Onno Eberhard, M.Sc.

Machine Learning Researcher

MPI for Intelligent Systems & University of Tübingen

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Education

Ph.D. Computer Science, *Max Planck Institute for Intelligent Systems & University of Tübingen.*
Oct 2023 – now Advisors: Claire Vernade and Michael Muehlebach. (Additional: Georg Martius and Peter Dayan.)
My research [1, 2] focuses on the foundations of reinforcement learning under partial observability.

M.Sc. Machine Learning, *University of Tübingen.*
Oct 20 – Sep 22 GPA: 1.00/1.00 (top of class), degree awarded with distinction. Thesis: "Colored Noise Exploration in Reinforcement Learning," supervised by Georg Martius and Philipp Hennig, written at MPI-IS.

B.Sc. Electrical Engineering and Information Technology, *University of Duisburg-Essen.*
Oct 16 – Sep 20 GPA: 1.6/1.0 (top 5% of graduates). Thesis supervised by Steven X. Ding, written at Siemens.
Oct 18 – Sep 20 Computer Science, *University of Duisburg-Essen.* 90 ECTS points (= half a B.Sc.), GPA: 1.5/1.0
Aug – Dec 2018 Visiting Student, *Nanyang Technological University Singapore.* Schools: EEE, CSE.

Experience

Google Research · *Paris, France*
Jun 23 – Sep 23 *Research Intern* with Thibaut Cuvelier, applying RL and GNNs to operations research problems. [3]

Max Planck Institute for Intelligent Systems · *Tübingen, Germany*
Oct 22 – May 23 *Research Intern* with Michael Muehlebach, working on open-loop reinforcement learning. [2]
Jun 21 – Sep 22 *Research Intern* with Georg Martius, working on noisy exploration for deep reinforcement learning. [4]

University of Duisburg-Essen · *Duisburg, Germany*
Oct 19 – May 21 *Research Assistant* with Torsten Zesch, working on deep learning for automatic speech recognition. [5]
May – Aug 2019 *Teaching Assistant*, physics lab.

Siemens · *Mülheim an der Ruhr, Germany*
Sep 16 – Sep 22 *Working Student* as a data scientist · *Apprenticeship* as an electronics technician (IHK diploma).

Service & Supervision

Supervision Yike Zhao (M.Sc. 2025 at EPFL, co-supervised with Michael Muehlebach)

Reviewing ICLR 2026 — DynaFront @ NeurIPS 2025 — ICML 2025 — L4DC 2025 — NeurIPS 2024
IFAC NMPC 2024 — IMOL @ NeurIPS 2023

Organizing Eighteenth European Workshop on Reinforcement Learning (EWRL 2025)
ICML Workshop on Foundations of Reinforcement Learning and Control (FoRLaC @ ICML 2024)

Honors & Awards

2025 Awarded the Best Poster Award at the IMPRS-IS Boot Camp 2025 (for [1]).
2025 Nominated for the Best Paper Award at L4DC 2025 (for [2]).
2023 Awarded the scholarship of the International Max Planck Research School for Intelligent Systems.
2021 Selected by Bending Spoons for *First Ascent International 2022* (top ∼3% of applicants).
2018 Awarded the *PROMOS* scholarship by the German Academic Exchange Service (DAAD).
2017 Awarded the *Deutschlandstipendium* scholarship for academic achievements (top ∼0.7% of students).
2016 Awarded the *Abiturpreis* of the German Physical Society for the best results in the Physics Abitur.
2016 Awarded the *Abiturpreis* of the German Mathematical Society for the best results in the Math Abitur.
2014 Fourth place at the RoboCup World Cup 2014 in Brazil in the league *Rescue A Secondary (Superteam).*
2012 Second place at the RoboCup World Cup 2012 in Mexico in the league *Rescue A Primary.*

Publications

2025 [1] OE et al. *Partially Observable Reinforcement Learning with Memory Traces.* ICML 2025
2025 [2] OE et al. *A Pontryagin Perspective on Reinforcement Learning.* L4DC 2025. **Oral**
2023 [3] OE et al. *Middle-Mile Logistics Through the Lens of Goal-Conditioned RL.* GCRL @ NeurIPS 2023
2023 [4] OE et al. *Pink Noise Is All You Need: Colored Noise Exploration in Deep RL.* ICLR 2023. **Spotlight**
2021 [5] OE & TZ. *Effects of Layer Freezing on Transferring a Speech Recognition System.* KONVENS 2021

Skills

Languages English: fluent — German: native — French: elementary (A2) — Mandarin: elementary (HSK2)

Technical Machine Learning · Reinforcement Learning · Deep Learning · Bayesian Inference · Optimization & Control
Python · NumPy & SciPy · JAX & Flax · PyTorch · Julia · Haskell · Java · GNU/Linux · Git · LaTeX

Oct 2025 I am always excited to learn new things!