

Justus Lorenz Grabowsky

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in Justus Lorenz Grabowsky

Education

- Oct. 2024 – May 2025 **Visiting Assistant in Research, Yale University** New Haven, CT, USA
Master's Thesis: *GW-BSE Study of the Band Structure and Optical Spectrum of Layered CrSBr*
Supervisor: Prof. Diana Qiu - Yale University, Department of Mechanical Engineering & Materials Science, Prof. Juan Carrasquilla - ETH Zürich, Department of Physics
- Sep. 2023 – present **Physics MSc, ETH Zürich** Zürich, Switzerland
Semester project: *Machine Learned Interatomic Potential for BaTiO₃*
Supervisors: Prof. Nicola Spaldin - Department of Materials, Prof. Mathieu Luisier - Department of Information Technology and Electrical Engineering
- Sep. 2022 – June 2023 **Exchange Student, ENS Paris** Paris, France
Participated in research and coursework during exchange program at the École Normale Supérieure Paris.
- Sep. 2020 – Sep. 2023 **Physics BSc, ETH Zürich** Zürich, Switzerland
Bachelor's project: *Ultra Strong Light-Matter Coupling in THz LC-Resonators*
Supervisor: Prof. Carlo Sirtori - Laboratoire de Physique de l'École Normale Supérieure

Research Experience & Projects

- Feb. 2024 – Aug. 2024 **3D Heisenberg Model**
Simulated the 3D Heisenberg model in C++, a fundamental model for understanding magnetism in materials, utilizing various algorithmic approaches to explore its properties for the course *Computational Statistical Physics*.
Supervisor: Dr. Andreas Adelman – Paul Scherrer Institute, ETH Zürich
- Jul. 2023 – Sep. 2023 **Research Intern, OIST** Onna, Okinawa, Japan
Studied excited state dynamics in 2D semiconductors using time- and angle-resolved photoemission spectroscopy. Built an experimental setup for fourth harmonic generation.
Supervisor: Prof. Keshav M. Dani – Okinawa Institute of Science and Technology
- Sep. 2022 – Feb. 2023 **Research Intern, ENS Paris** Paris, France
Studied actin-based motility of cells both theoretically and experimentally.
Supervisor: Prof. Julie Plastino - Laboratoire de Physique de l'École Normale Supérieure

Machine Learning Projects

Predicting a Persons Age from Brain Image Data, Classification of ECG data (time-series data), Predicting California Housing Prices, Thermal Storage Design with Physics Informed Neural Networks

Skills

Technical	C++, Python, PyTorch, Julia, Linux, GitHub, VSCode, Machine Learning, High Performance Computing, Dynamical Systems
Physics	Computational Physics, Solid-State Physics, Statistical Physics
Soft-Skills	Teamwork, Communication, Problem-Solving, Time Management, Work Ethic, Adaptability

Work Experience

- Feb. 2022 – June 2022 **Teaching Assistant at the Department of Physics** ETH Zurich, Switzerland
Prepared and taught a weekly exercise class for about 20 students which accompanied Prof. Andreas Vaterlaus's lecture in Physics I.

Languages

German (native), English (fluent), French, Spanish, Portuguese, Latin, Ancient Greek

Honors and Awards

Sep. 2022 – June 2023	SEMP Scholarship
July 2021 – present	Scholarship of the German Academic Scholarship Foundation Most prestigious scholarship program in Germany awarded to less than 0.5 % of German students.
Mar. 2019	Award of the German Physical Society for outstanding high school results in Physics

Volunteering & Memberships

July 2023 – June 2024	Representative for scholarship holders of the German Academic Scholarship Foundation Represented and supported other scholarship holders and organized events for the regional group in Zürich. American Physical Society German Physical Society
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References

Thesis Advisor	Prof. Diana Qiu, Yale University ✉ diana.qiu@yale.edu Website ↗
Former Supervisor	Dr. Andreas Adelmann, Paul Scherrer Institute ✉ andreas.adelmann@psi.ch Website ↗
Former Supervisor	Prof. Keshav M. Dani, OIST ✉ kmdani@oist.jp Website ↗