Curriculum Vitae
David Geldbach

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RESEARCH INTERESTS

Probability theory, stochastic processes, random trees, tree-valued Markov chains, continuous random trees, metric space scaling limits, branching processes, random walks in random environment.

EDUCATION

University of Oxford — **Oxford, UK**
DPhil student in Probability — Oct 2021 - Current
- Supervised by Julien Berestycki and Matthias Winkel
- Research in probability theory, branching processes and random trees
- Funded by the EPSRC

Ludwig-Maximilians-Universität — **Munich, Germany**
M.Sc. in Mathematics — Oct 2019 – July 2021
- **Final Grade: 1.1** (German grading scale from 1-5 with 1 being best)
- Master Thesis: *Ergodicity of the Dynamical XY-Model*,
  supervisor: Markus Heydenreich, Grade 1.0
- Focus on probability theory, stochastic processes and statistical mechanics

École normale supérieure de Lyon — **Lyon, France**
Exchange student in Master Mathematics M2 — Jan 2021 – April 2021
- Funded by the Erasmus program

Ludwig-Maximilians-Universität — **Munich, Germany**
B.Sc. in Mathematics (major) and Theoretical Physics (minor) — Oct 2016 – Sep 2019
- **Final Grade: 1.3** (German grading scale from 1-5 with 1 being best)
- Bachelor Thesis: *The Scaling Limit of the Erdös-Rényi Graph*,
  supervisor: Markus Heydenreich, Grade 1.0

National University of Singapore — **Singapore**
Exchange Semester in Mathematics (major) and Theoretical Physics (minor) — Aug 2018 – Dec 2018
- Undergraduate Research Project with Rongfeng Sun, Grade: A+
- Funded by LMU exchange

St. Raphaels Gymnasium Heidelberg — **Heidelberg, Germany**
A-Levels / Abitur — Sep 2008 – June 2016
- **Final Grade: 1.2** with Honours (German grading scale from 1-6 with 1 being best)
- Exchange Semester at Ridley College, St. Catherines, Canada; Jan.-July 2015

TALKS AND PRESENTATIONS

PIMS summer school — June 2022
Contributed short talk, "Characterisation of some tree-valued Markov chains".

Munich probability seminar (LMU/TUM) — July 2021
Master thesis presentation, "Ergodicity of the Dynamical XY-Model".

ACADEMIC ACTIVITIES

Pacific Institute for the Mathematical Sciences (PIMS)   **Vancouver, Canada**
Summer school: Probability   June 2022
- Received funding for accommodation and travel

Centre de Recherches Mathématiques (CRM)   **Montréal, Canada**
Workshop: Branching systems and PDEs   May 2022
- Received funding for accommodation and travel

CIRM Marseille   **Marseille, France**
Summer school: Random trees and random graphs   July 2019

TEACHING EXPERIENCE

University of Oxford   **Oxford, UK**
Tutor and Teaching Assistant   Oct 2021 - Current
- Marking homework and co-supervising classes for Probability on Graphs and Lattices MT21 and Applied Probability HT22
- Tutor at St. Catherines College for A8 Probability

Ludwig-Maximilians-Universität   **Munich, Germany**
Tutor and Corrector   April 2018 – Jan 2021
- Supervising groups of 10-30 students with exercises and marking homework
- Courses supervised:
  - Linear Algebra 2 (1st year course; 2018)
  - Probability Theory (2nd-3rd year course: different types of convergence, limit theorems, characteristic functions, conditional expectations, martingales, Brownian motion; 2019)
  - Stochastics (2nd year course: introduction to probability, measure theory; 2019/20)
  - Probability theory (as above as online course; 2020)
  - Stochastic processes (4th year course: Brownian motion, continuous time Markov chains, general Markov processes in continuous time; marking only; 2020/21)

SKILLS, ACTIVITIES & INTERESTS

Languages: German (native), English (fluent), French (advanced), Spanish (basic), Latinum
Technical Skills: Python, C++ (basic), Mathematica (basic), Latex
Activities: Rowing, Running, Rock Climbing, Road Cycling, Mountaineering