

MANUEL WENDL

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EDUCATION

M.Sc. Robotics, System and Control

Sept 2024 - Present

ETH Zürich (Eidgenössische Technische Hochschule Zürich), Switzerland

Department of Mechanical and Process Engineering, Informatics and Electrical Engineering

Relevant coursework: Machine Learning and Control, Safe Learning for Robotics (Python, PyTorch, ROS, C, Linux)

B.Sc. Engineering Science

Oct 2020 - April 2024

Technical University of Munich, Germany

Munich School of Engineering/ School of Engineering and Design

Relevant coursework: Foundational courses of Engineering, Control, Embedded Systems and Machine Learning

EXPERIENCE

ETH Zürich Learning and Adaptive Systems, Semester Project

Feb 2025 – Present

- Research on Online Safe RL overcoming the Sim-to-Real gap. (supervisor Prof. Andreas Krause)

TUM Cyber-Physical Systems Group, Research Assistant

June – Sept 2024

- Continued research on training verifiably robust control agents using set-based reinforcement learning
- Research results available in preprint (under review): arxiv.org/pdf/2408.09112v1
- Integration of code in CORA toolbox: tumcps.github.io/CORA

MTU Aero Engines, Working Student - Simulation Flying Fuel Cell

May – Sep 2023

- Development and verification of new model components/subsystems for multiphysics fuel cell model
- Research of modeling approaches and implementation of numerically stable MATLAB Simscape models

BMW Group, Intern - Methodologist Endurance Testing

Sep 2022 – Mar 2023

- Development of automated analysis tool for electrical drive train test bench measurements
- Professional and technical management of external employees during software development
- Development of a real-time model for rotor temperatures without thermocouples
- Development of a tool for generating globally optimized test profiles for electrical drive trains

PROJECTS

Training Verifiably Robust Agents using Set-Based Reinforcement Learning

Reproducible code for preprint of research on set-based RL @TUM ([GitHub](#)).

Monocular Visual Odometry Pipeline

Course project of Vision Algorithms for Mobile Robots @UZH/ETH ([GitHub](#)).

Programming Competition Dynamic Programming and Optimal Control

Fifth place in Dynamic Programming and Optimal Control Programming Competition @ETH ([GitHub](#))

Lyapunov Stable Neural Network Control

Simultaneously learning controller and control Lyapunov function with neural networks ([GitHub](#))

Algorithms for Scientific Computing

Implementation of Python/C toolbox based on lecture series @TUM ([GitHub](#))

SCHOLARSHIPS AND CERTIFICATES

Scholarship: Master Scholarship at VW 2024, Academic Scholarship of Germany 2020/2023

Honors: Deutsche Physikalische Gesellschaft e.V. 2020 (Recognition for excellent performance in physics)

Languages: English (C1 - Toefl), French (B2 - DELF), Spanish (B1), German (Native)

ACTIVITIES

TV Planegg-Krailling: Triathlon

2016 – Present

Active team member of the Triathlon Regional league team

TV Stockdorf 1911: Soccer

2009 – 2019

Active soccer team member