

Employment

Medical Radiation Physics, Lund

Lund University

Lund, Sweden

2021 Aug 26 → present

Research project participant

MR Physics

Lund University

Lund, Sweden

2023 Aug 24 → present

Visiting researcher

King's College London

London, United Kingdom

2021 Sept 1 → present

Research outputs

Repeatability and reproducibility of rapid T_1 mapping of brain tissues at 64 mT: A multicentre study

Lena, B., Padormo, F., Teixeira, R. P. A. G., Bernallick, C., Gholam, J., van den Broek, R., Lafayette, S. L., Vavasour, I., Cercignani, M., Jones, D. K., Kolind, S., Hajnal, J., Bourke, N., Dong, Y., Hollander, W. J., Karaulanov, T., Deoni, S. C. L., Williams, S. C. R., Sundgren, P. C. & Webb, A. G. & 1 others, Ljungberg, E., 2025 Oct, In: Imaging Neuroscience. 3, IMAG.a.916.

Ultra-low-field brain MRI morphometry: Test-retest reliability and correspondence to high-field MRI

Váša, F., Bernallick, C., Bourke, N. J., Padormo, F., Baljer, L., Briski, U., Cawley, P., Arichi, T., Wood, T. C., Lythgoe, D. J., Dell'Acqua, F., Booth, T. C., Venkataraman, A. V., Ljungberg, E., Deoni, S. C. L., Moran, R. J., Leech, R. & Williams, S. C. R., 2025 Oct, In: Imaging Neuroscience. 3, IMAG.a.930.

Magnetization transfer imaging using non-balanced SSFP at ultra-low field

Balaji, S., Wiley, N., Dvorak, A., Padormo, F., Teixeira, R. P. A. G., Poorman, M. E., MacKay, A., Wood, T., Cassidy, A. R., Traboulsee, A., Li, D. K. B., Vavasour, I., Williams, S. C. R., Deoni, S. C. L., Ljungberg, E. & Kolind, S. H., 2025 Aug, In: Magnetic Resonance in Medicine. 94, 2, p. 602-614 13 p.

Motion-corrected brain MRI at ultralow field (64 mT)

Brackenier, Y., Teixeira, R. P., Cordero-Grande, L., Ljungberg, E., Bourke, N. J., Arichi, T., Deoni, S., Williams, S. C. R. & Hajnal, J. V., 2025 Aug, In: Magnetic Resonance in Medicine. 94, 2, p. 825-834 10 p.

Characterization of Portable Ultra-Low Field MRI Scanners for Multi-Center Structural Neuroimaging

Ljungberg, E., Padormo, F., Poorman, M., Clemensson, P., Bourke, N., Evans, J. C., Gholam, J., Vavasour, I., Kollind, S. H., Lafayette, S. L., Bernallick, C., Donald, K. A., Bradford, L. E., Lena, B., Vokhiwa, M., Shama, T., Siew, J., Sekoli, L., van Rensburg, J. & Pepper, M. S. & 14 others, Khan, A., Madhwani, A., Banda, F. A., Mwila, M. L., Cassidy, A. R., Moabi, K., Septhi, D., Boakye, R. A., Ae-Ngibise, K. A., Asante, K. P., Hollander, W. J., Karaulanov, T., Williams, S. C. R. & Deoni, S., 2025 Jun, In: Human Brain Mapping. 46, 8, e70217.

Quantification of the in vivo brain ultrashort- T_2^* component in healthy volunteers

Deveshwar, N., Yao, J., Han, M., Dwork, N., Shen, X., Ljungberg, E., Caverzasi, E., Cao, P., Henry, R., Green, A. & Larson, P. E. Z., 2024, In: Magnetic Resonance in Medicine. 91, 6, p. 2417-2430

UNITY: A low-field magnetic resonance neuroimaging initiative to characterize neurodevelopment in low and middle-income settings

Abate, F., Ljungberg, E., Sundgren, P. C., Williams, S. C. R. & et al., 2024, In: Developmental Cognitive Neuroscience. 69, 101397.

System and method for performing motion-insensitive and quiet three-dimensional magnetic resonance imaging
Wiesinger, F. (Inventor), Solana Sanchez, A. B. (Inventor), Menini, A. (Inventor), Ljungberg, E. (Inventor), Wood, T. C. (Inventor), Barker, G. J. (Inventor) & Williams, S. C. R. (Inventor), 2022 Mar 15, Patent No. US11275142B1, Priority date 2020 Nov 5, Priority No. US17/090,557

Motion corrected silent ZTE neuroimaging

Ljungberg, E., Wood, T. C., Solana, A. B., Williams, S. C. R., Barker, G. J. & Wiesinger, F., 2022, In: Magnetic Resonance in Medicine. 88, 1, p. 195-210 16 p.

Simultaneous high-resolution T_2 -weighted imaging and quantitative T_2 mapping at low magnetic field strengths using a multiple TE and multi-orientation acquisition approach

Deoni, S. C. L., O'Muircheartaigh, J., Ljungberg, E., Huentelman, M. & Williams, S. C. R., 2022, In: Magnetic Resonance in Medicine. 88, 3, p. 1273-1281 9 p.

Radial Interstices Enable Speedy Low-volume Imaging

Wood, T., Ljungberg, E. & Wiesinger, F., 2021 Oct 7, In: Journal of Open Source Software. 6, 66, p. 1-2 3500.

Silent zero TE MR neuroimaging: Current state-of-the-art and future directions

Ljungberg, E., Damestani, N. L., Wood, T. C., Lythgoe, D. J., Zelaya, F., Williams, S. C. R., Solana, A. B., Barker, G. J. & Wiesinger, F., 2021 Apr 1, In: Progress in Nuclear Magnetic Resonance Spectroscopy. 123, p. 73-93

Comparison of multi echo T_2 relaxation and steady state approaches for myelin imaging in the central nervous system

Dvorak, A. V., Ljungberg, E., Vavasour, I. M., Lee, L. E., Abel, S., Li, D. K. B., Traboulsee, A., Mackay, A. L. & Kolind, S. H., 2021 Jan 14, In: Scientific Reports. 11, p. 1-12 1369.

Silent T_1 mapping using the variable flip angle method with B_1 correction

Ljungberg, E., Wood, T., Solana, A. B., Kolind, S., Williams, S. C. R., Wiesinger, F. & Barker, G. J., 2020 Aug 1, In: Magnetic Resonance in Medicine. 84, 2, p. 813-824

The Evaluation of Optic Nerves Using 7 Tesla "Silent" Zero Echo Time Imaging in Patients with Leber's Hereditary Optic Neuropathy with or without Idebenone Treatment

Grochowski, C., Symms, M., Jonak, K., Krukow, P., Wood, T. C., Ljungberg, E., Enseñat, J., Nowomiejska, K., Rejdak, R., Maciejewski, R. & Barker, G. J., 2020 Apr 13, In: Journal of Clinical Medicine. 9, 4, 1112.

Myelin Water Fraction and Intra/Extracellular Water Geometric Mean T_2 Normative Atlases for the Cervical Spinal Cord from 3T MRI

Liu, H., Ljungberg, E., Dvorak, A. V., Lee, L. E., Yik, J. T., Macmillan, E. L., Barlow, L., Li, D. K. B., Traboulsee, A., Kolind, S. H., Kramer, J. L. K. & Laule, C., 2020 Jan 1, In: Journal of Neuroimaging. 30, p. 50-57

Silent myelin-weighted magnetic resonance imaging

Wood, T. C., Damestani, N. L., Lawrence, A. J., Ljungberg, E., Barker, G. J., Solana, A. B., Wiesinger, F. & Williams, S. C. R., 2020, In: Wellcome Open Research. 5, 74.

Myelin Water Atlas: A Template for Myelin Distribution in the Brain

Liu, H., Rubino, C., Dvorak, A. V., Jarrett, M., Ljungberg, E., Vavasour, I. M., Lee, L. E., Kolind, S. H., Macmillan, E. L., Traboulsee, A., Lang, D. J., Rauscher, A., Li, D. K. B., Mackay, A. L., Boyd, L. A., Kramer, J. L. K. & Laule, C., 2019 Nov 1, In: Journal of Neuroimaging. 29, 6, p. 699-706

Quantitative neuroimaging measures of myelin in the healthy brain and in multiple sclerosis

O'Muircheartaigh, J., Vavasour, I., Ljungberg, E., Li, D. K. B., Rauscher, A., Levesque, V., Garren, H., Clayton, D., Tam, R., Traboulsee, A. & Kolind, S., 2019 May 1, In: Human Brain Mapping. 40, 7, p. 2104-2116

Rapid myelin water imaging for the assessment of cervical spinal cord myelin damage

Dvorak, A. V., Ljungberg, E., Vavasour, I. M., Liu, H., Johnson, P., Rauscher, A., Kramer, J. L. K., Tam, R., Li, D. K. B., Laule, C., Barlow, L., Briemberg, H., Mackay, A. L., Traboulsee, A., Kozłowski, P., Cashman, N. & Kolind, S. H., 2019 Jan

1, In: *NeuroImage: Clinical*. 23, 101896.

Inter-Vendor Reproducibility of Myelin Water Imaging Using a 3D Gradient and Spin Echo Sequence

Lee, L. E., Ljungberg, E., Shin, D., Figley, C. R., Vavasour, I. M., Rauscher, A., Cohen-Adad, J., Li, D. K. B., Traboulsee, A. L., Mackay, A. L., Lee, J. & Kolind, S. H., 2018 Nov 21, In: *Frontiers in Neuroscience*. 12, 854.

Rapid myelin water imaging in human cervical spinal cord: Myelin Water Imaging in the Cervical Spinal Cord

Ljungberg, E., Vavasour, I., Tam, R., Yoo, Y., Rauscher, A., Li, D. K. B., Traboulsee, A., Mackay, A. & Kolind, S., 2017 Oct 1, In: *Magnetic Resonance in Medicine*. 78, 4, p. 1482-1487

Grey Matter Segmentation in Spinal Cord MRIs via 3D Convolutional Encoder Networks with Shortcut Connections

Porisky, A., Brosch, T., Ljungberg, E., Tang, L. Y. W., Yoo, Y., De leener, B., Traboulsee, A., Cohen-Adad, J. & Tam, R., 2017 Sept 9, *Deep Learning in Medical Image Analysis and Multimodal Learning for Clinical Decision Support : Third International Workshop, DLMIA 2017, and 7th International Workshop, ML-CDS 2017 held in Conjunction with MICCAI 2017, Proceedings*. Springer, p. 330-337 (Deep Learning in Medical Image Analysis and Multimodal Learning for Clinical Decision Support; vol. 10553).

Assessing structure and function of myelin in cervical spondylotic myelopathy: Evidence of demyelination

Liu, H., Macmillan, E. L., Jutzeler, C. R., Ljungberg, E., Mackay, A. L., Kolind, S. H., Mädler, B., Li, D. K. B., Dvorak, M. F., Curt, A., Laule, C. & Kramer, J. L. K., 2017 Aug 8, In: *Neurology*. 89, 6, p. 602-610

Spinal cord grey matter segmentation challenge

Prados, F., Ashburner, J., Blaiotta, C., Brosch, T., Carballido-Gamio, J., Cardoso, M. J., Conrad, B. N., Datta, E., Dávid, G., Leener, B. D., Dupont, S. M., Freund, P., Wheeler-Kingshott, C. A. M. G., Grussu, F., Henry, R., Landman, B. A., Ljungberg, E., Lyttle, B., Ourselin, S. & Papinutto, N. & 8 others, Saporito, S., Schlaeger, R., Smith, S. A., Summers, P., Tam, R., Yiannakas, M. C., Zhu, A. & Cohen-Adad, J., 2017, In: *NeuroImage*. 152, p. 312-329

Awards

Advanced Low Field MRI physics and Sequence Development

Ljungberg, E. (PI)

Bill & Melinda Gates Foundation: SEK2,561,000.00

2023/05/11 → 2025/12/31