Curriculum Vitae

Name: Jan Fiete Bölts
E-Mail: jan.boelts [at] mailbox.org
GoogleScholar: Jan Boelts
GitHub: janfb Twitter: @janfiete

Education

2018 - **PhD in Computational Neuroscience and Machine Learning**
mackelab, University of Tübingen and Technical University of Munich

2015 - 2018 **MSc in Computational Neuroscience** (with distinction)
Bernstein Center for Computational Neuroscience, Berlin, Germany
Thesis: *Model Comparison in Approximate Bayesian Computation*

2011 - 2015 **BSc in Cognitive Science** (with distinction)
University of Osnabrück, Osnabrück, Germany
Thesis: *Online Decoding of Contour Perception through EEG*

Professional Experience

2021 - present **Lecturer** at KI macht Schule
- German initiative to teach AI in high school

2016 - 2018 **Research assistant** with **Prof. Susanne Schreiber**
Computational Neurophysiology, Humboldt University Berlin
- studying energy efficiency of synaptic stimuli in single cell models

2017 - 2018 **Master thesis** with **Prof. Jakob Macke**
Neural Systems Analysis, Caesar Research Center, Bonn

2016 - 2018 **Research intern** with **Prof. Henning Sprekeler,**
Modeling of Cognitive Processes, Technical University Berlin
- analysis of a model for the formation of grid cells, master thesis

Mar 2017 - Jul 2017 **Research intern** with **Prof. Andrea Kühn**,
Movement Disorder Group, Charité University Medicine Berlin
- analysis of local field potential data for deep brain stimulation

Aug 2014 - Oct 2014 **Research intern, Department of Biomedical Engineering**
Universidad Antonio Nariño, Bogotá, Colombia
- EEG data analysis and decoding for brain-computer interfaces

Aug 2013 - Dec 2013 **Research intern, Department of Psychiatry**
University of British Columbia, Vancouver, Canada
- fMRI data analysis for schizophrenia research

Teaching Experience

2022 **TA, Probabilistic Machine Learning, University of Tübingen**

2018 - 2020 **Lecturer, MSNE Master program, TU Munich**
Master's course: Introduction to programming and ML in Python
Master's course: Large Scale Modeling and Data Analysis

2012 - 2015 **Teaching Assistant, University of Osnabrück**
Tutor in lectures on logic, mathematics and neuroinformatics

Awards and Memberships

2016 Smartstart scholarship by Bernstein Network and Volkswagen Stiftung

2013 and 2014 **DAAD RISE scholarship** 2013 (Vancouver) and 2014 (Bogotá)

Skills

Languages	**German**	**English**	**Spanish**	**French**
	native	C1	B1	B1

Programming **Python, PyTorch, TensorFlow, Pyro, Java, Matlab, Shell, Git**

Community engagement

Reviewing Journal of Open Source Software; ICLR; NeurIPS

Teaching Workshop: **"Simulation-based inference for scientific discovery"**

Publications

Journal papers:

Boelts, J., Lueckmann, J. M., Gao, R., & Macke, J. H. (2022).
Flexible and efficient simulation-based inference for models of decision-making.
eLife.

*Tejero-Cantero, A., ***Boelts, J.***, *Deistler, M., *Lueckmann, J. M., Durkan, C., Gonçalves, P. J., Greenberg D. S. & Macke, J. H. (2020).
sbi: a toolkit for simulation-based inference.
Journal of Open Source Software, 5(52), 2505.

Conference papers:

Ramesh, P., Lueckmann, J. M., **Boelts, J.**, Tejero-Cantero, Á., Greenberg, D. S., Goncalves, P. J., & Macke, J. H. (2021).
GATSBI: Generative Adversarial Training for Simulation-Based Inference.
ICLR 2021.

Lueckmann, J. M., **Boelts, J.**, Greenberg, D. S., Gonçalves, P. J., & Macke, J. H. (2021).
Benchmarking Simulation-Based Inference.
AISTATS 2021.

Boelts, J., Lueckmann, J. M., Gonçalves, P., Sprekeler, H., & Macke, J. H. (2018).
Comparing neural simulations by neural density estimation.
In 2019 Conference on Cognitive Computational Neuroscience, Berlin 2019.

Boelts, J., Cerquera, A., & Ruiz-Olaya, A. F. (2015).
Decoding of imaginary motor movements of fists applying spatial filtering in a BCI simulated application. In IWINAC 2015