

BENEDIKT PETKO

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Education

Imperial College London, *Faculty of Natural Sciences, Department of Mathematics* 2015–2023

Centre for Doctoral Training – Mathematics of Random Systems 2019–Present

- Study towards **PhD in Mathematics**, specialisation in stochastic analysis
- Courses in stochastic simulation, deep learning, stochastic analysis

MSci Mathematics with a Year in Europe 2015–2019

- **First-Class Honours, 84%** final average
- Modules including: Stochastic Calculus and SDE, Markov Processes, PDE

Summer school of machine learning and applied statistics July 2019

- Introduction to machine learning, time series, spatial point processes; **awarded** departmental bursary

Swiss Federal Institute of Technology in Zurich, *Department of Mathematics* 2017–2018

- Exchange Programme, **5.35/6 GPA** achieved
- Modules including: Machine Learning, Probability Theory, Measure Theory, Functional Analysis

Experience

Undergraduate researcher at Imperial College London June 2019–September 2019

- Project in **probability theory and financial mathematics**, funded by departmental bursary
- Studied point processes, Markov processes and their applications to limit **order book modelling**
- Reviewed literature on ergodic properties of various order book models

Academic Leader at Wohl Reach Out Lab, Imperial College London June 2019–Present

- **Leading** natural science themed workshops for pre-university audience
- Responsible for organisation, lecturing, experiments, **managing** a team of assistants

Exchange student at University of British Columbia, Vancouver, Canada July 2017–August 2017

- Project in **applied mathematics**, fully funded by Imperial College scholarship
- Digital image processing, tested multi-frame image restoration techniques to increase resolution
- **Worked independently, formulated hypotheses and tested them on simulated data**
- Improved programming skills in **Python** – NumPy, SciPy, CVXOPT libraries

Volunteer for IntoUniversity North Kensington, London November 2015–June 2016

- Responsible for mentoring a 13-year-old pupil to encourage academic development
- Developed ability to **communicate effectively** and provide advice and encouragement
- Managed time effectively to balance volunteering and academic commitment

Intern at Masaryk University, Brno, Czech Republic September 2013–June 2014

- Conception and elaboration of an own high school scientific project on sparse sampling in nuclear magnetic resonance spectroscopy
- Gained experience with **analysing complex data, using accuracy and attention to detail**

Skills

Coding: Python

Teaching: 250+ hours of teaching as a private tutor

Languages: English (full professional proficiency), German (professional working proficiency), Czech (native speaker), Spanish (limited working proficiency), Mandarin (post-beginner)

Achievements

Scholarship awarded by Bakala Foundation for the duration of studies 2015–2019

(16 candidates selected out of 270, based on a written application and an interview)

Faculty of Natural Sciences Dean's List 2016, 2017

Acknowledgement for the top 10% of the year group