

## EDUCATION

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- PhD Applied Mathematics**, Disordered Systems group at King's College London Oct 2021 - present
- Research interests: performance of generalised linear models with **heavy-tailed high-dimensional data**, **statistical inference in high dimensions**, **robust statistics**, statistical physics applications to machine learning, agent-based economic modelling
  - Academic representative of the Disordered Systems PhDs; PGR PhD representative for Equality, Diversity and Inclusion
  - Supervisors: Dr Gabriele Sicuro and Dr Pierpaolo Vivo
- MSc Applied Mathematics**, Imperial College London, Distinction Oct 2020 - Oct 2021
- Thesis on agent-based modelling of opinion formation via differential equations, **SDEs + PDEs** theory and Python simulations
  - Marjorie McDermott Scholarship by the Imperial Maths Department, academic representative of the MSc Applied Maths cohort
- BA (Hons) Maths and Philosophy** with a year abroad, King's College London, First Class honours Sept 2016 - Jul 2020
- Project on noise filtering of financial correlation matrices and non-stationarity in financial time series via the Wishart ensemble
  - Modules: Linear Algebra, Prob&Stats I&II, International Politics of Energy, Financial Mathematics I&II, Advanced Logic
  - Year 3 abroad at University of California, Los Angeles, modules: Honours Mathematics, C++ programming, Cognitive Science
- International Baccalaureate (IB)** Diploma at Vilnius Lyceum, Lithuania, score 40/45 Sept 2014 - Jun 2016

## PUBLICATIONS

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- UA, L. Defilippis, B. Loureiro, G. Sicuro, [High-dimensional robust regression under heavy-tailed data: Asymptotics and Universality](#), NeurIPS 2023 HeavyTails Workshop, submitted to ICLR 2024 Sept 2023
- UA, G. Sicuro, P. Vivo, [Classification of Superstatistical Features in High Dimensions](#), NeurIPS 2023 Apr 2023
- Mahalakshmi Sabanayagam\*, Freya Behrens\*, UA, Anna Dawid, [Unveiling the Hessian's Connection to the Decision Boundary](#), NeurIPS 2023 M3L Workshop Mar 2023
- UA, A. Tonshniwal, G. Sicuro, L. Zdeborová, [Planted Matching Problems on Random Hypergraphs](#), Phys. Rev. E 106, 054302. Nov 2022

## PROFESSIONAL EXPERIENCE

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- Graduate Teaching Assistant at King's College London, MSc and BSc level** Oct 2021 - present
- Teaching Numerical and Computational Methods with Python, Econophysics, Probability and Statistics, Calculus
- Spring into Quant Finance, G-Research** Apr 2023
- Week of networking and workshops on ML (transformers), hedging strategies, programming, finance led by quants
- Junior Quantitative Researcher at Syntropy** Sept 2020 - Dec 2020
- Designed and analysed quantitative models, performed sensitivity analysis, data visualisation
  - Refactored Excel velocity and volatility models to Python using pandas, numpy, scipy, added interactive visuals via plotly
- Software Engineering Intern at Danske Bank in Vilnius, Lithuania** Summer 2020
- Assisted in building an API to store large historical market datasets and optimise stream-processing software for real-time market data feed handling in-house, done in close collaboration with the Copenhagen HQ quant team, using Java, SQL, HTML
- Junior Researcher in Mathematical Physics at King's College London** Summer 2018, 2019
- Reviewed literature on random matrix theory applications to sparse data in finance and neuroscience, analysed statistics of sparse correlation random matrices using statistical physics tools, simulations in MATLAB and Python
  - Produced reports that resulted in the King's Undergraduate Research Award (2019) and funding from EPSRC (2018)
- Fundraiser at Amnesty International UK** Summer 2017
- Delivered pitches to inform and encourage people to donate in the streets of London in a team setting

## CONFERENCES AND SUMMER SCHOOLS

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- Statistical Physics and Machine Learning back together again, EPFL at Cargèse Aug 2023
- Youth in High-d: Recent Progress in Machine Learning, High-d Statistics and Inference, ICTP Jun 2023
- FLAIM: Formal Languages, AI and Mathematics, IHP Paris & Meta Nov 2023
- Summer School on Statistical Physics and Machine Learning, École Physique des Houches Jul 2022
- Statistical Physics of Deep Learning Summer School, Lake Como School of Advanced Studies Jun 2022

## OUTREACH AND VOLUNTEERING

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- ICMS-LMS *Opportunities and directions in modern mathematics*, PhD panel speaker March 2023
- Founder and lead of the Piscopia Initiative KCL Committee, outreach events organiser Feb 2022 - present

## ADDITIONAL SKILLS

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- Languages v1.0** Lithuanian - native • English, French - fluent • Italian - intermediate  
**Languages v2.0** Python • C++ • HTML • TeX  
**IT** Github • HPC • slurm • shell • MS Office • OS X • MS Windows  
**Interests** AI • International Affairs • Neuroscience • Long Distance Running • Nutrition