David Alexander Klindt

*April 12, 1991—Bremen, Germany

Pronouns:	he / him / his
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Areas of specialization

Machine Learning • Computer Vision • Computational Neuroscience

Current position

2021 – *Postdoctoral fellow* Norwegian University of Science & Technology
Group: Benjamin Dunn, Department of Mathematical Sciences

Education

2016 - 21 PhD Machine Learning & Computational Neuroscience, University of Tübingen
Thesis supervisors: Matthias Bethge & Thomas Euler

2015-16 M.Sc. Dual Masters Brain & Mind Sciences, University College London (1st year)
École Normale Supérieure & Pierre and Marie Curie University (2nd year)

2021 – B.Sc. Mathematics, Distance-learning University Hagen

2012 - 14 B.A. Philosophy, Neuroscience & Physics, University of Magdeburg

2020 Summer School, Brains, Minds & Machines, Massachusetts Institute of Technology

2018 Summer School, Computational Neuroscience: Vision, Cold Spring Harbor Laboratory

Professional Experience

2019 Research Intern, Google Inc., Mountain View, CA, USA
Conducting research project in learned compression team

2013 Research Assistant, DZNE, Magdeburg, Germany
Data analysis & conducting fMRI experiments in Neurophysiology lab

2007 Technical Intern, Sonne, Wind & Wasser GmbH, Braunschweig, Germany
Automatizing OCR processing in renewable energy projects

Teaching & Social Engagement

2021- Course Organizer, Neuromatch Deep Learning Academy
Coordination of ethics team, assembling course curriculum

2021- Supervisor, Norwegian University of Science & Technology
Supervision of PhD students, research project management

2016 - 2021 Mentor, University of Tübingen, Germany
Mentoring of M.Sc. & PhD students

2014 Teaching Assistant, University of Magdeburg, Germany

2010 - 11 Volunteer abroad, Tian Zhen Yuan School, Chengguanzhen, Hebei, China

Programming Skills

2018 Summer School, *11th Advanced Scientific Programming in Python*, G-Node, Camerino, Italy
Topics: GitHub, Testing Code, Documenting & Packaging, Advanced NumPy, Data Visualisation, Advanced Python (Functions, Classes, Generators), Profiling Code, Cython & Numba, Memory Bound Problems, Parallel Python

Publications

2021 E. Hermansen, **D. A. Klindt** & B. A. Dunn (*under review*) "Persistent Homology of the Uniform Manifold Approximation and Projection Complex".

2021 D. Gonschorek, L. Höfling, K. Szatko, K. Franke, T. Schubert, B. A. Dunn, P. Berens, **D. A. Klindt*** & T. Euler* (*under review*) "Removing Inter-Experimental Variability from Functional Data in Systems Neuroscience".

2021 **D. A. Klindt***, L. F. Schott*, Y. Sharma*, I. Ustyuzhaninov, W. Brendel, M. Bethge & D. Paiton (2021) "Towards Nonlinear Disentanglement in Natural Data with Temporal Sparse Coding", 9th *ICLR*. (oral presentation, top 0.1%) git

2021 Y. R. Qiu, Z. Z. Zhao, **D. A. Klindt**, M. Kautzky, K. P. Szatko, F. Schaeffel, K. Rifai, K. Franke, L. Busse & T. Euler (accepted) "Mouse retinal specializations reflect knowledge of natural environment statistics", *Current Biology*.

2020 C. Schröder*, **D. A. Klindt***, S. Strauss, K. Franke, M. Bethge, T. Euler & P. Berens (2020) "System Identification with Biophysical Constraints: A Circuit Model of the Inner Retina", *NeurIPS* 33. (spotlight presentation)

2020 **D. A. Klindt***, J. Ballé*, J. Shlens & E. P. Simoncelli (2020) "Unsupervised Learning of Image Manifolds with Mutual Information", Cold Spring Harbor Laboratory meeting: *From Neuroscience to Artificially Intelligent Systems.*

2020 Z. Zhao*, **D. A. Klindt***, A. M. Chagas, K. P. Szatko, L. Rogerson, D. Protti, C. Behrens, D. Dalkara, T. Schubert, M. Bethge, K. Franke, P. Berens, A. S. Ecker & T. Euler (2020) "The temporal structure of the inner retina at a single glance", *Nature Scientific Reports* 10 (1), 1-17.

2017 **D. A. Klindt***, A. S. Ecker*, T. Euler & M. Bethge (2017) "Neural system identification for large populations separating 'what' and 'where'", *NeurIPS* 30. git

2017 **D. A. Klindt**, M. Devaine & J. Daunizeau (2017) "Does the way we read others' mind change over the lifespan? Insights from a massive web poll of cognitive skills from childhood to late adulthood", *Cortex*, Volume 86: Pages 205-215.