Curriculum Vitae

Name: Jan Fiete Bölts   GoogleScholar: [Jan Boelts](...)

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Education

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

2018 -	**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, Java, Shell, Git, GitHub, CI** — advanced |

Community engagement

| Reviewing | Journal of Open Source Software; ICLR 2021 |
| Teaching | Workshop: **"Simulation-based inference for scientific discovery"** |

Publications

Journal papers:

*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

Preprints:

Boelts, J., Lueckmann, J. M., Gao, R., & Macke, J. H. (2021).
Flexible and efficient simulation-based inference for models of decision-making.
bioRxiv.