## Simon Meister

## Research Interests

To develop machines that learn to solve complex problems as effectively as biological brains. My interests include reinforcement learning, deep learning, neuromorphic computing and spiking neural networks. I am particularly interested in learning algorithms for recurrent spiking and non-spiking neural networks.

Education

2014–2018 B.Sc., Computer Science, Technische Universität Darmstadt, Germany, 1.4.

Experience

Professional

2018–2020 Founder & CEO, Vality GmbH, Germany.

Led design of virtual and augmented reality hardware, computer vision algorithms and platform software. Also responsible for fundraising, partnerships and hiring.

Miscellaneous

2020-Now Independent Researcher, Germany.

Research on scalable and biologically plausible deep learning and reinforcement learning.

Publications

Peer-Reviewed Conference Papers

[1] S. Meister, J. Hur, and S. Roth. UnFlow: Unsupervised Learning of Optical Flow with a Bidirectional Census Loss. In AAAI Conference on Artificial Intelligence (AAAI), New Orleans, Louisiana, Feb. 2018. **Oral presentation**. Code.

Theses

Bachelor

2018 Motion R-CNN: Instance-level 3D Motion Estimation with Region-based CNNs, Code.

Supervised by Professor Stefan Roth & M.Sc. Junhwa Hur

Projects

2018 Deep Reinforcement Learning for StarCraft II, Code.

Supervised by M.Sc. Filipe Veiga & Professor Jan Peters

2017 Monocular depth prediction with PyTorch, Code.

Supervised by M.Sc. Jochen Gast

## Honors & Awards

2019 Best Paper Award, Fraunhofer IGD, €3000.

"Impact on Science" category, awarded for "UnFlow" paper.

2013 **Christian Ernst Neeff-Preis**, *Physikalischer Verein Frankfurt*, €1000.

Awarded for work on massively parallel physics simulation conducted during the "Jugend forscht" youth science competition (national level).

Technical Experience

Advanced Python, C, C++, TensorFlow, PyTorch, Linux, Git, JavaScript

Intermediate LATEX, NumPy, CUDA, OpenGL, Matlab, Java, Clojure

Biographic Information

Citizenship German

Languages English (fluent), German (native)

Formative Courses

Technische Universität Darmstadt

Grading scheme: 1.0 (best) - 4.0 (pass)

Statistical Machine Learning (1.0), Computer Vision 1 (1.0), Project Lab Deep Learning for Computer Vision (1.0), Deep Learning for Natural Language Processing (1.7), Integrated Project Robot Learning (1.0)

Online

Machine Learning, Andrew Ng, Coursera, Stanford University.