize 'human flourishing' in cities—provides an affective and discursive supplement to more traditional urban governance strategies associated with terms like neoliberalism and entrepreneurialism. I show how this focus on compassion tends to support particular kinds of 'pro-social' political subjectivities and imaginaries that nevertheless tend to individualize collective, structural problems. Pointing to the limits of such projects, the paper argues for the importance of imagining and enacting more agonistic and autonomous forms of compassion or care through engaging with the politics of mutual aid.

Statues and sprays: Graffiti as a spatial practice of resistance against dominant discourse
Jozef Lopuch (Masaryk University) & Vendula Svobodová (Masaryk University)
Since statues are present in public space that we inhabit, they are part of our everyday life. They can serve different functions. For instance, aesthetic on visual level but also symbolic as part of cultural, political, or power relations. As a society, we lay wreaths at some statues, while others are torn down and replaced. These spatial practices prove that statues are representative of our cultural values and our behavior towards them demonstrates our beliefs and attitudes. Statues can play a significant role in resistance against dominant culture and values. Nowadays, it has become a relevant issue, as the Black Lives Matter movement is related to spraying and tearing down statues of historical figures with links to a colonial and/or racist past. It has happened in Central Europe as well as in Nordic countries. That is why we have chosen the spraying of Churchill's statue in Prague as a topic for analysis in this paper. Our goal is to show the influence of geography on the process of creating media discourse on different levels, through the analysis of Czech media articles. Firstly, we will examine the role of the place itself as it creates a discussion about legality/legitimacy of such behavior. Secondly, we will discuss the meaning of the statue, what it represents, as there are different meanings and representations for different groups (of population and media). Lastly, we will analyze the connection to other global events which creates a discussion about values that are symbolized by the statue and the writing. Articles chosen for analysis were published shortly after the event. We have divided them into two categories – mainstream and disinformation media. The latter has a more negative regard

towards this practice and views it as a violation of public order. What is more, the authors of the writing were automatically labeled as leftist. Churchill was presented only as "the one who defeated Hitler", granting him an incontestably positive role. The former, on the other hand, draws attention to some negative aspects of Churchill's legacy. However, the overall impression in articles from both media categories was considerably positive.

Towards non-ableist geographies of visual impairment: The methodological difficulties in the research of visually impaired people's urban experience *Pavel Doboš (Masaryk University), Hana Porkertová (Mendel University in Brno) & Robert Osman (Masaryk University)*
Based on a research project studying the experience of people with visual impairment within the urban milieu in the Czech Republic, the conference contribution discusses the limits of human geographical methodologies. It draws on actor-network theory, assuming that science does not describe reality but produces it. A research design utilizing ableist methodologies can produce ableist realities. The discipline of human geography is usually very much based on the visual perception of the world which makes certain difficulties for studying the spatial experience of people with visual impairment. Therefore, it was in our case necessary to adjust the methods so that they could mediate this experience to the geographical community without reproducing ableism. The researchers faced multiple dilemmas: What questions to ask? How to answer them? What can and cannot be said about the results? Consequently, how to research experience that differs from that of the researchers who are able-bodied? What kind of knowledge do they produce? An approach that would demonstrate the spatial experience as multiple, dynamic, and mutually constructed has been required – an approach that could offer a range of potentially productive methods and research questions, as well as bring critically reflected results. Poststructuralist approach, mainly Deleuze-Guattarian philosophy, was chosen, and two methods were used: interviews and go along interviews that had to be adjusted to be able to explore spatial experience of people with visual impairment. Despite various preparations of these methods, new difficulties kept emerging, which had to be addressed if we did not want to reproduce ableist scientific knowledge. From the beginning of data collecting, there was an agreement to work in teams with slightly different roles of each of the researchers, which was significant especially during go-along interviews. In some cases, researchers' and participants' anticipations differed, which led to unexpected and even potentially dangerous situations. These were not caused only by the differences between scientific and lay communities but also between able-bodied and disabled personal experience with urban space. Researchers were sometimes assigned to the assistants' roles, and the new position of doing research together required further negotiations and opened various ethical questions.

A shift for hybrid planner? Real estate politics in the city of Joensuu *Ilkka Pyy (University of Eastern Finland)*
Both rich and poor municipalities can quite easily pursue revitalized infrastructures. New schools, multipurpose sports and culture facilities and office spaces are built up in larger and smaller centres as well in core as peripheral areas. One of the reasons behind such easiness is due to the change in which municipalities instead owners become tenants. A broader explanation relates to the needs for replacing the outdated sectoral logic in terms of societal realms (private/market, public, civil), service policies (land use planning, housing, health, education, traffic, security etc.) and decision-making (representative democracy, vertical hierarchy) to the logic of hybridity. The latter emphasizes networks, partnerships, agreements, issue-, place- and people-based development strategies, public utility, corporate governance. In

this paper, the main argument concerns the dimensions and options of municipal self-government. Will it remain rather the same and stable, laying on the solid ground of constitution, no matter what logics the local planning actions follow up? Or does it make a difference, when we look the interpretations of local autonomy through the alternative conceptual lenses of actor network theory and assemblage theory? Here the content analysis is based upon planning documents and newspaper articles collected 2009 and onwards, when the city of Joensuu reached its current territorial shape and size after the amalgamations with four neighbouring municipalities. The special attention will focus on some disputable construction and demolition projects in diverse urban and rural locations. The hypothetical guiding rules of analysis will ask whether hybrid development configurations as responses in an ever more complex environment are long/short sighting the range of investments, restructuring the revenue sources (taxes, fees, rents vs. loans vs. grants), clarifying/blurrings the division of tasks and responsibilities, and re-evaluating the priorities of municipal property.

Session 40 Nordic Legal Geography

Chairs: Michael Jones (Norwegian University of Science and Technology) & Päivi Rannila (Tampere University)

Auditorium M107, Tuesday

Nordic legal geographies – past and present *Päivi Rannila (Tampere University) Michael Jones (Norwegian University of Science and Technology)*
Legal geography has become an established sub-field of geography internationally. Scholarly debate has been carried out especially by North American and British geographers, whose work on space–law relations has been particularly significant in the development of critical legal geographical understanding. However, international anthologies in legal geography have lacked studies from the Nordic countries. While the term 'legal geography' has not been prominent in Nordic research, some scholars have tackled space–law relations, although not all such studies have been labelled 'legal geography'. This paper will provide a preliminary overview of earlier scholarly work on space–law relations and the current state of this field in the Nordic countries. Two overlapping approaches will be discussed: historical legal geography and critical legal geography. Topics include landscape and law, property relations and the law, rights to public space and commons, planning law and land use, legal geographies of human–non-human relationships, legal geographies of immigration and citizenship, and legal geographies of sexuality and sexual violence. Our discussion aims to give tentative answers to the following questions: How have legal geography and related studies developed in the Nordic countries? How have legal spaces been conceptualized? How have specific places and contexts signified ways of thinking about law?

Gender, work and legal practice interlaced in early modern rural landscape *Elisabeth Gräslund Berg (Dept of Human Geography)*
In this study of gender relations as part of 17th and 18th century Swedish rural landscapes, the legal dimensions play an important role in the theoretical departure, in empirical sources and in analysis and interpretations. The analytical framework takes departure in gender political ecology studies and gendered resource mapping as a way of widening the traditional scope of historical landscape studies of land use, tenure and resources. The sources used are court

records from local courts in two different areas in Sweden, from early 17th to early 18th centuries. The analysis points at how gender, work and legal practice were interlaced in Swedish early modern rural landscape and the interpretation of the results discusses how potential legal meanings in the landscape plays into gender relations and a gendered landscape.

International law, grazing lands conventions and the nationalization of minorities *Olof Stjernström (Nord University)*
This study aim to address the border relation between Norway and Sweden and the question of grazing land rights. At present Sweden and Norway have an unclear relation regarding the grazing land rights for the cross-border reindeer husbandry. The negotiations did not came to an agreement in the final discussions between the two countries. Norway went on with a national legislation and Sweden claimed the original attachment to the old border treaty from 1751 (Strömstadstraktaten with Lappkodicillen). The latter is a document recognizing the Sami and their rights to cross the border to reach their traditional seasonal grazing lands. Throughout the years the original codicil has been re-negotiated a number of times but the carrying principles are still valid. The aim of this article is to investigate how the Lappkodicillen as carrier of principals has developed over time and how present negotiations affect the cross-border reindeer husbandry and the present land-use planning in the Scandinavian mountain area.

The possible, permissible and desirable as analytical tool. *Nina Toudal Jessen (University of Copenhagen)*
This paper addresses the relations between what was perceived as possible, permissible and desirable at a certain time and place. Empirically, I use the example of land use changes in 20th century Denmark to present the analytical triad of what was possible, permitted and desired at the time. The triad of concepts, which I will call possible, permissible, and desirable. First, possible, refer to the practical realm and thus the physical world. This serves as practical perspective. Engineers have proven creative and skilled enough not to underestimate their powers, even in projects that may seem physically hopeless. Thus, the possible has changed with technological, climatic, ideological, and political changes. The possible connects to the other two concepts. The permissible addresses legal structures, both locally, regionally, and internationally. Like the possible, the permissible is embedded in the practical, legal and ideological/interest realm at the same time. Laws are imposed for a variety of reasons; no law is naturally placed upon us. In contrast, all laws are products of negotiations and conflicts of interests. Examining the permissible uncovers not only what could happen, but moreover shows why and how it happened. The permissible is in itself structured by the societal standards, which it also helps sustain. In the context of the permissible the actors and acting bodies often comprise public authorities, landowners and legal administration. The last aspect of the triad is the desirable. Closely connected to the permissible, the notion of the desirable covers the wishes and needs of a broad range of different agents: locals, the regional authorities, state authorities and international laws as well. Again, the desirable feeds into both the possible and the permissible, but instead of focusing on laws, legal rights and physical possibilities, when I use the concept of the desirable what matters are the perceptions, notions and wishes of the actors involved. Together the conceptual triad allows for holistic analyses of land use over time, which may help shed light on the connections between actual, concrete landscape changes and the legal framework.

Carceral riskscapes and working in the spaces of mental health care *Virve Repo (University of Turku)*
This paper analyses alleged misconducts in a geropsychiatric ward, G1, of Kupittaa psychiatric hospital in Turku, Finland during the years 2009—2016. The study participates in the discussion on riskscapes, and furthermore, introduces the concept of carceral riskscape in order to utilize the concept when describing carceral spaces. Since there is a strong, but less studied connection between risk and the carceral, this study combines these concepts to give a new viewpoint to the mechanisms that create carceral spaces. The emphasis in this study is on the carceral riskscapes that working community face in institutional premises. Thus, the study focus on the connection between carceral spaces and work, which has been given less attention in research literature. The study analyses working culture of geropsychiatric ward in Turku. Some of the staff members allegedly mistreated the patients and some of the carceral practices were also targeted to co-workers. The research is qualitative in nature and analyses documents from the inner reports to trial documents. The findings of the study suggest that the relationships between staff members are significant in the context of carceral riskscapes. Furthermore, the carceral riskscapes created by staff members cause inequalities and affect the well-being of the staff members as well as the quality of care.

Property, planning and scale *Roger Westin (Malmö Universitet)*
The Swedish Planning and Building Act (PBA) stipulates that planning should identify public interests and weigh them against private interests. Public interest in planning is complex and multifaceted and ranges from environmental protection, social sustainability, to economic growth. PBA expresses that planning should protect public interests, the society's common interest, from individual interests that could hinder their development. And that planning should secure the best type of, and the most efficient, land-use, with respect to long-term sustainability goals. One of planning's main purposes, according to PBA, is to formalize rights connected to land resources. And this gives planning a close connection to property; it allocates, distributes, and alters property rights. In the last decade, multiple reforms of PBA, and introduction of new public management have increased the output of planning decisions. Mäntysalo et al argues that this has created conflicting grounds for claims to legitimacy. One such contradiction lies in that the democratic legitimacy of planning relies on both taking in public opinions, which takes time, and a high output of decisions. Reforms have also reinforced contradictions in the content of planning. Expectations on planning to protect land resources are higher, as are pressures to make fast decisions to increase private exploitation of land resources. This research aims to answer the following general questions: In what way do planners navigate and maneuver to secure legitimacy in the planning process? What role does scale play in the process that formalizes property rights? The research examines two cases in Malmö where the municipality initially had identified public interests and strategic goals connected to both social and environmental sustainability that never materialized. Instead, the property owner's rights increased. The preliminary findings show planners use temporal and spatial scaling as a strategy to solve the conflicts in planning tasks. Rescaling helps planners to adjust the planning tasks in conformity to property owners' interests, without having to face critiques of not taking public interest into account.

Power and ownership rights over landscapes as property *Siiri Pyykkönen (The University of Turku)*

Thinking landscape as property brings an interesting view how landscapes are constituted. When defining landscape as property, one has to pay attention to different aspects of landscape and to what is meant by property. Landscape is formed when materialities and historical representations of space are realized through observer's memories and sensations. However, landscape is not only what the observer sees, but it reflects the ideologies of those who have power to control the use and development of space. Thus, it can be argued that landscape displays the interests of those in power, not those who inhabit it. In my study, I focus on the spatial planning processes and ownership networks behind landscapes. My goal is to answer the questions about why landscape is what it is, how landscape is defined as property, and what ideologies landscapes reflect. Landscape as property is created in complex relations and it is important to clarify the meanings of landscape in urban contexts, and to discuss the power relations involved. In my presentation, I will discuss how landscape can be examined as a property for which someone can claim ownership rights and power to control. I argue that examining landscape as property brings new possibilities for urban planning that need to be considered in landscape development and urban planning projects.

Sharing of costs and benefits from natural resource utilisation under the 'green shift' *Katrina Rønningen (Ruralis)*

Institutions for benefit sharing from natural resources are crucial for how Norway escaped 'the resource curse'. Regulations ensured management and shared wealth creation from the hydropower and the oil. Based on ground rent principles, here understood as the extraordinary incomes, or 'super profit' from access to natural resources that are defined as common resources, were shared and distributed locally as nationally, while (international) capital necessary for developing the resources were welcomed, but regulated. These regimes made out a crucial basis for how Norway built an extensive state funded welfare. As oil gradually will be phased out, we are seeking for 'the new oil' in the bioeconomy, in bioprospecting, in the ocean and the deep seas, and in various types of renewable energy, including wind. This paper presents findings from a study investigating the logics of management regimes employed on these new developments and how benefits and burdens are distributed in space and time. The principles of ground rent are not applied on aquaculture and wind energy, and regulating principles linked to other potentially important resources, are not in place. Further, weaknesses to the processes of developing these 'new' resources have been identified. On October 11, 2021, one of Europe's largest wind power developments in Fosen, Mid-Norway, was deemed illegal by the Supreme Court of Norway. The license to construct the power plants, as well as the expropriation permit, were deemed to violate the rights of the reindeer herding Sámi communities to continue reindeer herding as part of their cultural practice, as stated in article 27 in the International Covenant on Civil and Political Rights. The decision may have profound consequences for altering these licensing processes, improved local embeddedment of such developments and implications on (indigenous) land use rights after decades of processes of loss and fragmentation of land, commodification, privatization, and more recently what has been termed neo-colonialism under the 'green shift'.

A just green transition in rural areas - the Nordic perspective of value creation and local benefits *Anna Karlsdottir (Nordregio/university of Iceland) Elin Cedergren (Nordregio)*
Rural areas can play a very important role in the green transition as far most of natural resources are located here, some of them already highly regulated. There may however be a real risk that the rural areas end up working merely as instruments to national and international agendas and as engines for the urban areas without any local benefits for the rural communities and rural populations. This paper discusses approaches of a Nordic stakeholder group tackling a project meant to grasp how national and global value added in the form of green progression from the rural areas also may translate into concrete local added value in the places where the value is generated. Our members are made up of representatives from national, regional and municipal level of authority across the Nordic countries. We want thus to share experience of a process of a commissioned project in the Nordic cooperation ongoing 2021-2023 with this focus. One component of the work focuses on land use planning priorities in green transition efforts and what they mean in individual Nordic countries. It serves as an example of different practices of knowledge-sharing between different stakeholders for spatial governance in individual countries in the Nordic region in the process of developing a comparative overview of approaches to green transition. The project is carried out through four steps. The first step includes a policy document with comparative analysis on what "just" implies in the Nordic regional development and transition context. Also, we include a scoping analysis of sectoral transition plans and their sensitivity to rural challenges and possibilities. Third and fourth, we conduct case studies and develop policy advice on basis of findings. We explore new governance approaches to mitigate climate change and uneven regional development in the cross sectoral and partnerships organization of the work in individual Nordic countries meant to speed up green transition. We also explain how we ended up applying action-based research methodology approach in mobilizing representatives in the committees/partnerships expertise is helping out with the scoping analysis. It highlights the difficulties and opportunities encountered in the process of transition management.

Landscape Perspectives for a Sustainable Climate Change Transition *Edith Lalander Malmsten (University of Stockholm)*
The following is a brief presentation of underlying problems and overarching research questions that characterizes my Ph.D. project on environmental planning for a sustainable energy transition and its relation to ecological contexts and scales. To achieve the climate goals, while ensuring a stable energy supply amidst the ongoing energy crisis, Europe needs to accelerate the expansion of renewable energy sources. However, most renewable energy sources come with an immense impact on our environment and social-ecological systems and services. In a Rechtsstaat built on fundamental legal principles - such as legality and predictability - law plays a decisive role in steering towards different environmental goals and interests. Previous legal research indicates that Swedish legislation within environmental planning lacks steering capacity regarding the overarching environmental goals. Fragmented planning processes and lack of more comprehensive perspectives in decision-making concerning land and water use have been identified as significant explanations to this system failure. Hence, there is a great risk that the current energy transition will take place at the expense of other environmental values, such as conservation of biological diversity and protection of cultural values. In various non-legal scientific fields, there is an increasing consensus vis-à-vis the importance of landscape approaches and landscape planning to better balance competing interests and coordinate regulations for multiple and sustainable land and water uses within a given area. Broadly

speaking, this means applying a larger geographic scale and more holistic approach to nature and on how different environmental and social systems are intertwined These notions generate questions about the relationship between human administrative scales and natural ones, and how relevant legal concepts reflect and affect their natural references. In turn, raising normative questions concerning what knowledge this deconstructive approach may provide concerning how the planning system should be constructed to better reflect landscape approaches and contribute to a more sustainable and holistic balance of interests in environmental decision-making. Hopefully, this will provide knowledge on the ecological dimensions of legal geography.

Session 41 Biopolitics and the geographies of tourism

Chair: Maartje Roelofsen (Open University of Catalonia)

Auditorium M107, Wednesday

Narratives of cross-border animal mobility in the transportation of animals by air *Lucia Gräschke (University of Eastern Finland)*

The international mobility of nonhuman companions is part and parcel of globalization. Companion animals, carried on land, water, or air transportation networks, accompany their caregivers on holidays, work hiatuses, or when they relocate to another country. Borders, however, regulate animal mobility. Borders as social constructions consist of practices that facilitate or prevent nonhuman movement by working on animal bodies. This study examines narratives of dog and cat border crossings using social media data. In detail, the study aims to answer which narratives organize the cross-border movement of companion animals? These narratives include social and political practices and events and are, furthermore, embedded in larger discourses that determine the position of nonhuman companions in modernity. A central narrative occurs around the spread of diseases. The most common disease occurring in cats and dogs is rabies. Animals are narrativized as disease carriers and hence face restrictions to enter nation-states, as diseases like rabies pose outside threats to humans and nonhumans within states. Vaccinations, tests, and their documentation have the goal to prevent the spread of diseases establishing mobility requirements for companion animals. While these practices are typically applied to animals, the Covid-19 pandemic has turned the spotlight on the impact of vaccinations and their documentation in human mobility. Keywords: animal mobility, borders, narratives, diseases

'Nothing beats a beach holiday.' Mass tourism consumption as biopolitical force in a post COVID-19 European Union. *Harald Buijtendijk (Breda University) Eke Eijgelaar (Breda University)*

In this presentation we use a biopolitical lens to analyse the consumption of aviation-dependent package holidays to Mediterranean beach destinations in 2021. In the context of current European Union climate change mitigation and (post) COVID-19 recovery policies, this mode of tourism consumption is increasingly problematic because of its contribution to climate change and public health implications. It initially collapsed following COVID-19 related travel restrictions. Large, successive government bailouts to multinational tour operators and national airlines and the EU-wide issuing of digital COVID-19 certificates have reinvigorated it since, even though it contributed to the conditions for the virus to spread. Drawing from empirical research investigating this situation, we begin with problematising the dominant market framing of

tourism consumption. Posing as rational actors, seemingly able to fully steer and control their holiday purchase decisions, we trace tourism consumers as bodies subjected to different (subtle) forms of manipulation that transcend the digitalised realm of travel industry marketing. We then propose that tourism consumption can also be understood as a biopolitical material-discursive arrangement: a collection of practices and communications, that reproduce holiday routines and related mobilities as an institutionalised aspect of social life, despite (self-imposed) uncertainty amidst omnipresent health-related anxieties. Finally, moving beyond the usual agendas of corporate and (national) economic interests, we discuss the functioning of this manifestation of bodily self-management as a technique of power in the pursuit of geopolitical aims. As biopolitical force, the reproduction of consumption of mass tourism to the Med contributes to safeguarding the EU's internal stability and related geopolitical legitimacy, but also raises implications for the future of this mode of tourism in the Med given the unfolding climate crisis.

The Island 2.0: Biopolitical experiments in 'COVID-free' tourism spaces *Claudio Minca (University of Bologna) & Maartje Roelofsen (Open University of Catalonia)*

This presentation is focussed on the biopolitical implications of some experimental spaces where tourists were invited to experience a presumed covid-free environment. In line with a long tradition of enclavic and secluded tourist spatialities, these most recent experiments have brought to light the persistent and increasing appeal of purified and sterilized leisure environments and new forms of control and bodily management of tourist bodies, which may be opening the floor to the implementation of new strategies of management of extensive social bodies. By focusing in particular on the experiments supported by the Dutch government together with the tourist industry in 2021 we will discuss the intersections between these new forms of tourist experience and broader questions of health and population management in pandemic times.

Between threats and privileges: the biopolitics of tourism in crisis *Dominic Lapointe (Université du Quebec a Montreal)*

Following the coronavirus outbreak's escalation, attaining the status of global pandemic in mid-March 2020, one hundred percent of tourism destinations had implemented some form of travel restriction by the end of the month (UNWTO, 2020). In the weeks leading up to widespread lockdown the dominant world order, characterised by the efficient circulation and increasing movement of things, disintegrated rapidly representing a critical juncture in the ongoing expansion of globalization and transnational mobilities. Indeed, mobile human bodies unwittingly served as vehicles for the spread of disease as the novel coronavirus became passenger (Adey et al., 2021), propagating within such familiar leisure spaces as cruise ships, ski resorts, casinos, hotels and restaurants. Thus, the economic potential of leisure mobilities dissipated as tourists and destinations became both threatened by COVID-19 and a threat to public health. Suddenly exposed to forced (im)mobility, insecurity and, in some cases, abandonment, travellers negotiated and navigated the deterioration of the global tourism economy. A series of long form and/or descriptive newspaper articles are drawn upon for their coverage of traveller experiences between February 1 and March 31, 2020. Content analysis of select online print media, resembling travel narratives, highlights how tourism is being discursively framed. Applying a biopolitical lens, the publicization (and politicization) of vulnerable traveller subjectivities and affects suggests widespread humanity despite – indeed, because of – limitations to their economic potentiality. Conversely, a preoccupation with

privileged traveller experience reinforces biopolitical arrangements of spatial mobility. Several months following this critical juncture, the global tourism industry continues to grapple with a series of complex and dynamic sanitary, political and economic contingencies forcing the renegotiation of privileged mobilities in a world with COVID-19. As such, this paper addresses a moment in the broader (post-)COVID-19 tourism system.

Session 42 Peatlands and environmental change

Chairs: Antti Sallinen (University of Eastern Finland & Finnish Environment Institute) & Franziska Wolff (University of Eastern Finland)

Auditorium M102, Tuesday

UAS-SfM-derived elevation models to evaluate changes in the surface flow paths and water accumulation for peatland restoration monitoring *Lauri Ikkala (University of Oulu), Hannu Marttila (University of Oulu), Anna-Kaisa Ronkanen (Finnish Environment Institute), Jari Ilmonen (Metsähallitus Parks and Wildlife), Maarit Similä (Metsähallitus Parks and Wildlife), Sakari Rehell (Metsähallitus Parks and Wildlife), Timo Kumpula (University of Eastern Finland) & Björn Klöve (University of Oulu)*

Peatlands are globally threatened by increasing exploitation. The majority of peatlands in Finland are severely degraded by land use and drainage activities. Peatland restoration is an effective way to promote biodiversity, return natural functions of peatlands in the catchment hydrology and re-establish the long-term carbon sinks. Restoration aims to recover the peatland's ability to store water and nutrients and provide a moist environment urgent for the specific species and peat accumulation. The main aim of the restoration is to direct the water flows back to the pristine routes away from the artificial ditch network. The restored sites are monitored to determine whether the restoration has succeeded and to gather experiences to further develop the methodology. Conventional hydrological monitoring includes manual observations of the water distribution and flows, supported by systematic approaches such as automated water level loggers. However, these data are limited to sparse locations and cannot give a spatially representative overview. Ultra-high resolution remote sensing methods such as UAS (Unmanned Aerial Systems) mapping can ease the demanding restoration fieldwork and transform the discrete nature of conventional single data points into a spatial continuum over the restoration site. We introduced a novel approach to evaluate the changed surface flow paths and accumulation of water using a UAS SfM (Structure-from-Motion) method to produce digital elevation models for the restoration sites. These models can be used to determine the impacts of the restoration measures such as ditch blocking and dam construction on the surface water flow paths. We evaluated these changes at two lately restored sites in Olvassuo and Mujejärvi and compared the outcomes with the field observations of the hydrological changes. According to our results, the hydrological restoration succeeded at the sites and the water flows did not end up to the former drainage network any longer. We showed that the UAS data need to be georeferenced with proper accuracy, i.e., positioning either the unmanned vehicle or the ground control points with a precise GNSS (Global Navigation Satellite System) unit. We conclude the flow path and water accumulation modelling based on topographical data potential for assessing the changed surface flows in peatland restoration monitoring.

Monitoring peatland water table depth with optical and radar satellite imagery *Aleksi Räsänen (Natural Resources Institute Finland) & Santtu Kareksela (Natural Resources Institute Finland)*

Peatland water table depth (WTD) and wetness have widely been monitored with optical and synthetic aperture radar (SAR) remote sensing but there is a lack of studies that have used multi-sensor data, i.e., combination of optical and SAR data. We assessed how well WTD can be monitored with remote sensing data, whether multisensory approach boosts explanatory capacity and whether there are differences in regression performance between data and peatland types. Our data consisted of continuous multiannual WTD data from 46 restored and pristine Finnish peatlands included in the Parks & Wildlife Finland peatland restoration monitoring network, and optical (Landsat 5–8, Sentinel-2) and Sentinel-1 SAR data processed in Google Earth Engine. We used random forest regressions with dependent variable being WTD and independent variables consisting of 21 optical and 10 SAR metrics. We assessed model performance by calculating percentage of explained variance (R2) and normalized root-mean-square error (nRMSE). Based on our initial results, the average regression performance was moderate in multi-sensor models (R2 40.7%, nRMSE 0.20), almost as high in optical models (R2 39.2%, nRMSE 0.21) but considerably lower in SAR models (R2 22.0%, nRMSE 0.24). However, there was considerable site-specific variation in the model performance (R2 -7.5–75.1 in the multi-sensor models) and whether multi-sensor, optical or SAR model performed the best. The average regression performance was higher for pristine than restored peatlands and higher for open than treed peatlands for all three sensor approaches. Our results suggest that optical data works usually better than SAR data in peatland WTD monitoring and multi-sensor approach boosts model performance only a little. Future studies should test if the results differ when ancillary data about e.g. vegetation and climate is used or when remote sensing data is processed further for instance by using the most representative pixel within a peatland.

Detecting peatland vegetation patterns with multi-temporal field spectroscopy *Yuwen Pang (University of Helsinki), Aleksi Räsänen (University of Helsinki) & Tarmo Virtanen (University of Helsinki)*

Although handheld spectrometer data has been applied for various ecological purposes, the benefit of multitemporal field spectroscopy data has not been widely investigated in detecting peatland vegetation patterns. We collected field spectroscopy data from two northern boreal Finnish peatlands, Lompolojänkkä and Halssiaapa from seven dates between late May and September. We examined how temporal and spectral resolution impact spectral detectability of vegetation characteristics, more specifically, plant communities and plant functional types (PFTs). In addition, we investigated what the optimal temporal window is for data collection and how the detectability varies among the vegetation characteristics. The results showed that multi-temporal spectroscopy data improved explanatory rates of regressions by 12–25%-points when compared to single-date observations. The explanatory rates were lower with coarser spectral resolutions, which dropped from 48% in 1nm spectral resolution to 26% by using Sentinel 2A 4bands stimulated data. For plant communities, the whole season spectral data was required as the single date regressions did not provide acceptable results; while for PFTs, the optimal temporal window was mostly in June. The detectability of vegetation characteristics varied across peatlands and the dependent variables. In general, plant community regressions had higher accuracy, on average 48% and 43% in the two peatlands respectively, than PFT regressions that had average explanatory rates of 42% and 38% in the two sites. Our research shows the importance of multi-temporal hyperspectral data and reveals that optimal temporal window varies between sites and analyzed vegetation characteristics. In particular, when multitemporal

data is collected, the spectral resolution could be from 1nm to 20nm to get the best possible results.

Investigation of ecological and spectral parameter to optimize classification of very high-resolution UAV-images for selected Aapa mires in North Karelia, Finland. *Franziska Wolff (University of Eastern Finland), Tiina Kolari (University of Eastern Finland), Teemu Tahvanainen (University of Eastern Finland) & Timo Kumpula (University of Eastern Finland)*

The use of very high-resolution UAV-data for image analysis and classification in remote sensing has advanced significantly over the past years and offers great possibilities to investigate ecosystems. Peatlands, however, represent a challenge in terms of their microtopography and spectral reflectance of particularly Sphagnum mosses. Being also a challenge for machine learning, it is crucial to test the quality and quantity of the input data to produce peatland habitat and vegetation community maps over a larger spatial area. This study aimed to a) evaluate ecological and spectral information needed to perform image classification on different spatial levels and b) assess the accuracies of the classifiers Support Vector Machine (SVM) and Random Forest (RF). For this purpose, field work in three selected North Karelian mires was conducted in 2020. Drone data (RGB and multispectral with a spatial resolution of 0.01cm and 0.05cm, respectively) was gathered in August 2020 from each study site. The vegetation abundance and species dominance in 80-100 vegetation plots with corresponding water table depth (WTD) and the RTK-GPS location was recorded. The detailed vegetation inventory thus allowed classification on habitat type and vegetation community level. For that, vegetation data was grouped I.) a subjectively, II.) by hierarchical clustering of species, and III.) with the addition of spectral clusters and indices. Those three grouping approaches serve as the basis for labelling the training samples in the classification process; therefore, each was run with both classifiers and tested for its reliability. An accuracy assessment for each classification output was generated. The results show satisfying results on habitat and vegetation community level. For each community, key species could be identified and supported the classification process. Although it is useful to include many spectral features, it is not necessary to generate all spectral indices we included. For further classification methods, we suggest the usage of ancillary data, such as vegetation height model and hyperspectral data, to increase the accuracy and produce information on species and diversity level. In addition to that, object-based classification of low altitude UAV-data should be considered to extract texture information.

Accelerated vegetation succession but no hydrological change in a boreal fen during 20 years of recent climate change *Tiina Kolari (University of Eastern Finland), Pasi Korpelainen (University of Eastern Finland), Timo Kumpula (University of Eastern Finland), Teemu Tahvanainen (University of Eastern Finland)*

We present results of plant community analysis and hydrological measurements repeated after 20 years in the Härkösuo aapa mire with diverse vegetation along the poor-rich gradient. The mire and the whole catchment are in pristine state and located in a wilderness area with low atmospheric deposition levels, but the annual mean temperature rose by 1.0°C in 20-year periods prior to sampling occasions. In 2018, we resampled vegetation and water-table depth (WTD) and obtained water samples from 203 semi-permanent plots. The differences in plant community structure, species occurrences, vegetation types, WTD, pH, and concentrations of dissolved organic carbon (DOC) and mineral elements between 1998 and 2018 were tested and illustrated with Kriging interpolation. Despite the pristine state and remote location of the study

area, and a relatively short study period, we found significant changes in vegetation. Wet fen vegetation types decreased, while bog and poor fen vegetation increased significantly. This reflected the increase of common mire species, including Andromeda polifolia, Drosera rotundifolia, Eriophorum vaginatum, Scheuchzeria palustris, and Vaccinium oxycoccos. The changes were the most pronounced in the rich fen, where Sphagnum mosses had increased in plot frequency, cover, and species richness. Although indications toward drier conditions were found in vegetation, WTD had not consistently increased. Instead, our results revealed complex dynamics of WTD, as depending on vegetation changes. Additionally, changes in water chemistry were mainly insignificant in concentration levels and spatial patterns. Overall, we found significant trend in vegetation, conforming to common succession pattern from rich to poor fen and bog vegetation. Results revealed a trend of increasing abundance of generalist species at the expense of some rich fen specialists. In the rich fen, Sphagnum mosses had proliferated, potentially indicating early signs of ecosystem change towards bog succession. However, we could not clearly connect changes to water chemistry, which indicates that other factors, such as increased productivity due to recent warming, have contributed to drive the changes, threatening northern rich fen ecosystems.

Detection of Sphagnum increase over aapa mires by Landsat images *Antti Sallinen (University of Eastern Finland) Tiina Kolari (University of Eastern Finland), Aniko Toth (University of Eastern Finland), Nick Murray (University of Eastern Finland), Lars Granlund (University of Eastern Finland), Franziska Wolff (University of Eastern Finland), Kimmo Tolonen (University of Eastern Finland), Timo Kumpula (University of Eastern Finland), Teemu Tahvanainen (University of Eastern Finland), University of New South Wales (James Cook University)*

Several recent studies have reported cases where wet flarks (sparsely vegetated hollows) in the central parts of aapa mires (patterned fens) have been overgrown by vegetation, especially by Sphagnum mosses. This is associated with the phenomenon of fen-bog transition, a process in which a fen, a mire under the influence of runoff from surrounding upland, turns into rainwater-dependent bog. The phenomenon can be part of natural succession, but it may also be caused by surrounding drainage or climate change. Since the reasons and extent of the flark fen changes are unclear, we developed remote sensing methodology to investigate it on a large scale. The method is based on Landsat satellite images, which have a global coverage since the mid-1980s. We tested the functionality of various spectral bands and indices on a small aapa mire in western Finland. In this site, Mahlaneva mire, overgrowth of flarks by Sphagnum mosses was confirmed by repeated vegetation surveys and aerial images of different ages. The best indicator of decreasing flark area was the increase in near-infrared (NIR) reflectance. This is based on the high NIR absorbance of open water and on the high NIR reflectance of vegetation. Currently we are working on a larger, randomly sampled set of aapa mires, to detect changes of NIR reflectance in flark fens. We utilise automated cloud-based processing of all available Landsat images in the Google Earth Engine. Our goal is to obtain information on the prevalence and causes of the flark fen changes and to model future scenarios of aapa mire survival and development. Is fen-bog transition a widespread phenomenon in boreal patterned fens and is it turning aapa mires to raised bogs on a large scale? Such ecosystem change would mean loss of biodiversity but also of cultural values, since aapa mires are an important part of the landscape and human life in the north. However, the change may increase peat accumulation and reduce methane emissions and, thus, mitigate climate warming. This work is part of the multidisciplinary project SHIFTMIRE, funded by the Academy of Finland.

Simulation modelling in carbon storage, biodiversity and ecosystem services (BES) assessments of boreal peatland forests *Parvez Rana (Natural Research Institute Finland), Artti Juutinen (Natural Research Institute Finland), Anne Tolvanen (Natural Research Institute Finland), Kyle Eyvindson (Natural Research Institute Finland) & Anna Laine-Petäjäkangas (Natural Research Institute Finland)*

Finland aims to be carbon (C) neutral by the year 2035 and EU by the year 2050. To achieve these targets, new measures from peatland forests are needed to reduce net greenhouse gas (GHG) emissions. We assessed the C reduction at Ii municipality peatland forests through C storage in living trees and soils. Future C storage in forests depends largely on how they will be managed. We considered several management alternatives representing traditional rotation forestry and continuous cover forestry on peatland forests and included an energy wood harvesting alternative. Along with the C reduction, we assessed impacts of forest management alternatives on biodiversity and ecosystem services (BES) based on available data (i.e., Metsäkeskus) and models (i.e., tree growth model and biodiversity model). To assess the impact of forest management alternatives, we simulated forest growth by utilizing the SIMO simulation, which calculates the net present value of timber production, variables describing stand characteristics and harvests, C storage and BES indicators. Finally, we will also discuss how alternative management in peatland forests could help in the planning and decision making in the mitigation of climate change.

Session 43 Multidisciplinary understanding of Forest Dynamics

Chair: Topi Tanhuanpää (University of Eastern Finland)

Auditorium M102, Monday

Finnish Ecosystem Observatory (FEO) – operationalizing remote sensing analyses for biodiversity monitoring *Petteri Vihervaara (Finnish Environment Institute)*

Finnish Ecosystem Observatory (FEO) aims to integrate different data types and provide timely data and knowledge for various decision-making purposes. In this presentation, we describe three case studies as examples of different data types and different monitoring needs: i) habitat mapping for large area, ii) hydrological condition of aapa mires, and iii) automated Aspen mapping for boreal forests. A special emphasis will be related to forest biodiversity applications. We will evaluate the possibilities to operationalize the production of such data sets in a long-term as well as the challenges and bottlenecks related either to data, processing or applicability. Finally, we will also discuss how FEO and similar kind of biodiversity monitoring platforms could be further developed, and how the network of such observatories could co-operate in the future.

Detecting individual fallen trees with airborne laser scanning *Einari Heinaro (University of Helsinki)*

Dead trees are an important indicator of biodiversity, as they provide a habitat for many species. Thus, dead tree mapping enables identifying valuable areas regarding biodiversity, which allows focusing restoration and conservation actions. Remote sensing provides an efficient way of mapping dead trees, as it enables gathering information from large areas at once. Airborne laser scanning (ALS) is particularly suitable for mapping lying deadwood (i.e., fallen trees), as it is able to gather information from below the canopy. The continuously improving point densities of ALS

datasets have enabled a shift from modelling-based approaches to direct measurements. In forest inventory, this can be seen in recent studies related to the inventory of living trees, in which information about the forest is gathered at a single-tree level. Studies related to single-tree level information collection of dead trees are, however, scarce. Heinaro et al. (2021) aimed to fill this gap by presenting a method for detecting individual fallen trees using moderate-density ALS data. Their method is based on detecting fallen trees as line-like objects in the ALS point cloud. This paper aims to extend the methodology presented in Heinaro et al. (2021) and study how well the method generalizes on different types of ALS data. The paper inspects how changes in the point density of the ALS data affect the performance of the fallen tree detection method. The main aim of this paper is to answer questions, such as: - What are the requirements for laser scanning data used for biodiversity monitoring? - Are the current nationwide laser scanning datasets sufficient for large-scale biodiversity mapping? References Heinaro, E., Tanhuanpää, T., Yrttimaa, T., Holopainen, M., & Vastaranta, M. (2021). Airborne laser scanning reveals large tree

State-of-the-art computer vision methods enable deadwood detection from RGB UAV imagery *Janne Mäyrä (Finnish Environment Institute)*

Deadwood and decaying wood, both standing and fallen, is a vital component for the biodiversity of forests, as it offers a home for several endangered species (such as fungi, mosses, insects and birds). However, when comparing European countries, Finland ranks on the bottom in the amount of both standing and fallen deadwood (m^3/ha), with only 5 m^3/ha of deadwood on average. There are, however, large differences between different forest types, as non-managed old-growth forests have several times more decaying wood compared to managed forests. Moreover, there is a severe lack of stand-level deadwood data, as the Finnish forest inventories either provide only plot-level data or do not measure deadwood at all. In the recent decade, computer vision methods have advanced rapidly, and they can be used to automatically detect and classify individual trees from Unmanned Aerial Vehicle (UAV) imagery accurately. This makes it possible to better utilize UAVs for field data collection, as the UAV data is spatially continuous, already georeferenced and covers larger areas compared to traditional field work. In this work, we apply state-of-the-art instance segmentation method, Mask R-CNN, to detect both standing and fallen deadwood from RGB UAV imagery. Our study area is located in Hiidenportti, Eastern-Finland, from where we have collected 12km^2 UAV data, as well as accurately located, extensive field data for deadwood. In addition to the field data, we utilize virtual plots to train our models. These 90x90m virtual plots are constructed around the field plots, and all deadwood present in these plots is manually annotated by experts. We compare our results with both expert-annotated virtual plots, as well as with accurate field-measured plot level data. We evaluate our models with the typical object detection metrics, and also estimate how much of the deadwood present in the field can be detected from aerial UAV imagery and what factors (such as canopy cover, forest type and deadwood decaying rate) affect the detections. Finally, in order to gain better insights on the wider usability of our models, we also test the methods with UAV data from Evo, Southern-Finland. The species richness of European aspen epiphytic lichens: What are the most crucial environmental parameters, and how to find suitable habitats for them with remote sensing techniques?

Aerial image time series in defining site specific deadwood profiles *Topi Tanhuanpää (University of Eastern Finland)*

Deadwood plays a central role in boreal forest ecosystems. I Finland, majority of species are dependent on different forms of deadwood either directly or indirectly. To tackle the on-going biodiversity crisis, more accurate spatial data on the abundance and quality of deadwood are needed. The characteristics of deadwood make it difficult to map directly over large landscapes. As a stochastic phenomenon, deadwood accumulation is hard to predict reliably. On the other hand, direct detection is often problematic, especially using passive remote sensing systems. Modern LiDAR technology enables detailed detection of ground surface structure, which allows detection of individual stems. However, even then the quality of deadwood is hard to predict. National Land Survey (NLS) Finland maintains an archive of historical aerial images that reach back to 1940's. Modern photogrammetric software enables transforming even the oldest aerial images into georeferenced point clouds that accurately describe the upper canopy envelope. The long time series of aerial images enables decadal observations from the Finnish forests, which can be used for detecting and characterizing fallen trees. The mixture of deadwood of different sizes, decay classes, and species is called deadwood profile. In this study, the profiles are modeled in 80 sites in southern Finland using time series analysis of photogrammetric point clouds and sophisticated decay models. Our aim is to investigate, the correctness of the resulting deadwood profiles and possibilities of largescale utilization of the method. To cover majority of the deadwood in the forests, we utilize digitized and natively digital images over the past 60 years.

A single Vs multi-sensor UAS-based approach for European Aspen detection in boreal forest *Anton Kuzmin (University of Eastern Finland)*

European aspen (Populus tremula L.) is a keystone species for the biodiversity of boreal forests. Large-diameter aspens maintain the diversity of hundreds of species, many of which are threatened in Fennoscandia. Due to a low economic value and relatively sparse and scattered occurrence of aspen in boreal forests, there is a lack of information of the spatial and temporal distribution of aspen. This study assessed the potential of RGB, Multispectral (MSP) and Hyperspectral (HS) UAS-based sensors for identification of European aspen at individual tree level using different combinations of spectral and structural features derived from high-resolution photogrammetric RGB and MSP point clouds and HS orthomosaics. We aimed to find out if a single sensor solution is more efficient than the combination of multiple data sources for an optimal practical solution for efficient planning and implementation of sustainable forest management practices using the UAS-based approach. Experiments were conducted using >1000 ground measured trees in a southern boreal forest mainly consisting of Scots pine (Pinus sylvestris L.), Norway spruce (Picea abies (L.) Karst), silver birch (Betula pendula), and downy birch (Betula pubescens L.). European aspen (Populus tremula L.) has a relatively sparse and scattered occurrence in the area. The proposed method provides a new possibility for the rapid assessment of aspen occurrence to enable more efficient forest management as well as contribute to biodiversity monitoring and conservation efforts in boreal forests.

The species richness of European aspen epiphytic lichens: What are the most crucial environmental parameters, and how to find suitable habitats for them with remote sensing techniques? *Ida Palmroos (Finnish Environment Institute)*

Monoculture forests are problematic for the biodiversity. In Fennoscandia the history of forest management is long. Intensive forestry has been practiced since 1950s which has led to even-aged and even-structured forests. In addition to even-aged and even-structured forests, forest management also often leads in Fennoscandia to coniferous monoculture. Epiphytic lichens are a diverse group, and some species are also seen as an indicator species. Epiphytic lichens have also a great impact to the forest's ecosystem dynamics and their presence have a positive correlation to many species. Earlier studies have been shown that for example air humidity, pH, bark roughness, light, host tree species, tree and stand age and the density of other tree species are significant factors for epiphytic lichen. The proper habitats for epiphytic lichens are declining due to the forest management even though some actions for the conservation has been done. In this study we are examining European aspen's (Populus tremula) epiphytic lichens both in protected and non-protected areas. In Northern ecosystems European aspen has been recognize as a keystone species. While the proper habitats for epiphytic lichens are declining it has become even more important to find the suitable habitats. It is time taking to find and measure all the environmental variables in the field and because the loss of biodiversity is accelerating, it is all the time more important to get the results of the studies faster out than earlier. Therefore, in this study we are testing if it is possible to survey those environmental variables by using remote sensing techniques. For tree analyses and species surveys, one of the most promising techniques are based on hyperspectral and light detection and ranging (LiDAR) data. From the canopy layer we could measure the density of the trees, canopy height, survey the species and also check the color of the leaves, which correlates to the amount of chlorophyl. The pH and bark roughness measurements were also linked to those parameters because both of those variables showed strong positive correlation to the species richness of epiphytic lichens.

Outdoor heat stress at preschools during an extreme summer in Gothenburg, Sweden - Preschool teachers' experiences contextualized by radiation modelling *Oskar Bäcklin (University of Gothenburg)*

With increasing urbanisation and climate change, heat stress issues are becoming increasingly important to consider in order to create sustainable urban environments worldwide. Heat affects all groups in society, although small children are especially vulnerable due to physiological factors as well as limitations in their everyday mobility. Therefore, it is crucial to ensure that outdoor areas used by children, such as preschools provide healthy safe thermal conditions. Trees are proven effective heat mitigating objects, as well as highly appreciated features of preschool yards for their aesthetic and pedagogical aspects. However, there is a large variation in the amount of trees at preschool yards which can prove to be problematic regarding thermal comfort and well-being for both children and preschool teachers today and in the future. Using a mixed-method approach consisting of 19 interviews with preschool teachers, and modelling outdoor thermal conditions on 440 preschool yards, the occurrence of heat stress in Gothenburg preschools during the heat wave of 2018 and its effects on preschools has been studied. One third of modelled preschool yards were found to have more than 50% of the preschool yardarea exposed to strong heat stress during a warm and sunny summer days, implying children in many preschools have significantly less play area than current guidelines deem sufficient. Shading, which was found mainly provided by trees within preschool yards

rather than from objects in surrounding areas, provide effective heat mitigation. Shading devices such as shade-sails were found prone to breakage and not providing sufficient shading. Thus, shading devices are not suggested as a long-term solution for heat mitigation at preschool yards. Interviews confirmed that excessive heat conditions at preschool yards cause tired, drowsy and overheated children as well as forcing the preschool to prioritise care over pedagogical activities. The results demonstrated that heat stress is a problem at many Gothenburg preschools, with difficulties in ensuring the well-being of children at many preschools as a consequence. The strong correlation found between amount of trees at preschool yards and less heat stress highlight the importance of trees for heat mitigation.

Session 44 Land cover changes in (sub-) arctic regions

Chairs: Mariana Verdonen (University of Eastern Finland) & Timo Kumpula (University of Eastern Finland)

Auditorium M102, Monday

Effects of climate change on the distribution of palsas across the circumpolar permafrost area *Oona Könönen (University of Oulu)*

Climate change is the crisis of our time. Especially, anthropogenic warming threatens sensitive northern environments, that are warming almost twice as fast as the global means. As the climate becomes warmer and wetter, permafrost is projected to thaw from extensive areas. Palsa mires are permafrost wetlands which occur at the margin of the polar permafrost region. European Union has assessed palsas to be critically endangered habitats mainly because of the degradation of permafrost. In this study, we utilized geospatial datasets and statistical methods to model the influence of climate change on the distribution of palsas. We used two different Representative Concentration Pathways (RCPs) 4.5 and 8.5, and as an outcome of the models, present maps to show the potential suitable environmental spaces of palsas in the future. To our knowledge, this is the first study to cover the whole distributional range of palsas. With this broader perspective we aim to gain firsthand knowledge of the potential distributional changes of palsa mires across the circumpolar permafrost area and in less studied regions, like the eastern Siberia. By filling these gaps of knowledge, we aim to provide a better understanding of the fate of palsa mires. Studying palsas is especially important because they are critically endangered landforms and important habitats for several species. We need to learn more about the habitats and their potential changes to be able to plan possible protection actions for different plant and animal species, and for palsa mires themselves. As permafrost wetlands palsa mires can act as important factors in future's greenhouse gas fluxes. Thus, understanding the future degradation of palsas is not only relevant for the subarctic regions, but rather it is an issue of global importance.

Long-term monitoring of active layer and degradation of permafrost in Finland *Mariana Verdonen (University of Eastern Finland)*

Palsas (peat-covered mounds with frozen cores) occur in the narrow circumpolar zone of sporadic permafrost and are sensitive to climatic changes. Palsa mires are very heterogenous environments and important hot spots of biodiversity in northern regions. Due to the changing climate, they are expected to experience substantial changes and may disappear from many

subarctic regions, including Finnish Lapland. However, detailed long-term monitoring data of the degradation process of palsa's are scarce in Finland. Here, we present the results of the long-term (2007–2021), annual active layer thickness monitoring at two palsa sites (Peera and Laassaniemi) located in Kilpisjärvi region, North-West Finland, with the emphasis on detailed change detection for the period covered by Unmanned Aerial System (UAS) data (2015-2021) and connections with climatic parameters. Climate records and aerial image time-series since 1960's form the background for the more detailed investigations during the past 14 years. This long-term monitoring of active layer depths in palsas, coupled with comprehensive data set from the past few years, is one of the kind in Finland.

Comparison of three different methods to survey the volume body of landscape structural elements *Alexander Störmer (Leibniz University Hannover) & Timo Kumpula (University of Eastern Finland)*

Knowledge and data about the spatial extent and volume of smaller landscape structural elements (such as mounds, rocks, trees) in extremely small increments are relatively rare in landscape sciences. High-resolution terrestrial laser scanning (TLS) has already been used in different studies to estimate mostly volume and biomass of trees or shrubs. Beside biomass estimations, no other landscape elements were surveyed in the past using TLS. However, by the use of modern techniques, an exact survey is nowadays possible for every landscape element, which will increase the knowledge about the elements themselves as well as about impacts of climate and environmental changes on especially subarctic regions. Several approaches to estimate the volume of landscape structural elements will be shown in this presentation using the example of a Palsa mound in northernmost Finland. A relatively simple approach is the GIS-based calculation of a Triangulated Irregular Network (TIN) on the basis of the Palsa's active layer depths' measuring. Using high-resolution Unmanned Aerial Vehicle (UAV) data to calculate a 3-D model of a Palsa is another more ambitious approach as well as the survey with a TLS. With all three methods, an exact 3-D model of the Palsa mound (TLS, UAV) respectively active layer (TIN) can be created. The volume of the mound and active layer can be calculated either based on the resulting Digital Elevation Model (DEM) or with the help of using specific software (e.g. CloudCompare), which is able to calculate the volume of elements based on point cloud data. The usage of these methods and technologies in landscape sciences to estimate volumes are fairly unique. The study area including the Palsa mound is located in Northern Finnish Lapland about 30 km south eastern of the three corner point of Sweden, Finland and Norway. The presentation will introduce the three different approaches and give an overview of the results, differences, pros and cons as well as uncertainties of the methods. Keywords: Terrestrial laser scanner, unmanned aerial vehicle, active layer, Palsa

Eye in the sky: The use of Unmanned Aerial Systems to unveil the impacts of landcover change in the subarctic tundra. *Miguel Villoslada (University of Eastern Finland)*

Shrubification of arctic tundra wetlands alongside with changes in the coverage and volume of lichens are two well-documented processes in the Fennoscandian tundra. A rapidly warming climate and changes in reindeer grazing patterns are driving shifts in the carbon feedbacks and altering local microclimate conditions. It is therefore of upmost importance to closely monitor these changes in order to gain a complete understanding of their dynamics and improve the adaptive capacity of the regions under study. In this regard, earth observation data has played a

key monitoring role during past decades. However, the fine scale of these processes often renders them invisible or hazy under the eye of satellite sensors. On the other hand, the rapid growth of Unmanned Aerial Systems and sensor capabilities opens new opportunities for mapping and monitoring. Here, we present a toolset of Unmanned Aerial Systems and Machine Learning algorithms that enables highly accurate monitoring of landcover change dynamics in the sub-arctic tundra. More precisely, we combined multispectral, photogrammetric and thermal data with an ensemble of machine learning algorithms to map the extent of woody shrubs and quantify their above-ground biomass at two study sites across the Finnish-Norwegian border. Furthermore, we used the same toolset to map the extent and volume of lichens at three study sites across the Finnish-Norwegian border. The set of algorithms under scrutiny were a pixel-based Random Forest, an object based Random Forest and the more recent XGBoost. The ensemble of algorithms was trained with a comprehensive set of in-situ data collected at the study sites. The high degree of accuracy obtained in the results unfolds new research prospects, such as the combination of fine-scale remote sensing with chamber and Eddy Covariance measurements to quantify the impact of land cover on the carbon and energy balance.

Effects of different reindeer grazing practices on land cover and ecosystem carbon exchange in a sub-arctic highelevation peatland *Sari Juutinen (University of Eastern Finland)*

Our objective is to disentangle the impacts of reindeer grazing on the vegetation and ecosystem-atmosphere exchange of carbon (C) in a Fennoscandian tundra wetland. Previous studies exploring the impacts of reindeer grazing on ecosystem carbon balance, have focused on tundra heaths and forest ecosystems, while the impacts on sub-arctic peatlands have not been quantified. Peatlands cover about 30% of the land area in Fennoscandia and form a significant long-term C pool and source of atmospheric methane (CH4). The major land-use in the region, grazing by reindeer (domesticated caribou, Rangifer tarandus tarandus), has potential to modulate these ecosystem functions. Grazing is known to constrain the growth of shrubs, decrease vegetation productivity, decrease lichen cover, and increase or decrease land surface albedo, thereby also exerting strong control on the Ccycling. To answer how reindeer summer grazing affects vegetation, wetness, albedo, and ecosystem CO2 and CH4 exchange of a sub-arctic peatland, we sat-up an eddy covariance (EC) measurement station and chamber measurement points on a high-elevation peatland (Jávrrešduaddarat, 68.833 N, 23.913 E) in June 2021. The station locates on the border between Finland and Norway, where a fence built in late 1950's creates an experimental setup separating the different reindeer management strategies of the two countries. In the Norwegian side, grazing occurs only during winter, while in Finland, the area is grazed year-around. Due to difference in summer grazing, willows (Salix lapponum mainly) are more abundant, higher, and denser in peatlands in Norway compared to the Finnish side. The EC footprint has a radius ca. 30 m and it captures both sides of the fence allowing comparing the effects of grazing, i.e. different willow density, on peatland's C-exchange. The study will be continued three years and here we introduce our experimental set-up and report preliminary results on how the different grazing practices affect peatland vegetation and ecosystem CO2 and CH4 exchange. Our results will quantify the impacts of land-use and land-use change on sub-arctic peatlands where also climate warming adds uncertainty in the fates of C-sequestration and CH4 emissions.

Seasonal and inter-annual landcover dynamics in selected drained lake basins on Yamal, Siberia *Helena Bergstedt (b.geos)*

Drained lake basins are common features in permafrost landscapes on the circumpolar scale. They play important roles in the geomorphological, hydrological, and ecological development of Arctic landscapes and detailed knowledge and understanding of associated processes is crucial for many applications (e.g., landscape models) and to further our understanding of the Arctic environment. Yamal shows various drained lake basins, distributed over the peninsula differing in size and abundance between regions. Drained lake basins and associated landscape dynamics such as changes in surface water area and vegetation cover can be monitored from space using different indices derived from satellite imagery. Here we present a case study, describing landcover dynamics within selected drained lake basins utilizing Sentinel-2 and Landsat-8 multispectral imagery. We use a range of different landcover metrics such as NDVI, brightness, greenness and wetness derived from the Tasselled Cap index to described seasonal and inter-annual changes in different drained lake basins on the Yamal peninsula representing a North-South climatic gradient and different drained lake basin development stages. Results are analysed comparing the different sites, focussing on the connection of the studied parameters and site-specific factors (such as relative basin age, hydrological connectivity).

Arctic lake drainage in western Siberian 1961 – 2021, impacts to landcover change and reindeer herding. *Timo Kumpula (University of Eastern Finland), Helena Bergsted (b.geos), Roza Laptander (University of Hamburg & University of Lapland), Dorothee Erich (Arctic University of Norway), Alexander Sokolov (Russian Academy of Sciences), Natalia Sokolova (Russian Academy of Sciences), Svetlana Abdulmanova (Russian Academy of Sciences), Annett Bartsch (b.geos), Pasi Korpelainen (University of Eastern Finland) & Bruce C. Forbes (University of Lapland)*

The thaw lakes and drained thaw lake basins are a prominent feature in the Arctic and cover large areas of the landscapes in the high latitudes. Thaw lakes as well as drained thaw lake basins have major impacts on a region's hydrology, landscape morphology and flora and fauna. Drained lake basins have been studied across regions in the Arctic and differences in abundance and distribution exist between regions in the circumpolar Arctic. Thawing permafrost and drainage lakes can also affect human activities. Our research area is the Yamal peninsula in the Western Siberia, Russia. Yamal Peninsula is about 700 km long and about 150 km wide, extends from 66 to 72 degree North. In Yamal petroleum industry with related infrastructure networks can be affected by changes in lake and stream hydrology. Nenets reindeer herding is the traditional land use form in the Yamal. Reindeer herding is based on natural pastures and resources, and lakes and streams serve as important fishing resource for own use and sale. Thawing and drained lakes are part of climate change driven landscape changes in the area.

Landsat has been used in multiple studies for the analysis of lake area, extent and drainage or shrinkage events in the circumpolar Arctic. To analyze lake drainage, lake shrinkage and changes in lake extent consistent satellite data with adequate temporal and spatial resolution is needed. Frequent cloud cover in arctic regions during the summer months limits the number of suitable acquisitions of multispectral sensors and hinders the implementation of large-scale time series analysis efforts. Landsat data enables time span from 1972, although Landsat MSS images were rather coarse and good quality images are sparse. Good quality data have only been available since the mid-1980s when Thematic Mapper was launched. Old archival aerial photographs allows looking further back in some cases to 1940's, but their limited spatial coverage and

availability does enable large scale investigations. Cold war era spy satellite missions like Corona and KH are the only options to expand time span even to late 1950's and early 1960's.

Our remote sensing datasets cover a time span from 1961-2019. Corona data represents the oldest data source and mosaic was compiled from 38 original Corona images. Corona mosaics resolution is about 7 meters. Landsat mosaics are derived from 1980's and 2010's data. In addition we use several very high resolution satellite data (Quickbird-2, Worldview-2/3) to demonstrate lake changes in detail. Field data for verification of drained lakes have been collected from several parts of Yamal. Field data includes observations of changes and vegetation sampling. We have also interviewed several reindeer herders to understand the implications of lake changes for reindeer husbandry.

The changes were observed in the following periods 1961-1988 and 1988-2018. The results show that the disappearance of the lakes occurs throughout the period, but in the latter period the process accelerated. In terms of reindeer husbandry, the issue is multidimensional, as lakes that are quite important for fishing have disappeared in some places. Drained Lake, on the other hand, will soon turn into a good quality pasture where nutritious grasses and forbs grow, but if drained lake is located in a winter grazing area, it is just a lost fish resource.

Session 45 Beyond numbers and algorithms – deep-diving into the platform-mediated gig economy

Chairs: Natasha Webster (Stockholm University) & Qian Zhang (Stockholm University)

Auditorium M107, Tuesday, Auditorium F103, Wednesday

Reflections on the divisions of social reproductive labour in Airbnb households *Maartje Roelofsen (Open University of Catalonia)*

In this paper presentation, we examine the complexities of power, privilege, and representation that shape Airbnb work, drawing on over four years of ethnographic work in four different cities. We consider how the dynamics between gender and other social categories are reflected in who is assigned the various types of labour involved in taking Airbnb guests. We look at different household compositions, including couples, singles, families, and cohabiting friends, and ask how these households accommodate the extra social reproduction labour that hosting Airbnb guests demands. Moreover, we question how hosts manage the demands of hosting while balancing this labour with the other duties in their lives such as housework, childcare, and paid employment. Far from evenly distributed, findings suggest that the division of Airbnb labour in households reflect existing gender ideologies and often mirror historical divisions of domestic labour in terms of location, race and other social categories.

An Appendage to The Machine: Corporealising The Gig Economy *Olivia Butler (Uppsala University)*

In 1847 Marx declared that the division of labour and subsequent labour simplification means that the labourer is "transformed into a simple, monotonous productive force that does not have to use intense bodily or intellectual faculties" (Tucker, 1978, p.214). Conversely, preliminary interviews have instead revealed gig-work to be highly mentally and physically intensive, not only in terms of the onerous labour itself, but also due to the intense stresses externalised onto the

worker through uncertainty, insecurity and balancing work and life. These stresses are symptomatic of what Mitchell (2020) described as the double intensification of production, both through absolute surplus value production (increasingly long working hours) and through increased surplus value production (increased intensity due to optimisation and gamification through digitisation), and these symptoms can be physically felt. Attending to the corporeal, then, is a fundamental aspect of studying the gig-economy and helps locate the nebulous global networks pertaining to the gig-economy; of global corporations and international policy scripts of labour relations. That is because, in spite of digital mediation, labour is inherently a social practice performed by bodies in space. These bodies are, nevertheless, subject to processes of differentiation along gendered, racialised, ableist and ageist lines which together create an ideal gig worker (Zampoukos, 2021). In the Swedish case, for instance, giggarna are usually perceived as, young, South Asian men (Geissinger, Weidenstedt & Lougui, 2020), due to cultural similarities (e.g. Dabbawala), hiring practices and the onerous nature of the job; deemed to exclude other bodies. This has spatial implications, not just because the bodies material character derives from space (Simonsen, 2005), or because space is mediated sensorially- through the body. But also, for the spatial division of differentiated labour; with highly visible gig-workers in public space (e.g. couriers) augmented over invisible workers in private spaces (e.g. cleaners). By focusing on questions of embodiment across the public private divide, we expect to show that gig-work is not simply the domain of young, immigrant men, but that the nature of spatial organisation obfuscates the role of different bodies in the gig-economy. This will raise further questions regarding safety and inclusion and exclusion in both public space and economic participation.

Going Local: Ethnographic investigation of spatio-temporal factors in the Danish context of digital platform labor *Konstantinos Floros (IT University Copenhagen) & Kalle Kusk Gjetting (Aarhus University)*

The inequalities and displacements produced by the proliferation of platform-mediated gig work and algorithmic management have created a growing literature in recent years (e.g., van Doorn et al. 2020; Lee et al. 2015). Particularly important to our work is the fact that platforms operate largely uncontrolled in terms of employment relations and algorithmic transparency (cf. Rosenblat & Stark 2016). To delve deeper into this question in our local context of Denmark we have established the Danish Research Network for Platform Work. The research within this network has so far resulted in 28 interviews with housecleaning and food-delivery platform workers in three locations in Denmark and we have also undertaken platform work ourselves in the period from 2019 and ongoing. A commonality between our projects is our focus on utilizing ethnographic methodologies which we use to go beyond numbers and algorithms to uncover the lived experience of the platform workers. Our preliminary findings point to a range of locally contingent factors that our interlocutors navigate within. Amongst these are workingholiday visas for migrant workers, tax exemptions, vehicle availability and more general labor market particularities. Moreover, the findings point to varied temporalities of workers' participation, shaped by the interplay between locally contingent factors and our interlocutors' specific situations. We argue that it is essential to complement our understanding of how platform workers' livelihoods are shaped on a local level, by investigating which part of the labor force is attracted to this type of work (and why), how it is governed and whether the effect of the platform business model is to produce, sustain or simply take advantage of pre-existing inequalities. We bring these concerns of social justice and inequality as well as methodological implications to the fore in our discussion. van Doorn, N., Ferrari, F., & Graham, M. (2020). Migration and Migrant Labour in the Gig Economy: An Intervention. SSRN Electronic Journal.

https://doi.org/10.2139/ssrn.3622589 Lee, M. K., Kusbit, D., Metsky, E., & Dabbish, L. (2015). Working with machines: The impact of algorithmic and data-driven management on human workers. In Proceedings of the 33rd annual ACM conference on human factors in computing systems (pp. 1603-1612). Rosenblat, A., & Stark, L. (2016). Algorithmic labor and information asymmetries: A case study of Uber's drivers. International Journal of Communication, 10, 27.

Digital Capital; Doing Digital Discipline *Mathilde Dissing Christensen (Cardiff University)*

Digital platforms and activities permeate everyday lives in multiple ways, they organize how, and sometimes who, moves and who stay still. This paper takes its empirical starting point in exploring Airbnb hosts, as they can be understood not only as a novel kind of touristic worker, but also within a larger tendency of platform mediated work. This paper pursues two aims in exploring how trust is produced and negotiated on the platform and how the platform serves to align host performances towards corporate interests. Based on qualitative interviews with 33 active Airbnb hosts based in Copenhagen, Denmark and Philadelphia, USA, this paper explores how digital configurations are open to various 'negotiations, reconfigurations, and diffractions through tactical maneuvers rooted in everyday digital practices of urban denizens'(Leszczynski 2020). This paper works to illuminate the role the digital platform serves to stabilize an online market for hospitality exchanges and secondly to explore how the relationship between hosts and company is negotiated digitally. Consequently, this paper pursues two clear aims in exploring how trust is produced and negotiated on the platform and how the platform serves to align host performances towards corporate interests. In doing this I will argue that the affordances of the platform is designed to develop digital credibility, or digital capital, which is in turn utilized as a disciplining instrument. In doing this the paper argue that the development of digital capital is integral to navigating the digital platform successfully and explore how digital capital is produced and instrumentalized through the development of profiles, the review system and the superhost status. This paper contributes in part contributes insights into the workings of a key platform for facilitating tourism but also adds to current discussion on the organizing of interactions in platform Capitalism.

Global platforms and regional intermediaries | Intersecting networks of the music and the finance industry *Björn Braunschweig (Friedrich-Schiller-University)*

Fuelled by the dematerialization, digitization and platformization of music consumption, the financialization of music culture and its industry, and processes in technological financial innovations (FinTech) within the platform economy as a whole (Langley & Leyshon 2021) and the music industry in particular, private equity investments into intellectual property rights of popular and often older songs have soared in the last three years. While royalty funds in, e.g., the biopharma industry are officially designed to finance innovation, their 'musical' counterparts are increasingly built on FinTech-based reintermediation by a select few key-players in the music industry. Following Langley & Leyshon, the interplay of these developments holds the potential to lead to new heights of consolidation and monopolization; stifling musical innovation in the process rather than backing it. But the (new) networks enabling this, their spatial structure(s) and the role of the latter have yet to be made visible and analysed. To start to fill this gap, the development of the network(s) of advisors and advanced business service providers of four such investment funds, with combined assets under management of $4.7 billion (global publishing revenue of the music industry 2019: $5.6 billion) and their music industry counterparts – with a

focus on intermediary actors – will be made visible. For this I build on Dörry's (2015) approach of 'strategic nodes in investment funds GPN' and an updated version of Sitonio & Nuccarelli's (2018) 'recorded music supply chain'; with a strong emphasis on the actors' geographical and network embeddedness in both industries. The study is built on qualitative content analyses of 600+ documents (e.g., regulatory news, industry reports, advisory/analytics statements and presentations) and 250+ news articles as well as an explorative quantitative analysis of 20.000+ songs in 150+ catalogues. Preliminary results suggest that (1) the complexity of intermediary-networks and their actors' historically deep and broad embeddedness within the often national/regional industry networks and institutional contexts strongly contributed to the platform-based reintermediation in an ever increasingly digitized global industry and further gave rise to (2) the FinTech-based restructuring of the music industry, which has not only begun but is already well underway with measurable consequences.

Platform Ruralism: A call for conceptualizing the platform economy in rural contexts *Qian Zhang (Stockholm University)*

Technological developments – in work and social activities – have changed our daily lives and have normalized hybrid digital-physical-social spaces. A rapidly growing body of work has begun to explore the implications of these changes under the broad term, "Platform Urbanism". Yet, there are significant knowledge gaps regarding digital spaces and practices in the rural context. Digital studies on the rural have for long focused on improving ICT infrastructure and connectivity and while the role of digitalization in transforming agriculture has received significant attention, these debates remain surprisingly disconnected from discussions of the platform economy. While at first glance, emerging platform-mediated services in the rural are not as visible, frequent, or large-scale as in the city, rural digital practices are creating hybrid digital-physical-social spaces and practices (e.g. in Sweden, FundedByMe financing farming activities, WOOFF linking tourists to organic farmers, ETSY with handcrafts, or KRY offering online health services). Rural individuals and communities rely upon digital technologies to build social and economic practices, involving forms of gig work, and in doing so, reconfigure rural spaces through everyday digital life while also shaping public imaginaries of rural spaces/places. Yet this remaking of rural geographies through the platform economy remains under-examined. This paper challenges not only the normative perspective of the urban in understanding the platform economy but advances conceptual discussion of rurality to ask: What is Platform Ruralism? We argue there is a need to explore the diversity of spaces and places connected to and from the platform economy, and a need for a specific understanding of ruralism in the platform economy. We affirm the need for place/space-based inquiry which considers the rural as a specific and unique context yielding conceptualization(s) and understanding(s) of the platform economy which highlights the complexities and diversities of digital geographies. We especially call for thinking about the usefulness of intersectional perspectives for unpacking experiences of disadvantaged rural groups (e.g. women and migrants) and addressing associated social inequalities. We conclude with the call for geographers, who are uniquely well equipped to study the intersection of spatial contexts and emerging geographies, to further explore the rural platform economy.

Session 46 Current developments in tourism geographies

Chairs: Malin Zillinger (Lund University and ETOUR, Mid Sweden University & Jan Henrik Nilsson (Lund University)

Auditorium F100, Tuesday

Coastal tourism perspectives as seen by inhabitants and enterprises *Anu Printsmann (Tallinn University)*

While the COVID-19 pandemic is taking its hopefully last breaths, the long-term visions for tourism development have not wavered much. Questionnaires for local inhabitants (N = 758) and broadly termed Blue Economy enterprises (N = 100) asked for wished trends on coastal tourism and mobility in the form of scenarios in the middle section of the northern coast of Estonia. This study was conducted in the outline of Interreg Land-Sea-Act project looking at land-sea interactions in the context of Maritime Spatial Planning (MSP). As the southern coast of the Finnish Gulf has been deemed as rather desolate from Blue Growth pillars (aquaculture, renewable energies, blue biotechnology and deep sea mining) by national MSP, only tourism can be enhanced. The question is to find the right balance between environmental restraints and economic pressures. Despite some economic development is welcomed in this rather marginalised area, people do not believe in virtual reality or nature-based solutions and favour place-based tourism the most. The scenario study is placed in the wider framework of coastal trade-offs and future tendencies, while also concentrating more concretely of what kind of tourism infrastructure needs prioritised advancement. The answers differ in who should take the lead in promoting tourism as there is a lack in cooperation in all levels but on the other hand the results show high agreement what serves as the basis of attraction: maritime culture and landscape values.

Relict boundary as a tourist attraction/destination: A case of the Bohemian-Moravian historical land boundary *Petr Marek (Masaryk University)*

Boundaries have long been in the attention of geographers. Currently, they are also increasingly discussed in the context of tourism. State borders and sub- and supra-state boundaries may be seen as tourist attractions/destinations. Scholars focus mainly on current state borders, while the boundaries with the political function in the past – relict boundaries – are much less studied. The relict boundaries such as the Great Wall of China, Hadrian's Wall, the Iron Curtain, or the Berlin Wall are highly used in tourism. Motivations of people to visit the boundaries differ. Concerning the relict ones, cultural-historical motives may often prevail. Depending on the boundary length, a visit to it can also be understood as a sports activity, as evidenced by trails along Hadrian's Wall or the Iron Curtain, for example. The abovementioned relict boundaries are attractive in that they served as defensive. However, this paper aims to point out that even the „peaceful" borders (without a defensive function in the past) can attract tourists. An example of such a boundary is the Bohemian-Moravian historical land boundary. It served as an administrative border from the Middle Ages until 1948, when the Czech lands in then Czechoslovakia were abolished by the new communist government and divided into smaller regions. The paper introduces the attractions along the about 450km-long Bohemian-Moravian boundary and analyses its tourist potential based on an online questionnaire survey. More than 76% (of 357) respondents stated they would visit the educational trail along the Bohemian-

Moravian boundary. Marking this boundary for tourist purposes can thus contribute to the diversification of the tourism offer in the Czech Republic and relief of crowded destinations such as Prague or some mountains in the Czech borderland. It can also bring rural development to the so-called inner periphery. Marking the Bohemian-Moravian boundary will also foster awareness about this historical/relict boundary, which is currently very fuzzy (fueling a resistance identity of some Moravians) due to administrative reforms after 1948. The case study of the Bohemian-Moravian boundary might be an inspiration to use also other historical/relict boundaries, perceived as heritage, in tourism.

Traceless Lofoten Tourism *Rose Keller (Norwegian Institute for Nature Research)*

Tourism to national parks and similar tourism destinations has been growing rapidly in the Nordic regions. A growing issue in the arctic island archipelago of Lofoten associated with tourism is large amounts of waste. This tourism can be concentrated in time and space (beaches during the midnight sun), leading to concentrated impacts such as waste. The rise in all forms of waste is alarming, but human waste is especially concerning due to the serious human health hazards that arise due to contaminated water (Ells & Monz, 2010). Lofotodden national park is not spared from a human waste issue, as evidenced by the frequency of visitor comments regarding seeing toilet paper and feces during their trek. In our pilot project we examined three main challenges: 1. the extent and associated health hazard of human waste in the park, 2. needed infrastructure and responsibility for maintenance, and 3. how likely visitors would comply with waste alleviation programs. The project team mapped waste occurrences over the course of the peak tourist season to identify hot spots and generate an estimate of waste density along popular trails and tenting beaches. We collected water samples in streams we observed visitors filling their water containers, recorded tents and cars and set passive trail counters. We intercepted visitors for brief (10 min; N = 69) and walking interviews (50 min; N = 20). We asked questions about experience of the park and waste in the park along the tenets of the theory of planned behavior and observed non-verbal cues. We discovered that visitors see waste during their trip and are negatively impacted, yet encouraged to behave similarly to what they observe 'on the ground,' regardless of expressed moral norms. Leave no trace behavioral messaging via videos or personal contact with local managers was most preferred. Personal 'pack out' programs was least preferred among visitors. Ascription of responsibility largely fell on the park management, even among Norwegian visitors, which highlights a disconnect of visitor expectations with Norway's environmental governance structure. From these data, we will continue the work to test targeted messaging to visitors as well as assess preferences of infrastructure or programs via stated choice surveys to help determine best practice how locals can actually sustain waste management.

Interdisciplinary analysis of ecological and social complex feedbacks and relations linked to coastal tourism: the case of Biosphere Reserves *Liliana Solé Figueras (University of Turku)*

Scientific research has been studying the continued degradation of coastal ecosystems and their services. However, the existing research still fails to integrate the interactions among drivers of coastal change and the effects of these interactions on ecosystems and services. The failure to understand and integrate multiple drivers' relations and impacts can result into misallocation of coastal management and policy instruments aimed to protect coastal areas. This study answers to the above-mentioned knowledge gap by focusing on one core economic activity, tourism, that exerts great pressure in coastal areas. Tourism is one of the fastest growing sectors worldwide,

and it is expected to reach pre-pandemic levels by 2023. The overall objective of the project is to study the social and ecological complex feedbacks and relations linked to coastal tourism to provide holistic and interdisciplinary knowledge for coastal management. This objective is divided in four subobjectives; i) Identify and assess ecosystem services that underpin tourism activities, ii) Identify and assess drivers, drivers' interactions, and impacts of tourism activities, iii) Identify synergies and conflicts among social groups on the ecosystem service values that support tourism, the drivers that impact tourism activities and the impacts of tourism on coastal systems, iv) Identify future coastal and tourism management priorities. The study integrates socio-ecological analysis, complexity theory and Public Participation GIS approaches. The research is performed at two UNESCO Biosphere Reserves located in Finland and Spain that balance between increasing but sustainable tourism. At the end of the project, future management priorities will be identified for the two study areas, but the implications are valuable more widely for coastal tourism management.

Domestic and international tourism during the pre-vaccination times of COVID-19? Empirics of travel in Finnish tourism regions *Tommi Inkinen (University of Turku)*

Analysis provides an insight of COVID-19 pandemic in Finland during the one year pre-vaccination period (Dec. 2019 to Dec. 2020). Tourism has been one of the most severely affected industries due to the drastic travel limitations and restrictions. Countries responded differently to the first and second waves of the pandemic resulting into explicit limitations of spatial freedoms in the use of urban spaces, commuting, and longer travel. This presentation overviews key-statistics of tourism with a spatial segmenting. National statistics are referenced against four "tourism areas", namely Archipelago and Costal Area, Helsinki Metropolitan Area, Lakeland, and Lapland. The open access data was collected from the databases of Statistics Finland (Rudolf) and Business Finland (BF). They are essentially the same data but BF has produced readily available overviews and fine-tuned indicators based on the raw data. An emphasis has been put on the customer demand (e.g. the number of nightly stays and length in days). I will discuss regional characteristics and special conditions of each tourism area, thus providing a snapshot on selected locations. An important notion is that international travel from abroad to Finland concerned, largely, only international migrant workers. The results show well-known halt in international tourism and indicates that the increased domestic tourism has been modest.

The biopolitical production of a whole country as a tourist area Tourism and short-term rentals during the pandemic in Greece *Myrto Dagkouli-Kyriakoglou (Malmo University)*

COVID-19 crisis is shaping already the 21st century and creates a 'before' and 'after' to observe. The crisis has strong humanitarian and economic implications and tourism is one of the economic activities that is affected the most. For Greece, tourism represents its main export product. Also, tourism was and still is a key agent in overcoming the country's economic difficulties of "post-crisis era"- regarding the global financial crisis of 2008. Therefore, during the pandemic, by not having any control over the tourist product and the tourist flow, Greece was trapped in the dependent relationship with industrialized, more affluent/developed countries rendering it in an emergency situation. The state imposed biopolitical strategies to counteract the crisis by prioritizing the more profitable activities and powerful agents in the expense of the local population and not only. The biopolitical production of a whole country as a tourist area brings about the control of the bodies which are involved intentional or unintentional to the

tourist activity (tourists, employees of the tourist industry, locals). The state tourism policies were combined with biopolicies that ordered a social (re)production affecting multiple fields of everyday life for resident population like housing. Regarding housing in particular, another activity that rose during the 'post-crisis' period are the short-term rentals (STR), also regulated by biopolitics that constitute an activity linked to tourism. STRs and Airbnb as their poster-child represent the interface between technology and tourism integrating a strictly private space, linked to family welfare in a country with absent housing policies, into the market economy. STRs since the beginning of the first (for Europe) pandemic wave and especially in the prospect of the first summer tourist period faced sanitary restraints and biopolitics. On the other hand, the vary nature of STRs in the intersection of technology and tourism discovered new opportunities exploiting the biopolitics imposed by a state that nurtures the monoculture of tourism. This work investigates the biopolicies imposed in Greece in relation to the pandemic in order for the state to regulate its impact on tourism and it is based on empirical data from online in-depth interviews with amateur Airbnb hosts from Greece.

ICTs and the geographies of tourism *Malin Zillinger (Lund University & ETOUR & Mid Sweden University)*

The ubiquitous access to ICTs has changed tourist behaviour before, during, and after travel. Smartphones in particular have had a great influence here, because almost everyone has one, and because they open up new possibilities en-route. This has essential consequences for travel information search, and for what people on holiday actually do. Information-wise, we know that one-way information communication has lately shifted towards an interactive process. Information search is, to a certain degree, understood as an experience itself, instead of being reduced to functional values such as risk reduction. Also, tourists increasingly turn to digital channels as a first step in information search, somewhat replacing an internal information search that includes leaning towards one's own experiences. All this means that we need to understand digitalisation in tourism as a process that fundamentally changes tourism premises; it does not only change which information channels tourists prefer. One aspect that is shaped by smartphone use is spatial mobility. Research has long built on the assumption that tourists decide beforehand on their itineraries, and on stops along the way. Such an assumption is grounded on the idea that tourists plan their visit, and then rationally follow their plan. This seems to be wrong. Tourists are much more spontaneous, and are actually craving for more flexibility, than we have hitherto believed. This has important implications for what people do, and what they find attractive and important enough to visit. This presentation will revolve around issues like this, and ask the general question on how we can understand what a tourist attraction is, if such a notion is actually shaped by place and time when tourists are searching for information about it.

Digitalizing tourism mobility – building a common framework for an ecosystem *Maria Hakkarainen (University of Lapland) & Minni Haanpää (University of Lapland)*

Before the corona pandemic, Finnish tourism exports were growing rapidly, which is largely explained by the increase in the number of foreign individual tourists. Finland's tourism assets for international travellers are remote destinations, nature, and nature experiences. The importance of these has increased during the corona pandemic. However, in sparsely populated areas, accessing nature attractions without your own car is difficult. For international travellers in

particular, finding alternative modes of transport and travel chains connecting different modes of transport can be impossible in the current situation. Relevant information on, for example, travel modes, timetables and services at the destination is fragmented across a number of different websites and services. This requires that existing digital services can connect to each other and that new features can be added to them. The project will test new traveller and tourism-based mobility concepts as part of the solution development work. The aim is to create real-time and location-based service packages so that tourists have access to, for example, a route guide that combines tourism services with mobility services, as well as an easy way to book and pay for longhaul and local journeys, as well as various services in the area. In a recently started project, FIT ME! – Foreign Individual Travellers' hospitality and Mobility Ecosystem, we aim to develop a tourism mobility ecosystem in Finland. One of the challenges is the lack of a common understanding and framework between two fields, mobility and transportation and tourism studies, in theory and practice. The aim of this presentation is to draft out how a project combining these two multidisciplinary fields could organize in order to bring forward a shared understanding in theoretical and conceptual level.

Urban Ecosystem Services and Tourism *Jan Henrik Nilsson (Lund University)*

Urban tourism depends on the place specific qualities of destinations. In many cities, climate change poses a threat to these qualities, through increasing risk of excessive heat, draught and flooding. Cities need to adapt to reduce these risks. One way of doing this is to improve their green infrastructure. Urban forests, parks, rivers and wetlands may help reduce the effects of climate change in cities. At the same time, green infrastructure provide a variety of ecosystem services to the community. In particular, cultural ecosystem services such as recreation, and esthetical values take place in urban green infrastructure; they provide value in the form of improved experiences. These mainly benefit the locals but they may also be important for tourism. Such relations between ecosystem services and tourism have in earlier literature been recognized in rural contexts but very seldom in urban. This paper reports preliminary findings from qualitative case studies in the South of Sweden and Berlin, Germany. They focus on how urban planning projects (primarily aimed at mitigating GHG emissions and adapting to climate change) can be extended to develop places where experience values for both residents and visitors are created alongside other kinds of ecosystem services. We suggest that the need for climate change adaptation in a city may be used as a means to improve its place specific qualities as a tourist destination. By developing green infrastructure in innovative and environmentally friendly ways, the quality of ecosystem services improves, including those relevant for both visitors and residents. Protecting and building green infrastructure, thereby enhancing a city´s visible qualities and its reputation as a sustainable destination, may also be valuable in marketing the city.

Session 47 Poster Session

Perspectives of Regional Identification Processes in Styria *Sabine Hostniker (University of Graz)*

Spatial or regional identification processes and their associated theories have been encountered in human geography for several decades, and now seem to be re-established in the light of current social and political world events. In this context, the notion of "regional identity" is of

great importance and recurs in people's everyday lives as well as in policy planning documents and regional development concepts. A critical reflection of regional identity discourses and their relation to regional development is part of my ongoing research and dissertation project, where theoretical and planning-practical approaches are to be brought together in a cooperation with the province of Styria in Austria.

Regional identity concepts face the challenge of a clear theoretical assignment or demarcation from other concepts or research paradigms in everyday practice as well as in science. Therefore, I would like to broaden the understanding of the concept of identity with spatial reference and to analyze identification processes with regions.

Identification with a place or region results from a repeated engagement with everyday identity features. I am investigating how regions are produced and reproduced and which factors/actors have an influence on this process. The aim is to understand how people in a region classify the term "region" for themselves, on which scale "region" takes place, how people/actors see this region and how or by what means they identify with their region.

I will look at that topic through the lens of performativity. Moving away from the ongoing and diffuse discussion on the definition or location of "regional identity", I would like to contribute to seeing the region as a construct, which is a product of the influences of diverse actors, which tells a story. Which reproduces itself through its repeated enactment and thus manifests its identity in the perception of people. Empirically the research focusses on an ongoing qualitative study of people's identification with regions in the study area. The poster gives an overview of the current research status, showing the background of the described topic and is rounded off by an outlook on the planned empirical studies and methodological challenges of this project.

Long-term changes of the flood and river ice regimes *Karoliina Lintunen (University of Turku)*

River discharges and ice cover have a strong impact on biotic and abiotic processes in fluvial environments. Discharges and river ice are dependent on hydrometeorological circumstances. Under climate change, discharges and ice cover are changing in high-latitude areas of the globe. During the past five decades spring snowmelt has started earlier in Northern Europe, leading to a shift in the timing of floods, discharge peaks and river ice breakup. However, little is known how these changes influenced in the past and how changes will influence to fluvial environments in the future. The goal of this research to understand how river discharge and ice cover regimes have changed from past to present in Finland. To achieve the goal, statistical analysis of time-series data is applied to understand long-term changes of discharge and river ice regime.

In this paper, long-term data of hydrological regime is analysed statistically to identify potential changes and trends influenced by climate conditions during last 60 years. Hydrological parameters are divided into two groups: flood parameters and river ice parameters. Flood parameters include flood magnitude, frequency and timing whereas ice regime parameters include length of the ice-covered period, freeze-up date and break-up date. Combined with weather data, flood and river ice regime parameters work as reliable indicators for assessing long-term changes caused by climate change. These changes are studied in Finnish free-flowing large rivers and research data is open-access data provided by different national research institutes. Results of this paper can be applied when future changes are considered in the boreal-subarctic climate region.

You Are Never Alone With the Chicken Dinner! Understanding Chicken Circulation in Southeast Europe *Danko Simić, (University of Graz)*

With roughly 26 billion birds in 2019 chicken do not only account for more than 90 percent of the poultry population but also outnumber all other domesticated animals worldwide (FAO 2020). Thus, one could think that chicken are omnipresent in our lives. Due to industrial farm settings, however, chicken are largely made invisible, trapped and hidden behind factory walls. We mostly encounter them as commodities for sale in the refrigerated sections of grocery stores – e.g. as chicken breast, chicken wings or chicken nuggets.

I understand chicken (farm animals) and chicken meat products (commodities) as materialisation of manifold (human-animal) relations or as "a bundle of social relations" (Watts 2014, p. 394). In fact, the chicken is an actor-network. Therefore, "[...] you are never alone with the chicken dinner, even if you are dining alone" (Elton 2019, p. 8). In my PhD project – "What's a Chicken to Europe? Performing Europeanization in Poultry Circulation in Southeast Europe" – my goal is to follow these heterogenous associations and thereby "get behind the veil [...] in order to tell the full story of social reproduction" (Harvey 1990, p. 423). As following the chicken in its circulation – moving in and through time and relational space – calls for a methodology that can accommodate this multi-sited and multi-temporal continuous processes, I am engaging with a multi-sited ethnography (Marcus 1995). In my contribution I want to present first results of the following namely constructing a multi-sited terrain to understand how Europeanization is performed in Southeast Europe.

Geodiversity in freshwater ecosystems across scales – a conservation perspective *Maija Toivanen (University of Oulu)*

To stop the ongoing nature decline, we must strive to understand the diversity of nature and the causes and consequences of biodiversity loss as widely as possible. It is particularly important to acknowledge both the biotic and the abiotic sides of nature. Yet, many times "biodiversity" is used as a synonym for diversity of nature. The problem here is that it ignores the abiotic side, which makes our understanding of nature fundamentally insufficient.

To better understand the diversity of nature, we need to acknowledge geodiversity, the abiotic diversity of nature. It allows us to more efficiently study, understand, and protect biodiversity. Geodiversity – the variety of earth materials, forms, and processes – is the stage on which the biotic elements, the actors, live.

Here, I focus on applying the concept of geodiversity in freshwater ecosystems with widely applicable methods. Geodiversity can be determined at both landscape and local scale. I present how to determine geodiversity for lake and river catchments. Additionally, I present an idea how to determine geodiversity at local scale in rivers. Landscape geodiversity is compiled with GIS data. Local scale geodiversity is based on field work data.

With this presentation I want to highlight the Conserving Nature's Stage conservation strategy, that states that by conserving the stage (geodiversity) we can better conserve the actors (biodiversity), and the need to systematically include geodiversity in conservation efforts.

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