

Patryk Drozd

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EDUCATION

ESiWACE & Warm World

Summer School - *hpc4climate*

Lauenburg, Germany

28 July 2025 — 7 Aug 2025

- A summer school involved with working on and learning about climate science within the context of heterogeneous computing and data science.

Trinity College Dublin

MSc, High Performance Computing

Dublin, Ireland

Sep 2024 — Sep 2025

- A mathematically inclined high performance computing course, with a focus on numerical algorithms and simulation.
- Student Representative for year group.

Maynooth University

BSc, Theoretical Physics and Mathematics

Maynooth, Co. Kildare, Ireland

Sep 2021 — Sep 2024

- A 3 year accelerated theoretical physics and pure mathematics course.
- Student representative for year group in Physics department.

EXPERIENCE

Teaching Assistant

Trinity College Dublin

Sep 2024 — May 2024

Dublin, Ireland

- Teaching assistant for a first year engineering mathematics module involving teaching and grading students assignments.

Research Intern

Fraunhofer IWES

June 2024 — Sep 2024

Oldenburg, Lower Saxony, Germany

- Developed benchmarking scripts for a particular site with data masts and wind turbines. This involved developing skills in data analysis through Pandas and computational fluid dynamics with OpenFOAM.

Undergraduate Researcher

Maynooth University

June 2023 — Aug 2023

Maynooth, Co. Kildare, Ireland

- I worked with a postdoctoral researcher to develop skills in machine learning with Python and Pytorch. I developed models to classify regions of space for whether they form features like black holes or stars, and to upscale coarse snapshots from cosmological simulations. [poster](#)

SKILLS

- **Programming**
 - Python — Proficient with libraries such as Numpy, Matplotlib, Pandas and Pytorch.
 - C/C++ — Proficient with ability to write parallel code with OMP, MPI, and CUDA.
 - Linux — Using linux machines including university HPC systems and WSL.
- **Languages**
 - Fluent in English and Polish. Basic German skills.

AWARDS

- **Gold MUSE Award** / Maynooth University
 - An award recognising student contribution to non credit bearing activities.

PROJECTS

GPU Delaunay Triangulation

- For my masters thesis I'm implementing a Delaunay triangulation meshing algorithm with GPU acceleration with C++ and CUDA.

Finite Element PDE solvers

- As part of a significant undergrad project I worked on Finite Element solvers which numerically solved various linear PDEs using Python and Numpy. [summary](#)