Rik L.E.M. Ubaghs

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Education

ETH Zurich, Zurich, Switzerland July 2017 - May 2023
Ph.D. Neurotechnology

University of Amsterdam, Amsterdam, the Netherlands Sept 2014 - June 2016
Research Master Brain and Cognitive Sciences, Cum Laude

Maastricht University, Maastricht, the Netherlands Sept 2011 - June 2014
Bachelor Psychology and Neuroscience, Cum Laude

Skills

Languages: Dutch (Native), English (Fluent), German (Basic)
Programming: Python, Matlab, Rust, R, SQL
Skills: Microscopy, Industrial Design and Manufacturing, Biomedical Imaging

Research Positions

Institute of Neuroinformatics, ETH Zurich, Zurich, Switzerland June 2023 - Current
Postdoc
- Development of a microscope for tumor visualization during invasive surgery.

Institute of Neuroinformatics, ETH Zurich, Zurich, Switzerland July 2017 – June 2023
Ph.D. Candidate
- Development of a MRI compatible florescence microscope (full-cycle product design).
- Design of a paradigm to combine microscopy and MR imaging methods in awake rodents.
- Design of data pipelines for multi-modal data analysis.

Center for Neuroengineering, Duke University, Durham, USA Dec 2015 – Nov 2016
Visiting Scientist
- Development of hybrid brain decoding methods in Non-human Primates.

Industry Positions

Agora Technology, Maastricht, The Netherlands Nov 2016 - Feb 2018
Co-Founder
- Agora Technology builds data solutions to streamline/automate daily operations in the medical sector.
- Creation, maintenance, and analysis of large-scale data solutions using advanced machine learning approaches.

Medtronic/Maastricht University Medical Centre, Maastricht, The Netherlands Dec 2016 - Jun 2017
Data Scientist
- Design of a pipeline to process medical procedural data.
- Development of a centralized database for surgical protocols.

Extracurricular Positions

Natural Movements, The Netherlands March 2007 - May 2012
Co-Founder
- Natural Movements is a non-profit organization that aims to engage underprivileged youth in the local community through physical education and behavioral coaching.

Publications

Papers:
- Simultaneous single-cell calcium imaging of neuronal population activity and brain-wide BOLD fMRI Ubaghs, R.L.E.M., Boehringer, R., Marks, M., Hesse, H.K., Yanik, M.F., Zerbi, V., Grewe, B.F., bioRxiv 2023.11.14.566368; doi: https://doi.org/10.1101/2023.11.14.566368

Conferences:
- Ubaghs, R.L.E.M., Böhringer, R., Marks, M., Yanik, M.F. and Grewe, B.F., The Effect of Somatostatin+ Interneurons on the Negative BOLD Response. Proc. Intl. Soc. Mag. Reson. Med. 29 (2021)
- Ubaghs, R.L.E.M., Dermutz, H., Böhringer, R., Marks, M., Yanik, M.F. and Grewe, B.F., Shaping the BOLD signal through Excitatory and Inhibitory Interaction. Proc. Intl. Soc. Mag. Reson. Med. 29 (2020)

Honors

Committees:

Educational Committee, IIS, University of Amsterdam	Sept 2014 - June 2015
Vice-President Student Council, FPN, Maastricht University	Sept 2012 - June 2013
Program Committee, FPN, Maastricht University	Sept 2012 - June 2013

Grants:

Hendrik Muller Memorial Foundation	2016
Bekker - La Bastide Memorial Foundation	2015
Vrijvrouwe van Renswoude Foundation	2015