



Franz Scherr

PhD Candidate
Institute of Theoretical Computer Science
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Interests¹

[Machine, Deep, Reinforcement, Unsupervised, Meta-] Learning
Exploration Strategies and Planning in Artificial Agents
Computational Neuroscience
Memory in Neural Networks

Skills

Broad and deep understanding of contemporary methods shown in ¹
Creative problem solving
Expert level knowledge of TensorFlow (1 and 2), Python
Creative skills in visualization

Publications

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- | Year | Publication Venue | Publication Title | Authors |
|------|---------------------------|--|--|
| 2020 | Nature Communications | A solution to the learning dilemma for recurrent networks of spiking neurons | Bellec G*, Scherr F*, Subramoney A, Hajek E, Salaj D, Legenstein R, Maass W |
| 2019 | bioRxiv | One-shot learning with spiking neural networks | Scherr F, Stöckl C, Maass W |
| 2019 | NeurIPS (workshop) | Eligibility Traces provide a data-inspired alternative to backpropagation through time | Bellec G*, Scherr F*, Hajek E, Salaj D, Subramoney A, Legenstein R, Maass W |
| 2018 | NeurIPS (workshop) | Slow processes of neurons enable a biologically plausible approximation to policy gradient | Subramoney A*, Bellec G*, Scherr F*, Hajek E, Salaj D, Legenstein R, Maass W |
| 2018 | arXiv | Reservoirs learn to learn | Subramoney A, Scherr F, Maass W |
| 2017 | Frontiers in Neuroscience | Neuromorphic Hardware learns to learn | Bohnstingl T*, Scherr F*, Pehle C, Meier K, Maass W |
| 2017 | arXiv | Biologically inspired alternatives to backpropagation through time for learning in recurrent neural nets | Bellec G*, Scherr F*, Hajek E, Salaj D, Legenstein R, Maass W |

Education

- PhD Candidate with Prof. Wolfgang Maass at Institute of Theoretical Computer Science, TU Graz
- Master of Science in Information and Computer Engineering (with distinction, GPA 3.9/4.0), TU Graz
- Bachelor of Science in Physics (with distinction, GPA 3.8/4.0), TU Graz
- Bachelor of Science in Information and Computer Engineering (with distinction, GPA 3.7/4.0), TU Graz

Other Experience

- Undergraduate Teaching Assistant in Computer Networks, TU Graz
- Undergraduate Teaching Assistant in Computer Networks, TU Graz
- Internship cryptography group at IAIG, TU Graz
- Undergraduate Teaching Assistant in Real Analysis, TU Graz
- Google Hashcode Challenge, Placed **111/4852**