Marc Wanner

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linkedin | github

Summary

My main interest lies in applying abstract concepts and techniques to solving real-world problems in a computational manner. I find quantum computing especially exciting due to the new possibilities it offers and its unique mathematical model poses intriguing challenges, which I aim to tackle from theoretical computer scientist's perspective. The goal of my PhD is to apply techniques from classical machine learning to the realms of quantum computing. I am particularly interested in reinforcement learning- and deep learning-based techniques.

Education

Chalmers University of Technology *2023/10-now, Sweden*

PhD in Data Science and AI

- Research field: Algorithms for near term Quantum Computers

ETH Zürich *2022/02-2023/10, Switzerland*

M.Sc. in Computational Science and Engineering $(5.68/6.0)$

- Master's thesis: Deep Learning-Based Magnetic Field Enhancement in NMR Spectroscopy $(6.0/6.0)$
- Major field of specialization: Computational Biology
- Minor field of specialization: Physics

Chalmers University of Technology *2020/09-2021/01, Sweden*

M.Sc. in Computer Science and Engineering

- Student exchange as participant of UNITECH international society 20/21

ETH Zürich *2017/09-2020/08, Switzerland*

B.Sc. in Computational Science and Engineering $(5.46/6.0)$

- Minor field of specialization: Computational Biology

Experience

Nature Communications *2024/10*

Early Career Researcher Co-Review

Infineon Technologies AG *2021/02-2022/02, Germany*

Internship/Bachelor's thesis in quantum computing

- Internship topic: Quantum algorithms for supply chain-related optimization problems
- Thesis: On job-shop scheduling with quantum approximate optimization algorithms $(5.75/6.0)$

ETH Zürich *2018/09-2019/12, Switzerland*

Teaching assistant

- Subjects: Digital circuits, Complex calculus (including exam preparation course) and Discrete mathematics

Publication record

M. Wanner, L. Lewis, C. Bhattacharyya, D. Dubhashi, A. Gheorghiu,

Predicting Ground State Properties: Constant Sample Complexity and Deep Learning Algorithms *2024/05*

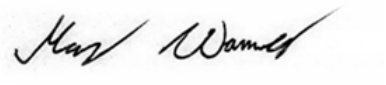
QTML 2024 (full oral presentation) | Advances in Neural Information Processing systems 2024 (accepted)

Skills

Programming Languages	***Experienced:*** Python | C++ ***Familiar:*** Java | C#
Software & Libraries	Numpy | Qiskit | PyTorch | julia | Matlab | R-studio | Unity
Theoretical concepts	Machine learning/AI | Quantum information theory | High performance computing
Languages	***Native:*** German ***Fluent:*** English | French | Italian ***Other:*** Swedish | Latin

Interests/Activities

- **Music** Playing the piano (since 2005) with focus on Jazz and improvisation
- **Sports** Indoor rock-climbing/bouldering, Table tennis, Weight training



Göteborg, November 6, 2024