JOHANNES MEHRER

johannes.mehrer@epfl.ch
Google scholar, ORCID

EDUCATION

PhD, Computational Neuroscience **2015 - 2020**
MRC-Cognition and Brain Sciences Unit, Cambridge University, UK

Research Master, Clinical and Cognitive Neuroscience **2013 - 2015**
Maastricht University, Netherlands. GPA: 8.4/10

Bachelor of Arts, Psychology and Neuroscience **2009 - 2013**
Hamburg University, Germany, and Temple University, Philadelphia, USA. GPA: 3.7/4

EXPERIENCE

Postdoctoral Researcher, EPFL **2023 - today**
NeuroAI Lab headed by Martin Schrimpf, Switzerland

Head of research - weclapp SE **2020 – 2022**
Building and leading a data science team in a business software company, Germany

PEER-REVIEWED PUBLICATIONS

"Model-guided micsrostimulation steers primate visual behavior" **2026**
Mehrer, Lönnqvist, Mitola, Gökce, Papale, Schrimpf
International Conference of Learning Representations (ICLR), 2026

"Inducing dyslexia in vision language models" **2026**
Honarmand, Sharma, Al-Khamissi, **Mehrer*** Schrimpf* (***shared last authorship**),
International Conference of Learning Representations (ICLR), 2026

"TopoLM: brain-like spatio-functional organization in a topographic language model" **2025**
Rathi*, **Mehrer***, AlKhamissi, Binhuraib, Blauch, Schrimpf (***shared first authorship**),
Top-2% paper (Oral) at International Conference of Learning Representations (ICLR), 2025

"Dreaming out loud: A self-synthesis approach for training vision-language models with developmentally plausible data" (arXiv) **2024**
AlKhamissi, Tang, Gokce, **Mehrer***, Schrimpf* (***shared last authorship**),
BabyLM challenge hosted at Conference on Computational Natural Language Learning (CoNLL), 2024

"Ecoset: an ecologically more valid visual diet for deep learning yields better models of human high-level visual cortex" **2021**
Mehrer, Spoerer, Jones, Kriegeskorte, Kietzmann, PNAS, 2021

"Diverse deep neural networks all predict human IT well, after training and fitting" **2021**
Storrs, Kietzmann, Walther, **Mehrer**, Kriegeskorte, Journal of Cognitive Neuroscience, 2021

PEER-REVIEWED PUBLICATIONS (continued)

"Individual differences among deep neural network models" **2020**
Mehrer, Spoerer, Jones, Kriegeskorte, Kietzmann, Nature Communications, 2020

"Recurrent neural networks can explain flexible trading of speed and accuracy in biological vision" **2020**
Spoerer, Kietzmann, **Mehrer**, Charest, Kriegeskorte, PLOS Computational Biology, 2020

PRE-PRINTS

"Discovering functionally selective brain regions with deep topographic multimodal Models" **2026**
Al-Khamissi*, **Mehrer***, Marinov, Abdelaal, Gokce, Schrimpf (***shared first authorship**)
Cognitive Computational Neuroscience (CCN) Conference, 2026

SUPERVISIONS

Bachelor students: Sophie Sigfstead (2025, University of Alberta), Ahmded Abdelaal (2025, Cairo University), Ayati Sharma (2024, Berkeley), Aditi Arun (2024, Indian Institute of Science, Bangalore)

Master students: Eylül Ipçi (2023 - ongoing, EPFL), Neil Rathi (2024, Stanford)

PhD students: Melika Honarmand (2024 - ongoing, EPFL), Badr Al-Khamissi (2025 - ongoing, EPFL)

TEACHING

Brain-like computation and intelligence: model-guided causal interventions **2026**
Guest-lecture in graduate-level course: EPFL NX-414

Psychological and Behavioral Science Tripos at Cambridge University (PBS4) **2016-18**
Teaching assistant for undergraduate students for 6 trimesters

INVITED TALKS

"Model-Guided Microstimulation Steers Primate Visual Behavior" **2026**
Max Planck School of Cognition 2026 Summer Academy, Dresden, Germany

"Model-Guided Microstimulation Steers Primate Visual Behavior" (remote) **2026**
Visual Inference Laboratory, Prof. Nikolaus Kriegeskorte, Columbia University, US

"Model-Guided Auditory Stimulus Selection for Schizophrenia Subtype Detection" (remote) **2026**
Translational Neuromodeling Unit, Prof. Klaas Enno Stephan, ETH Zurich, Switzerland

"Model-Guided Microstimulation Steers Primate Visual Behavior" (remote) **2025**
Cognitive Computational Neuroscience Lab, Prof. Adrien Doerig, Free University Berlin, Germany

"TopoLM: brain-like spatio-functional organization in a topographic language model" **2025**
Workshop on Large Language Models in Brain Research: from Theory to Practice at Giessen University, Germany

INVITED TALKS (continued)

"TopoLM: brain-like spatio-functional organization in a topographic language model" **2025**
Workshop on Topographic Deep Neural Network Models at Cognitive Computational Neuroscience (CCN) Conference

"TopoLM: brain-like spatio-functional organization in a topographic language model" **2025**
Top 2% oral presentation at International Conference of Learning Representations (ICLR)

"Artificial neural network models for computational neurology and psychiatry" **2024**
Translational Neuromodeling Unit, Prof. Klaas Enno Stephan, ETH Zurich, Switzerland

"Topographic ANNs predict neural and behavioral responses to causal perturbations" **2024**
International Interdisciplinary Computational Cognitive Science Summer School, Osnabrück, Germany

"Topographic ANNs predict neural and behavioral responses to causal perturbations" **2024**
EBRAINS Baltic-Nordic Summer School on Neuroscience, Helsinki, Finland

"Topographic ANNs predict neural and behavioral responses (to causal perturbations)" **2024**
Computational Cognitive Neuroscience and Quantitative Psychiatry, Prof. Martin Hebart, Giessen University, Germany

PEER-REVIEWING ACTIVITY

Journals: Nature, PLOS ONE, Cognition, Nature Communications Psychology
(verified reviewer record available via ORCID profile)

Conferences: International Conference on Learning Representations (**ICLR**), International Conference on Machine Learning (**ICML**), Cognitive Computational Neuroscience (**CCN**) Conference

Funding bodies: National Science Foundation (**NSF**, US), European Laboratory for Learning and Intelligent Systems (**ellis**, EU), EPFL Doctoral Program in Computer and Communication Sciences (**EDIC**, Switzerland)

MEDIA COVERAGE

Interview with SRF/RTS (Swiss National Radio) on ICLR 2025 paper "TopoLM" **2025**
"TopoLM: une IA de langage qui comprend structure et fonction du cerveau" (French)

COMMUNITY SERVICE AND OUTREACH

Cognitive computational neuroscience conference (CCN) 2025 **2025**
Co-organizer of workshop on: "Modeling the Physical Brain: Spatial Organization and Bio-physical Constraints"

Cognitive computational neuroscience conference (CCN) 2025 **2024-2025**
Member of the technical program committee

EPFL Lemanic Life Sciences Hackathon **2024**
Hosting a project on the emergence of face-selective units in topographic networks

GRANTS AND FELLOWSHIPS

EPFL, Neuro-X Institute, High-Performance-Cluster computing resources (∼ € 20,500) **2024**

Cambridge Trust - Vice Chancellor's Award 2015 (∼ € 84,000) **2015 - 2019**

German Academic Exchange Service, full stipend ("Jahresstipendium"; ∼ € 26,000) **2012 - 2013**
Deutscher Akademischer Austauschdienst (DAAD)

Exchange program Temple University, Philadelphia, US - Hamburg University, Germany (∼ € 24,000) **2011 - 2012**

German Merit Foundation (∼ € 19,000) **2008 - 2015**
Studienstiftung des deutschen Volkes

MEMBERSHIPS

Bernstein Network Computational Neuroscience **Since 2024**

German Society for Psychophysiology and its Applications **Since 2025**
Deutsche Gesellschaft für Psychophysiologie und ihre Anwendungen e.V.