Tristan Manfred Stöber

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Personal Data

Place and Date of Birth:	Marburg, Germany, 25th July 1988
Nationality:	German
Address:	Peter-Weyer-Strasse 92, 55129 Mainz
Family:	Married to Rahel Anna Stöber, four children
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Work experience

JAN 2023 – current | Course Instructor & Co-organizer
University Hospital Frankfurt, Goethe University
Part-time. Lecture series *Artificial Intelligence in Medicine - from a Neuroscientific Perspective*

SEP 2022 – current | Think@Ruhr Research Fellow
Institute for Neuroinformatics, Ruhr University Bochum
Topics: Hippocampal theory, spiking neural networks, epilepsy

SEP 2020 – AUG 2022 | Postdoc
Lab of Jochen Triesch, Frankfurt Institute for Advanced Studies, Frankfurt, Germany
Topics: Epilepsy, synaptic plasticity, criticality, hippocampal theory

MAR-JUL 2020 | Head Engineer
University of Oslo, Oslo, Norway
Simulation and analysis of neurophysiological data

JAN-MAR 2017, JAN-FEB 2016 | Visiting Scientist
Lab of Jill Leutgeb, University of California San Diego, San Diego, USA
Analysis of hippocampal data

FEB 2016 – JAN 2020 | Ph.D. research fellow
Simula Research laboratory, Fonebu, Norway

AUG 2015 | Research Assistant

Skills

Programming:	Python, C
Computational Neuroscience:	NEST, Brian
Machine learning:	TensorFlow, Keras
Workflow:	Github, Docker, Linux
Languages:	German, English, Norwegian, Spanish, Latin

Education

JUN 2021 – FEB 2016 | Ph.D.
Simula-UIO-UCSD Research and PhD training programme, Simula Research Laboratories and Faculty of Mathematics and Natural Sciences, University of Oslo, Norway
Title: Cooperate to compete — Identifying a potential role for hippocampal region CA2 in episodic memory formation. Supervisor: Marianne Fyhn (University of Oslo), Arvind Kumar (KTH, Stockholm), Jill Leutgeb (University of California, San Diego), Trygve Solstad (NTNU, Trondheim). Courses: Computational Neuroscience, Machine Learning for Image Classification, Causal Inference, Communicating Scientific Research

MAR 2016 – APR 2013 | MSc. Biology
University of Freiburg, Germany
Emphasis on Computational Neuroscience. Courses: Quantitative Methods, Measurement and Models, Models of Neurons and Networks, Systems physiology, Classical Complex Systems. From April 2014 til end part time studies due to 50% childcare. Masters thesis: *The Relationship between Network Structure and Network Excitability in Medial Temporal Lobe Epilepsy*. Final grade 1.3

SEP 2012 – OCT 2009 | BSc. Biosciences
University of Münster, Germany
General Biology studies with emphasis on Quantitative Biology, Neuroscience and Programming. Bachelor thesis *Quantitative Analysis of Larval Locomotion*. Final grade 1.3

JUL 2008 – AUG 1999 | A level degree
Stiftsschule St. Johann Amöneburg, Germany
Honour courses in Mathematics, Physics, English. Final grade 1.1

Publications

[1] Andrew B Lehr, Frederick L Hitti, Scott H Deibel, and **Tristan M Stöber**. "Silencing hippocampal CA2 reduces behavioral flexibility in spatial learning". In: *Hippocampus* (2023).

[2] **Tristan M Stöber**, Danylo Batulin, Jochen Triesch, Rishikesh Narayanan, and Peter Jedlicka. "Degeneracy in epilepsy: multiple routes to hyperexcitable brain circuits and their repair". In: *Communications Biology* (2023).

[3] **Tristan M Stöber** and Maria K Oosthuizen. "PCP4 immunoreactivity suggests the presence of hippocampal region CA2 in solitary, social and eusocial mole-rat species". In: *bioRxiv* (2023), pp. 2023–02.

[4] **Tristan M Stöber**, Andrew B Lehr, Marianne Fyhn, and Arvind Kumar. *Competition and Cooperation of Assembly Sequences in Recurrent Neuronal Networks*. In preparation. 2022.

[5] Andrew B Lehr, Arvind Kumar, Christian Tetzlaff, Torkel Hafting, Marianne Fyhn, and **Tristan M Stöber**. "CA2 beyond social memory: Evidence for a fundamental role in hippocampal information processing". In: *Neuroscience & Biobehavioral Reviews* (2021).

[6] Andrew B Lehr and **Tristan M Stöber**. "Differential involvement of CA2 in internally vs. externally driven hippocampal sequences". In: *Proceedings of the National Academy of Sciences* 118.38 (2021).

[7] Marius Vieth, **Tristan M Stöber**, and Jochen Triesch. "PymoNNto: a flexible modular toolbox for designing brain-inspired neural networks". In: *Frontiers in Neuroinformatic* (2021).

[8] **Tristan M Stöber**, Andrew B Lehr, Torkel Hafting, Arvind Kumar, and Marianne Fyhn. "Selective neuromodulation and mutual inhibition within the CA3-CA2 system can prioritize sequences for replay". In: *Hippocampus* (2020).

[9] Mikkel Elle Lepperød, **Tristan M Stöber**, Torkel Hafting, Marianne Fyhn, and Konrad Paul Kording. "Inferring causal connectivity from pairwise recordings and optogenetics". In: *BioRxiv* (2018).

[10] Alessio Paolo Buccino, **Tristan M Stöber**, Solveig Næss, Gert Cauwenberghs, and Philipp Häfliger. "Extracellular single neuron stimulation with high-density multi-electrode array". In: *Biomedical Circuits and Systems Conference (BioCAS), 2016 IEEE*. IEEE. 2016, pp. 520–523.

Leadership

2023	Supervisor, Research Assistant, Jan Erik Bellingrath
2021-2022	Co-supervisor, FIAS Master student Jan Marker
2018	Supervisor, Simula Summer Intern Carla Schenker
2017	Supervisor, Simula Summer Intern Andrew Lehr

Teaching

2023	Cognitive Neuroscience Seminar Series - Ruhr University Bochum
2023	Artificial Intelligence in Medicine - from a Neuroscientific Perspective, University Hospital Frankfurt
2022	Artificial Neural Networks - Ruhr University Bochum
2022	Current Topics in Theoretical Neuroscience, Goethe-University Frankfurt
2019	Advanced Physiology and Neurobiology, Oslo University
2019	Cognitive Psychology and Neuroscience, Oslo Metropolitan University
2010-2013	Anatomy of the Honeybee - Annual beekeeping conference, Apisticus-Tag, Germany

Projects, courses and other professional activities

2022 - current	Software architect & scientific advisor, brian2lava - Brian2 interface for Lava based neuromorphic computing
2022 - current	Board member, GRADE Research Academy of the Goethe University
2021 - current	Invited referee: Scientific Reports, PLOS Computational Biology
2021 - current	Speaker & co-founder, GRADE Initiative - Learning in Spiking Neural Networks
2023	GRADE Brain Teaching Training Program, Goethe University Frankfurt
2023	Leadership in Science and Research, Instructor Reinhold Haller, Main-Campus-Academy
2018 - 2020	Initiator & lead organizer, Oslo Neuroscience Meetup
2018	Course, Neural Network Dynamics and Function, Göttingen, Germany
2017	G-Node Advanced Course on Neural Data Analysis, Jülich, Germany
2016	SFN short course: Data Science and Data Skills for Neuroscientists, San Diego, USA
2016	Summer school, Neural Circuits and Behavior, Kavli Insitute, Trondheim
2013-2014	DAAD-funded documentary production:Freiburg Isfahan - Eindrücke einer umstrittenen Partnerschaft
2012	Summer school, Metabolic network modelling, RWTH Aachen
2011	Cajal Institute Madrid, Research project, Automated Segmentation of Two-Photon Recordings with Gonazlo de Polavieja
2011	Summer school, Systems Biology, Life Science College of the German Academic Scholarship Foundation

Scholarships and awards

2023	Scholarship, Main-Campus-educator, Stiftung Polytechnische Gesellschaft Frankfurt
2018	Leader of winning team, Simula Hackathon 2018
2014	Scholarship, Deutschlandstipendium
2013	Travel grant, Iran, German Academic Exchange Service (DAAD)
2013	Scholarship, Deutschlandstipendium
2010 - 2011	Scholarship, German Academic Scholarship Foundation
2008	Award, best A level score in 2008 and outstanding achievements in natural sciences, Stiftsschule St. Johann Amöneburg
2008	Award, outstanding achievements in physics, German Physical Society