JOHANNES PORSCH

Munich

joporsch04@gmail.com/Jo.Porsch@campus.lmu.de

EDUCATION

Physics M.Sc., Federal Institute of Technology Zurich 10.2024 - 09.2026

- Expected courses: Quantum Field Theory, Ultrafast Laser Physics

Physics B.Sc., Ludwig-Maximilian-University of Munich 10.2022 - 08.2025

- Elective courses: Advanced Programming techniques, Computational Physics/Machine Learning, Programming with Python, Astrophysics II, General Relativity*[1], Cosmology and large scale structures*
- Bachelor thesis: *The role of excited states in strong field ionization*

Mathematics B.Sc.[2], Ludwig-Maximilian-University of Munich 10.2023 - 08.2025

- Attended courses: Analysis I-III*, Linear Algebra I, Numerical Mathematics, ODE*, PDE*, Complex Analysis

Abitur Thomas-Strittmatter-Gymnasium St. Georgen 10.2014 - 07.2022

- DMV and DPG Abitur award

PRACTICAL EXPERIENCE

Bachelor thesis at Max Planck Institute of Quantum Optics 03.2025 - 07.2025

- Topic: *The role of excited states in strong field ionization*
- Focus on the influence of excited states on the ionization dynamics of atoms in strong laser fields
- Experience with Python, C++, Mathematica

Tutor for Physics and Mathematics at LMU Munich 09.2024 - 02.2025

- Tutor for the courses Mathematical Methods for Physicists and *Mathematical preperation for Physicists*
- Preparing and holding tutorials for approx. 20 students (including grading of exercises)

Research Assistant at Max Planck Institute of Quantum Optics 05.2024 – 08.2024

- Assisted in attosecond spectroscopy and theoretical strong field physics research, focusing on the reconstruction of strong-field ionization dynamics from numerically determined ionization probabilities
- Utilized the C++ programm *tRecX* for simulating and solving time-dependent partial differential equations, includingconvergence testing
- Compared theoretical models implemented in Python with simulated data, using sampling method *TIPTOE*
- Expected co-authorship of a publication based on research results

Study-related physics internship at LMU Munich 02.2023 - 08.2024

- Topics: Quantum Mechanics, Optics and Lasers, Mechanics, Experience with Python, C++, Matlab, Mathematica

SKILLS

Computer Python (pandas, plotly, scipy, numpy), C++, git, Mathematica, Linux, Numerical Simulations

Languages English (TOEFL C1), German (Native), French (B1)

INTERESTS

Music Saxophone, Clarinet and Guitar

Sports Fitness, table tennis, jogging, tango argentino

[1] Courses marked with *: Coursework including excercises completed, examinations were either not attempted, or not passed.
[2] Not completed, withdrawn after the 4th semester