

## ClimApp partners represented:

- 4 countries
- 8 organisations
- 9 senior researchers
- 2 post-docs
- 2 PhD students
- 2 Master students
- 1 administrator
- 8 native languages

## Lund University

### Chuansi Gao – Associate Professor, Project Coordinator

As the coordinator and lead principal investigator, the main roles are to lead, monitor and coordinate ClimApp project, communicate with European Area for Climate Services (ERA4CS), together with management team members supervise the scientific, technical and administrative progress, ensure the integration of various parts of the ClimApp project. Chuansi's vision is to develop an advanced ClimApp that integrates weather forecast data into human thermal models, heat stress indices and combined with individual user characteristics and vulnerability to provide a user-friendly and interactive mobile tool to provide heat and cold stress warnings and advice, improve decision-making for adaptation strategies when facing thermal climate challenges.



His research focuses on human-clothing-thermal environment interactions, the effects of thermal climate factors on thermal physiological responses, heat balance, health, comfort and work performance, and the development of strategies to cope with thermal stress through transdisciplinary approach. He participates in the EU-Horizon 2020 HEAT-SHIELD project, EU ENBEL project and International Belmont project on climate, environment and health, supervises doctoral students, and acts as principal investigators in international and national projects.

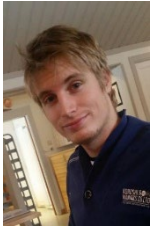
### Kalev Kuklane – Associate Professor



Kalev, as a former partner of ClimApp, was responsible for the Thermal Environment Laboratory at the Department of Design Sciences, Division of Ergonomics and Aerosol Technology. He graduated from the Tallinn University of Technology, Estonia as a civil engineer in building technology, and continued his studies for Master degree in industrial ergonomics at Luleå University of Technology, Sweden. The studies were continued while working at the National Institute for Working Life in Solna, Sweden. The doctoral thesis (2000) was related to the cold protective footwear thermal testing and test results practical utilization. His research has covered method development for thermal manikins, human performance evaluation, use of thermal indices and standardization, design solutions' thermal function evaluation etc. in the range of human exposure from extreme cold to extreme heat. He is the chairman of the European Society for Protective Clothing and is an active member of ISO/TC 159/SC 5/WG 1, CEN/TC 162/WG4, CEN/TC 122/WG 14 and national mirror Groups.

In the project he dealt with the cold exposure related thermal models, for example IREQ, and clothing aspects by reviewing, evaluating and adjusting the models to fit with the other standards in the field and validate if the adjustments match the expected predictions.

## Jakob Petersson



Jakob's doctoral research during the first 2.5 years will be mainly carried out within the framework of the ClimApp project. Jakob has received a Master of Science degree in Applied Climate Strategies and a Bachelor of Science (BSc) degree in Physics with specialization in Meteorology from Lund University in Sweden. His BSc project work was carried out at the Centre for Environmental and Climate Research (CEC) and focused on the change in extreme temperatures in Sweden.

## Johanna Alkan Olsson – Senior Lecturer



Johanna is a former partner in the project. Her main role was to assist in the development of the tool especially focusing on collecting user requirements from persons working outdoors, ensuring that different groups willing to use the tool and that the tool provide suggestions for appropriate measures. The research provided both methodological improvements related to participatory design of climate services as well as understanding of what kind of information is needed to transmit to different types of heat vulnerable groups so they could act correctly in thermal extremes.

Johanna is a lecturer in environmental science at the Centre for Environmental and Climate research at Lund University.

## Sara Egli



Sara is a former student in Information and Communication Technology at Lund University and has been working on ClimApp user interface design, user needs and usage scenarios.

## Hajnalka Bodnar – Project Administrator



As the project administrator, Hajnalka's main role is to support the Project Coordinator with a range of different tasks such as

- Work collaboratively with the Project Coordinator and partners to maximize productivity;
- Collaborate and communicate with the whole project team, contributing to the entire project lifecycle;
- Organize meetings and monitor schedules and see that deadlines are met;
- Coordinate efforts within the team and with stakeholders (or users) efficiently;
- Report updates verbally and in written form to the Project Coordinator;
- Monitor budget and help ensure resources are used efficiently;
- Create and maintain project's homepage.

## **KU - University of Copenhagen**

### **Lars Nybo - Professor**



Main roles are dissemination and implementation of the ClimAPP; liaison to the Heat-Shield project.

Main research area relates to fatigue mechanisms and factors associated with hyperthermia-induced fatigue (mechanistic exercise lab and field studies), performance and adaptation to exercise in the heat. The work in the ClimAPP project involves applied field studies where the application and usability/impact of the

ClimAPP will be tested on different group of end-users (including workers in different industries).

As member of the ClimAPP management-team and project coordinator for Heat-Shield it is his ambition to be broadly involved in all relevant actions and facilitate collaboration between the ClimAPP and Heat-Shield to maximize the overall output of the projects and optimize the benefits for each partner and creating a ClimAPP that will be a central dissemination tool for alerting, advising and interaction with end-users to adopt relevant strategies/methods to minimize detrimental effects of thermal stress.

### **Boris Kingma - Associate Professor**



Boris Kingma is responsible for the development of the app and supervision of the computer science student. The role includes implementing models on heat stress and cold strain, and converting these into a single Climapp Index for easy interpretation, as well as development and maintenance of the software architecture required to support the app.

He currently is an associate Prof. at University of Copenhagen on thermal modelling, and a senior human performance analyst at The Netherlands Organization for Applied Sciences (TNO). His work focuses on modelling and predicting physical and cognitive performance under thermally challenging environments.

## DTU - Technical University of Denmark

### Jørn Toftum - Professor



The research covers mainly the interaction between the indoor environment and human comfort, health and productivity. Activities in ClimApp comprise setting up the technical framework of the app-based tool for heat stress warning and implementation of the functionality of the app in non-extreme thermal environments.

### Henriette Steenhoff - Software Developer



Henrietta was a former partner of ClimApp project. She had a background in Computer Science and owned a Master of Science degree in Data Science at Technical University of Denmark. The focus was on big data/machine learning, visualization of data and user experience.

Her role in this project was primarily technical, working as an app/software developer including a consultant aspect regarding advising throughout the development process. She was going to find the right tools to build the platform for developing the prototype and the final version of "ClimApp". Based on the requirements posed and prioritized in collaboration with the members of the research group, she focused on merging science and technology working as the bridge between the research/models and the final product. As a developer she contributed with technical knowledge in general, user experience design and software development.

The development of the final app was a part of her Master Thesis.

## Vrije Universiteit Amsterdam

### Hein Daanen - Professor

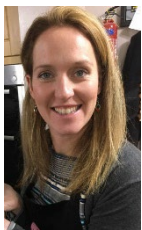


The main roles are supervision of the research of the PhD candidate focusing on thermal strain in vulnerable people and managing the part of the ClimApp project linked to the Netherlands. The research will serve as input for an App and the App will also be investigated for validity for these groups.

Hein is linked to the Heat-Shield project, and professor in exercise physiology at Vrije Universiteit Amsterdam, Faculty of Behavioural and Movement Sciences. Focus of the work is on the relation of thermal strain to human performance and on human adaptation to heat and cold. The work in the ClimAPP project involves field and lab studies. Lab studies are performed in the human performance laboratory that enables research in a temperature range -20 to +60°C, 10 to 90% relative humidity and simulated altitude to 5000 m.

As member of the ClimAPP management-team it is his ambition to supply a tool to people that are vulnerable in thermal extremes and their care takers so that they can identify the risks and take appropriate measures based on suggestions by the App.

### Nicola Gerrett - Post-doctoral researcher



Nicola will supervise the research of Mireille Folkerts (PhD candidate) who is investigating the thermal strain in vulnerable groups. The research will provide invaluable information for the mobile application ensuring that the output is relatable to a wider population.

Nicola gained her PhD at Loughborough University in the United Kingdom investigating perceptual responses to exercise and heat exposure. She has recently completed an international post doc in Japan investigating sweat gland function and adaptation in healthy old adults.

As a member of the ClimAPP project team it is her ambition to supply accurate and informative data that can provide a safer environment for vulnerable groups.

### Mireille Folkerts - PhD Candidate



As PhD candidate in the ClimApp project the main role is to investigate thermal strain in vulnerable people in order to improve and validate a mobile application that will serve as a guideline for these groups in heat and cold periods.

Mireille studied Human Movement Sciences in Groningen with Healthy Ageing as major in the master. After her study she worked as research assistant for two different research projects. One project investigated strength training in stroke patients and the other project investigated sleep and fatigue in offshore employees.

As member of the ClimApp project team it is her ambition to contribute to the tool helpful for vulnerable people and their care takers to better cope with thermal extremes and allow them to take the appropriate measures based on suggestions of the mobile application.

## **Koen Levels - Assistant Professor**



Koen was a former partner in the project. His main roles were supervision of the research of the PhD candidate focusing on thermal strain in vulnerable people. The research served as input for a mobile application and this application was investigated for validity within these groups.

Koen obtained his PhD degree in thermophysiology at the Vrije Universiteit Amsterdam, department of Human Movement Sciences, and uses his scientific background to provide elite athletes with evidence-based advice regarding the physiology of training. Moreover, he works as physiologist for the Dutch national rowing teams.

As member of the ClimAPP project team it was his ambition to supply vulnerable people and their care takers with a tool to identify the risks of thermally challenging conditions in order to allow them to take the appropriate measures based on suggestions by the mobile application.

## Regional Public Health Services, Gelderland-Midden (VGGM)

### Moniek Zuurbier - PhD



Moniek Zuurbier graduated in Environmental Epidemiology at Wageningen University in 2002.

- 2003-2006: coordination of EU projects PINCHE and CHEST
- 2006-2011: PhD research at Utrecht University on air pollution
- 2011-current: policy advisor at the regional Public Health Services Gelderland-Midden

Moniek is registered epidemiologist. She works in the Environmental Health team of VGGM. Her main areas of expertise are air pollution, noise, heat stress and epidemiology. Moniek's main activities at VGGM are research, advising local and regional policy makers and citizens on environmental health.

In ClimApp Moniek works together with the Vrije Universiteit Amsterdam on researching heat stress in children and testing and implementing the app for children and their care takers.

## DrQuench - Your Hydration Coach

### Stephen Garland - PhD



Stephen is a British Sport and Exercise Physiologist, with a background in the academic, elite sport, and business world. These all come together in a mobile App that he made: "Quench: Your Hydration Coach", which helps athletes of all levels drink right during their training, so they get the most out of the training, and recover fast.

It is his expertise in both building an App and providing user-friendly but scientifically-validated hydration advice that brings him to this project.

