Matthieu Rimlinger

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I am a highly motivated and dynamic graduate from ETH Zurich with a solution-oriented mindset. An agile learner, I am always eager to expand my knowledge. I am a rigorous and disciplined engineer with strong analytical skills, while capable of creativity in project work. Aside from work, I am passionate about endurance sports, writing, volunteering, exploring the world and facing new challenges.

EDUCATION

Swiss Federal Institute of Technology Zurich (ETHZ) Sep 2019 – Sep 2023
MSc Electrical Engineering and Information Technology (GPA 5.77/6) *Zurich, Switzerland*
Technical specializations: systems and control, optics and photonics. Minor specialization: management and economics.

Hong Kong University of Science and Technology (HKUST) Sep 2018 – Jun 2019
Academic exchange part of BSc Microengineering *Hong Kong, China*

Swiss Federal Institute of Technology Lausanne (EPFL) Sep 2016 – Jun 2019
BSc Microengineering (GPA 5.36/6) *Lausanne, Switzerland*

WORK EXPERIENCE

ETH Zurich Sep 2021 – Dec 2022
Teaching assistant *Zurich, Switzerland*
Giving exercise classes for the courses “Introduction to Programming in C++” and “Algorithm and Data Structures”. Preparation of teaching material. Supporting students’ learning throughout the semester. Invigilation of examinations.

Thales Alenia Space Oct 2021 – Mar 2022
R&D Intern Solution Architect *Zurich, Switzerland*
Supporting multiple activities in the development of inter-satellite optical communication links. System identification and controller design of fine steering mirror for disturbance rejection. Literature research on quadrant photo-diode for position detection. Characterization of avalanche photo-diode as receiver in communication link.

Sensirion Feb 2021 – Jul 2021
Product Management Intern Humidity & Temperature Sensors *Stäfa, Switzerland*
Supervision of products’ lifecycle. Organizing market launch of a new product. Writing technical documentation (data sheets, user guides). Process development and modeling with Petri nets. Market analysis for new product applications. Conducting competitive analysis and benchmarking competitors’ products.

Polariton Technologies Sep 2021 – Feb 2021
R&D Intern Space Applications *Zurich, Switzerland*
Design and realization of radiation hardness reliability test plan for plasmonic phase modulators. Literature research on space radiation environment. Preparation and characterization of modulators in laboratory. Procurement of irradiation test with ALTER TÜV Nord. Coordinating with ETH Zurich and Thales Alenia Space for resources and expertise sharing.

F. Hoffmann-La Roche Jul 2017 – Aug 2017
Summer Intern Regulatory Affairs *Basel, Switzerland*
Task automation with scripts to improve process efficiency. Improving database architecture and content accuracy.

PROJECTS

Heterogeneous Ensemble Control via Time-Varying Distributed Optimization Sep 2022 – Sep 2023
Master Thesis (Institute for Automation, ETH Zurich) *Zurich, Switzerland*
Algorithm design for distributed and constrained mixed H_2/H_∞ controller synthesis. Algorithm analysis in the time-varying setting. Numerical simulation (Matlab) of the algorithm applied to a virtual power plant for fast frequency control.

Laser Beam with Controllable Polarization for Nano-Rotor Trapping Oct 2021 – Mar 2022
Semester Research Project (Photonics Laboratory, ETH Zurich) *Zurich, Switzerland*
Design, implementation and characterization of the optical setup producing the laser beam. Performance evaluation via measurement of the Stokes parameters. Control scheme implementation for desired power output and degree of polarization.

SKILLS

Programming	Python, Matlab, C/C++, Assembly, VHDL, VBA, Javascript
Presentation	Microsoft Office Suite, LaTeX, HTML/CSS
Languages	English (C2), French (C2), German (C1)

PUBLICATIONS

M. Rimlinger et al., “Time-varying distributed H_2/H_∞ controller synthesis via dual consensus ADMM”, in preparation.

L. Kulmer et al., “Highest-Speed Modulators Enabling High-Capacity Free Space Optical Communications [...]”, JLT 42 (2024)

J. Zielińska et al., “Controlling optomechanical libration with the degree of polarization”, Phys. Rev. Lett. 130 (2023)

OTHER EXPERIENCES

Bicycle expedition from France to China Oct 2023 – Dec 2024

Independent travel on a bicycle across Eurasia. An exploration of the world’s incredible diversity. A test of resilience, tenacity and adaptability in face of uncertainty. A human and spiritual journey that helped me better understand what drives me and what I wish to pursue going forward in both my personal and professional life.

Volunteering in Nepalese primary school Dec 2018 – Feb 2019

Teaching volunteer *Gaunshahar, Nepal*

Teaching mathematics and english at primary school level. Working in team with ten other volunteers from all over the world. Constructing a new classroom. Supporting daily administration of the school.