PHILIPP PLANK

me@philipp-plank.at   philipp-plank.at

EDUCATION

Imperial College London, Department of Mathematics, UK   October 2024 – ongoing
Doctor of Philosophy (PhD) – **Mathematics**
- Σ   supervised by Dr. Yufei Zhang and Dr. Eyal Neuman
- Σ   topic: Theory and applications of Multi-Agent Reinforcement Learning
- Σ   current project: Policy Gradient Methods for Continuous-time Finite-horizon Linear-Quadratic Graphon Mean Field Games

University of Oxford, St Hugh's College, UK   September 2023 – July 2024
Master of Science (MSc) – **Mathematical and Computational Finance**
- Σ   final grade: **Distinction**
- Σ   master's thesis: Adversarial Reinforcement Learning for Informed Trading
- Σ   <u>relevant courses:</u> Statistics and Financial Data Analysis, Deep Learning, Market Microstructure and Algorithmic Trading, Numerical Methods (Finite-difference & Monte Carlo Methods), Advanced Monte Carlo Methods, Financial Computing with C++, Stochastic Calculus, Stochastic Control, Financial Derivatives, Fixed Income and Credit, Advanced Volatility Modelling, Quantitative Risk Management

Technische Universität Wien, AUT   October 2020 – July 2023
Bachelor of Science (BSc) – **Financial and Actuarial Mathematics**
- Σ   final grade: **Distinction**
- Σ   bachelor's thesis: Deep Reinforcement Learning for trading volatile markets
- Σ   <u>relevant courses:</u> Measure and Probability Theory, (Computational) Statistics, Stochastic Processes & Time Series, Mathematical Finance, Differential Equations, Numerical Analysis, Quantitative Risk Management, Analysis, Linear Algebra and Geometry, Life & Health Insurance Mathematics, Non-Life Insurance Mathematics

Konrad Lorenz Gymnasium Gänserndorf, AUT   September 2011 – June 2019
Grammar School ("Realgymnasium mit Darstellender Geometrie")
- Σ   Austrian "Reifeprüfung" (equiv. to A-Levels) with distinction

AWARDS & SCHOLARSHIPS

Excellence Scholarship (PhD) by **Provincial Government of Lower Austria**   June 2024
- Σ   as in 2023, the Excellence scholarships were awarded to 6 students from Lower Austria with outstanding performance who pursue degrees at the world's leading universities (e.g. Stanford, Imperial College, Oxford, …)

Roth Scholarship (PhD) by **Imperial College London**   February 2024
- Σ   the Roth scholarship covers the full tuition fees, stipend and research training costs.
- Σ   it is only awarded to around 8-10 incoming Mathematics PhD students based on academic performance, endorsement from two referees and academic prizes.

Merit-based Scholarship (BSc) by **Provincial Government of Lower Austria**   October 2023

Excellence Scholarship (MSc) by **Provincial Government of Lower Austria**   August 2023

Saven European Scholarship (MSc) by **University of Oxford**   June 2023
- Σ   Saven European Scholarships have been created by a generous gift from Mr Bjorn Saven (Founder Chairman of IK Investment Partners and Honorary Fellow of Harris Manchester College, Oxford) to support around 10 graduate students from twelve European countries

TU Wien TOP Fellow (BSc) by **Technische Universität Wien**   February 2023
- Σ   community for high-potential students and successful alumni in leading positions

Merit-based Scholarship (BSc) by **Technische Universität Wien**   December 2022/2023

Early Student Award (BSc) by **Austrian Mathematical Society**   September 2022
- Σ   awarded to ~25 students with outstanding performance after the first four semesters of their bachelor's degree
- Σ   students were selected from all Austrian universities offering a mathematics programme

WORK EXPERIENCE & INTERNSHIPS

Imperial College London, London, UK   October 2024 – ongoing
Graduate Teaching Assistant – Department of Mathematics
- Σ   provided support to students in weekly problem-solving classes and demonstrated solutions to reinforce understanding of previous material

UNIQA Insurance Group AG, Vienna, AUT   July 2023 – August 2023
Intern – Nat Cat [Natural Catastrophes] Competence Centre (Research & Development)
- Σ   enhanced Nat Cat modelling processes through the development and integration of VBA tools in internal automatisation software
- Σ   conducted independent data validation and preparation for Nat Cat models to ensure high-quality input data for accurate risk analysis and reinsurance cover

Technische Universität Wien, Vienna, AUT   October 2022 – June 2023
Academic Tutor - Institute of Discrete Mathematics and Geometry
- Σ   led weekly exercise classes in Mathematics (Analysis, Linear Algebra, Differential equations) for first year Mechanical Engineering & Chemical Engineering students
- Σ   evaluated and provided feedback on weekly tests

UNIQA Insurance Group AG, Vienna, AUT   July 2022 – August 2022
Intern – Nat Cat Competence Centre (Research & Development)
- Σ   designed and implemented an exposure management tool in R visualising risk exposure and expected losses from natural catastrophes including an algorithm to interpolate missing risk data
- Σ   developed a database import algorithm in VBA including automatised SQL data quality checks for portfolio data

Finnoconsult, Vienna, AUT   July 2021 – August 2021
Digital Analyst Intern
- Σ   conducted a comprehensive analysis of around 100 international retail banks from 13 countries with focus on innovation & digitalisation

Raiffeisenlandesbank Niederösterreich-Wien AG, Vienna, AUT   July 2020
Intern – Restructuring

Austrian Red Cross, Gänserndorf, AUT   July 2019 – June 2020
Paramedic ("Compulsory Community Service")

Vienna Stock Exchange, Vienna, AUT   August 2017 & 2018
Intern – Listings & Indices

LANGUAGES

- Σ   **German**: native; **English**: proficient (C2 - Cambridge English: Advanced – Grade A)

PROGRAMMING & IT SKILLS

- Σ   **Advanced**: Python (DL: PyTorch, RL: Ray RLlib), LaTeX; **Intermediate**: C++; **Basic**: R, SQL, VBA

VOLUNTEERING

Oxford Austrian Society, Oxford, UK   April 2024 – ongoing
Member of the Committee (Social Secretary)

Austrian Red Cross, Gänserndorf, AUT   July 2020 – December 2021
Voluntary paramedic

Studyroom.at, AUT   April 2020 – August 2020
Backend Engineer
- Σ   free online tutoring initiative for socioeconomically disadvantaged high-schoolers during the COVID-19-crisis with a successful exit to the government after 3 months; winner of a COVID-19 Start-up Funding Competition