



₫ PUBLICATIONS

Bellec*, G., **Scherr*, F.**, Subramoney, A., Hajek, E., Salaj, D., Legenstein, R., & Maass, W. *A solution to the learning dilemma for recurrent networks of spiking neurons.*Nature Communications (2020)

Scherr, F., Stöckl, C., & Maass, W. *One-shot learning with spiking neural networks*. Manuscript in preparation (2020)

Bellec*, G., **Scherr*, F.**, Hajek, E., Salaj, D., Subramoney, A., Legenstein, R., & Maass, W. *Eligibility Traces provide a data-inspired alternative to backpropagation through time* NeurlPS workshop on Real neurons and hidden units (Talk) (2019)

Subramoney*, A., Bellec*, G., **Scherr*, F.**, Hajek, E., Salaj, D., Legenstein, R., & Maass, W. *Slow processes of neurons enable a biologically plausible approximation to policy gradient* NeurIPS workshop on biological an artificial RL (Talk) (2019)

Subramoney, A., **Scherr, F.**, & Maass, W. *Reservoirs learn to learn* Submitted (2019)

Bohnstingl*, T., **Scherr***, **F.**, & Maass, W. *Neuromorphic hardware learns to learn* Frontiers in Neuroscience (2019)

Bellec*, G., **Scherr*, F.**, Hajek, E., Salaj, D., Legenstein, R., & Maass, W. *Biologically inspired alternatives to backpropagation through time for learning in recurrent neural nets* arXiv (2019)

* equal contribution

MAY 2018 - DEC 2020

S EDUCATION

UNIVERSITY OF TECHNOLOGY, Graz, Austria *Institute of Theoretical Computer Science*

PhD in Computer science (with honours, GPA 4.0/4.0)

Advisor: Prof. Wolfgang Maass

Thesis: Learning from rewards and with priors in

recurrent networks of artificial and spiking neurons

UNIVERSITY OF TECHNOLOGY, Graz, Austria

OCT 2016 - APR 2018

Institute of Theoretical Computer Science

MSc in Information and Computer Engineering (with honours, GPA 3.9/4.0)

Thesis: Spike-based agents for multi-armed bandits

Major: Computational Intelligence Minor: Information Security

UNIVERSITY OF TECHNOLOGY, Graz, Austria

OCT 2014 - APR 2018

Institute of Theoretical Computer Science

BSc in Physics (with honours, GPA 3.8/4.0)

Thesis: Gradient-based optimization of AMEA parameters

UNIVERSITY OF TECHNOLOGY, Graz, Austria

OCT 2013 - APR 2016

Institute of Theoretical Computer Science

BSc in Information and Computer Engineering (with honours, GPA 3.7/4.0)

Thesis: Automated security proofs for symmetric ciphers



UNIVERSITY OF TECHNOLOGY, Graz, Austria MAY 2018 - PRESENT Institute of Theoretical Computer Science

Research Assistant

ANYCONCEPT, Graz, Austria OCT 2020 - PRESENT

Academic Mentor

TREVER, Graz, Austria JUN 2019 - PRESENT

Academic Mentor

NEURIPS conference JUL 2020

Reviewer

UNIVERSITY OF TECHNOLOGY, Graz, Austria MAR 2018 - JUN 2018

Institute of Applied Information Processing and Communications

Undergraduate teaching assistant in computer networks

UNIVERSITY OF TECHNOLOGY, Graz, Austria MAR 2017 - JUN 2017

Institute of Applied Information Processing and Communications

Undergraduate teaching assistant in computer networks

UNIVERSITY OF TECHNOLOGY, Graz, Austria AUG 2016 - SEP 2016

Institute of Applied Information Processing and Communications

Internship cryptography

UNIVERSITY OF TECHNOLOGY, Graz, Austria OCT 2015 - JAN 2016 Institute of Analysis and Number Theory

Undergraduate teaching assistant in real analysis

ACHIEVEMENTS

Poster prize NeurIPS workshop on biological and artificial RL UNIQUE research centre	2019
Google hashcode challenge, placed 111/3012	2018
Academic Excellence Scholarship University of Technology Graz	2017
Academic Excellence Scholarship University of Technology Graz	2017
Academic Excellence Scholarship University of Technology Graz	2016
Academic Excellence Scholarship University of Technology Graz	2014



Expert level knowledge of TensorFlow (1 and 2) and Python

Analytical skills, broad understanding of diverse deep learning approaches

Applied skills in performing distributed training

Neuromorphic hardware

Creative skills in visualization