Robin Pauli

CV

Work experience

2015–2019 **Doctoral Researcher**, *Forschungszentrum Jülich, Institute for Advanced Simulation*, Jülich.

Main research topics:

- Theory and simulation of the dynamics in spiking biological neural networks and resulting Extracellular potentials
- Modelling and Data analysis of electrophysiological measurements from brainstimulation surgery

Achievments:

- Published well received community guideline increasing longevity and reproducibility of published model code
- Reduced time spent on preprocessing raw data by evaluating automated *spike-sorting* algorithms

2013–2014 **Research scientist**, *Forschungszentrum Jülich, Institut for Complex Systems*, Jülich.

Main research topics:

- Peptide drug design with evolutionary algorithms
- Based on this: created a recommender system for potential proteins reducing money spent on reagents and time in the lab

Education

2012-2014 **Master of Science in physics**, *HHU Düsseldorf*, Düsseldorf, ECTS score A (Top 10%).

- Specialization on computational methods and biophysics.
- Thesis on: Design of a peptide Inhibitor for the Mlok1 K^+ channel

2009-2012 **Bachelor of Science in physics**, *RWTH Aachen*, Aachen.

Bachelor thesis on spin-transport in topological isolators.

2009 **Abitur (Highschool Diploma)**, *Freiherr-vom-Stein Gymnasium*, Hamm.

Skill highlights

- German (Mothertongue), English (fluent)
- pytorch, lgbm, scikit-learn
- high performance- and cloud computing (AWS, GCE)
- Python, C++, R, sql
- snakemake, sumatra
- git, docker

Projects

Microsoft malware detection challenge — *Achieved Top 9% (bronze rank) with a blend of embedding based neural network and a LGBM model.*

NEST simulator developer — *Contributed to an open-source neural network simulator, python/C++*

Griebenowstrasse 18 – 10435 Berlin – Germany

+491736607385 • *robin.pauli@posteo.de* • *rpauli*