

Tobias Freidling

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Education

- 2020 – present **PhD Mathematics of Information**, University of Cambridge, UK.
Supervisor: Qingyuan Zhao
- 2020 **Exchange Research Student, Informatics**, Kyoto University, Japan.
Supervisor: Makoto Yamada
- 2018 – 2020 **M.Sc. Mathematics**, Technical University of Munich, Germany.
Thesis: *Model uncertainty in statistical inference*, Supervisor: Mathias Drton
- 2017 – 2018 **Visiting Student, The Queen's College**, University of Oxford, UK.
- 2015 – 2017 **B.Sc. Mathematics**, Ludwig-Maximilians University, Munich, Germany.
- 2014 – 2015 **B.Sc. Mathematics**, Technical University of Munich, Germany.

Publications

- 1 **Freidling, Tobias** and Qingyuan Zhao (2024). *Optimization-based Sensitivity Analysis for Unmeasured Confounding using Partial Correlations*. [arXiv: 2301.00040](https://arxiv.org/abs/2301.00040).
- 2 **Freidling, Tobias**, Qingyuan Zhao, and Zijun Gao (2024). *Selective Randomization Inference for Adaptive Experiments*. In preparation.
- 3 **Freidling, Tobias**, Benjamin Poignard, Héctor Climente-González, and Makoto Yamada (2021). "Post-selection inference with HSIC-Lasso". In: *International Conference on Machine Learning (ICML)*. Vol. 139, pp. 3439–3448. [URL: https://proceedings.mlr.press/v139/freidling21a.html](https://proceedings.mlr.press/v139/freidling21a.html).
- 4 Strieder, David, **Tobias Freidling**, Stefan Haffner, and Mathias Drton (2021). "Confidence in causal discovery with linear causal models". In: *Uncertainty in Artificial Intelligence (UAI)*. Vol. 161, pp. 1217–1226. [URL: https://proceedings.mlr.press/v161/strieder21a.html](https://proceedings.mlr.press/v161/strieder21a.html).

Presentations and Talks

- 2024 Causal Machine Learning workshop, Southampton, UK (upcoming)
American Causal Inference Conference (ACIC), Seattle, WA, USA (upcoming)
European Causal Inference Meeting (EuroCIM), Copenhagen, Denmark
Response-Adaptive Randomisation in Clinical Trials Workshop, Cambridge, UK
- 2023 Statistics Student Seminar, University of Chicago, IL, USA
Machine Learning and Data Science Seminar, Okinawa Institute of Science and Technology, Japan
European Causal Inference Meeting (EuroCIM), Oslo, Norway
Online Causal Inference Seminar
- 2022 American Causal Inference Conference (ACIC), Berkeley, CA, USA
- 2021 RIKEN Advanced Intelligence Project (AIP) Seminar, Japan, online
International Conference on Machine Learning (ICML), online
GSK.ai Research Symposium, online

Professional Service

Reviewer	Biometrika, Artificial Intelligence and Statistics Conference (AISTATS)
Organizer	Causal Inference Reading Group at the University of Cambridge (2022 – present) PhD Student Lunch Seminar at the University of Cambridge (2023 – present)
Consultant	Statistics Clinic at the University of Cambridge (2020 – present)

Prizes and Scholarships

2023	Smith-Knight and Rayleigh-Knight Prize (Group 3)
2020 – 2024	GSK PhD Studentship
2014/5 – 2020	Scholarship of the German Academic Scholarship Foundation Max Weber Scholarship of the Elite Network of Bavaria Scholarship of the Maximilianeum Foundation

Teaching

University of Cambridge

Teaching Assistant	2022 – Causal Inference (4 th year course) 2021 – Causal Inference (4 th year course)
Supervisor	2023 – Statistical Modelling (3 rd year course) 2023 – Statistics (2 nd year course) 2022 – Mathematics of Machine Learning (3 rd year course)

Ludwig-Maximilians University

Tutor	2016 – Numerics (2 nd year course)
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Industry Experience

2023	GlaxoSmithKline, AIML, Precision Oncology , Student Placement. Bayesian modelling of pairwise CRISPR knock-out experiments
2021	Unilever, SEAC , Industry Project. Optimal Bayesian experimental design of clinical studies for PBPK models
2019 – 2020	Siemens, Learning Systems , Working Student. Implementation of Recurrent Neural Networks in Tensorflow
2018	Gestafe , Data Science Internship. Business Intelligence for an insurtech start-up

Skills

Coding	R (proficient) LaTeX (proficient) SQL (basic)	Python (intermediate) git (basic+) Java (basic)	Stan (intermediate)
Languages	German (native) Spanish (intermediate-)	English (fluent) Japanese (beginner+)	French (intermediate-)