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Benjamin A. Robinson

Academic Employment

2024–2030 **Postdoc Assistant**, *Department of Statistics, University of Klagenfurt, Austria*.
Working in the Stochastic Processes group.

2020–2024 **Postdoc**, *Faculty of Mathematics, University of Vienna, Austria*.
Employed in the Mathematical Finance and Stochastic Analysis group of Mathias Beiglböck and Walter Schachermayer. Funded by the Austrian Science Fund (FWF) [10.55776/Y782], [10.55776/P35519], [10.55776/P34743].

2020 **Research Associate**, *Institute for Mathematical Innovation, University of Bath, UK*.
Conducted research on mathematical and statistical aspects of interdisciplinary and industrial projects, collaborating with academics from varied fields and external partners.

2020 **Research Assistant**, *Department of Psychology, University of Bath, UK*.
Provided data analysis, modelling and programming expertise to a collaborative project with NHS RUH Bath on sustainable transport — EPSRC *Reimagining Recruitment* grant EP/S012168/1.

Education

2020 **PhD in Statistical Applied Mathematics**, *University of Bath, UK*.
Stochastic Control Problems for Multidimensional Martingales, supervised by Alexander Cox. Funded by EPSRC Centre for Doctoral Training in Statistical Applied Mathematics at Bath (SAMBa) EP/L015684/1. Member of leading probability research group Prob-L@b.

2016 **MRes in Statistical Applied Mathematics**, *Distinction, University of Bath, UK*.
Masters Dissertation: *Constrained Optimal Stopping Problems*, supervised by Alexander Cox.

2015 **MSci in Mathematics**, *First Class, University of Bristol, UK*.
Masters Dissertation: *Ergodicity of Stochastic Processes and the Markov Chain Central Limit Theorem*, supervised by Márton Balázs.

Publications

[1] Gudmund Pammer, Benjamin A. Robinson, and Walter Schachermayer. A regularized Kellerer theorem in arbitrary dimension. *Annals of Applied Probability*, 35(2):749–778, 2025.

[2] Alexander M. G. Cox and Benjamin A. Robinson. SDEs with no strong solution arising from a problem of stochastic control. *Electronic Journal of Probability*, 28:1–24, 2023.

[3] Alexander M.G. Cox and Benjamin A. Robinson. Optimal control of martingales in a radially symmetric environment. *Stochastic Processes and their Applications*, 159:149–198, 2023.

[4] Julio Backhoff-Veraguas, Sigrid Källblad, and Benjamin A. Robinson. Adapted Wasserstein distance between the laws of SDEs. *Stochastic Processes and their Applications*, 2025. Accepted for publication. arXiv:2209.03243.

[5] Benjamin A. Robinson and Michaela Szölgyenyi. Bicausal optimal transport for SDEs with irregular coefficients. *arXiv:2403.09941*, 2024.

Supervision

Present **PhD Statistics**, *University of Klagenfurt*, Alexander Söllinger *(with Michaela Szölgyenyi and Stefan Thonhauser)*.

2024 **MSc Mathematics**, *University of Vienna*, Ralf Stoiber *(with Julio Backhoff-Veraguas)*, The Skorokhod Embedding Problem and its Financial Applications.

Teaching

2024 Winter **Stochastics for Engineers**, *Bachelor, Department of Statistics, University of Klagenfurt.*
Lecturer — Delivering lectures and exercise classes, coordinating teaching, preparing material.

2024 Summer **Stochastic Processes**, *Master, Department of Statistics, University of Klagenfurt.*
Lecturer — Delivering lectures and exercise classes, preparing course material.

Methodology 2: Statistics, *Bachelor, Department of Statistics, University of Klagenfurt.*
Teaching Assistant (TA) — Delivering exercise classes and preparing exercise sheets.

2023 Winter **Stochastics for Engineers**, *Bachelor, Department of Statistics, University of Klagenfurt.*
Teaching Assistant — Delivering online exercise classes and preparing exercise sheets.

2019 Winter **Mathematics and Statistics**, *Mathematics Resource Centre (MASH), University of Bath.*
Senior Peer Tutor — Leading a team of tutors, running drop-in sessions for first year mathematics undergraduates, providing mathematical and statistical support at drop-in sessions for all disciplines.

2016 Winter **Financial Derivatives**, *Master, School of Management, University of Bath*, TA.

2015–2019 **Analysis 1, Probability 1, Analysis 2**, *Bachelor, Department of Mathematical Sciences, University of Bath*, TA.

2015 Summer **Statistics 1**, *Bachelor, School of Mathematics, University of Bristol*, TA.

Linear Algebra 1B, *Bachelor, School of Mathematics, University of Bristol*, TA.

2014 Winter **Probability 1**, *Bachelor, School of Mathematics, University of Bristol*, TA.

Linear Algebra 1A, *Bachelor, School of Mathematics, University of Bristol*, TA.

Outreach Activities

2025 **Modelling Days**, *Klagenfurt, Austria.*
One-day mathematical modelling workshops at local high schools

Feb 2025 **Workshop for Schools**, *Universität Klagenfurt, Austria.*
Der Ton macht die Musik — Workshop on mathematics in music

Invited Seminar and Conference Talks

Dec 2024 **Rough Analysis and Stochastic Dynamics Seminar**, *TU Berlin.*
A regularized Kellerer theorem in arbitrary dimension

Feb 2024 **Probability Seminar**, *University of Leeds, UK.*
Bicausal optimal transport for SDEs with irregular coefficients

Nov 2023 **Vienna Probability Seminar**, *Institute of Science and Technology, Austria.*
A regularized Kellerer theorem in arbitrary dimension

Jun 2023 **SIAM Conference on Financial Mathematics and Engineering**, *Philadelphia, USA*, Minisymposium *Optimal Transport*.
An adapted distance between laws of SDEs

May 2023 **AAU Doctoral Seminar**, *Universität Klagenfurt, Austria.*
Distances between stochastic processes

Apr 2021 **Vienna Seminar in Mathematical Finance and Probability**, *Vienna.*
Optimal control of martingales in a radially symmetric environment

Jun 2020 **Internal Probability Seminar**, *University of Bath (Online).*
Optimal control of martingales in a radially symmetric environment and an SDE with no strong solution

Apr 2020 **Probability Seminar**, *University of Manchester*, Cancelled.

Contributed Conference Talks

Mar 2025 **German Probability and Statistics Days**, *Dresden, Germany.*
A regularized Kellerer theorem in arbitrary dimension

Sep 2024 **Numerical analysis and applications of SDEs**, *Będlewo Conference Centre, Poland.*
Bicausal optimal transport between the laws of SDEs

Sep 2024 **12$^{\text{th}}$ Austrian Stochastic Days**, *University of Innsbruck, Austria.*
Bicausal optimal transport for SDEs with irregular coefficients

Jun 2024 **Klagenfurt–Berlin Workshop on Multiple Perspectives in Optimization**, *University of Klagenfurt, Austria*.
Bicausal optimal transport for SDEs with irregular coefficients

Jan 2024 **Stochastic and Deterministic Analysis for Irregular Models**, *CIRM, France*.
Bicausal optimal transport for SDEs with irregular coefficients

Sep 2023 **11th Austrian Stochastic Days**, *University of Klagenfurt, Austria*.
A regularized Kellerer theorem in arbitrary dimension

May 2023 **Mathematical Finance and Stochastics**, *San Sebastian, Spain*.
A regularized Kellerer theorem in arbitrary dimension

Mar 2023 **German Probability and Statistics Days**, *Essen, Germany*.
Adapted Wasserstein distance between the laws of SDEs

Sep 2022 **10th Austrian Stochastic Days**, *University of Vienna, Austria*.
Adapted Wasserstein distance between the laws of SDEs

July 2022 **PIMS-IFDS-NSF Summer School on Optimal Transport**, *University of Washington, Seattle, USA*.
Bicausal transport between laws of SDEs

May 2022 **Stochastic Games and Martingale Optimal Transport**, *Università degli Studi di Milano, Italy*.
A regularized Kellerer theorem in arbitrary dimension

Aug 2020 **Bernoulli-IMS One World Symposium**, *Online*.
Optimal control of martingales in a radially symmetric environment

Jan 2020 **Winter School on Theory and Practice of Optimal Stopping and Free Boundary Problems**, *University of Leeds, UK*.
An SDE with no strong solution arising from the stochastic control of martingales in a radially symmetric environment

Apr 2019 **Stochastic Control and Games under Ambiguity**, *University of Leeds*.
Optimal control of martingales in a radially symmetric environment

Jun 2017 **BUC-VIII: Stochastic Optimal Control**, *CIMAT, Mexico*.
Stochastic optimal control problems related to martingale optimal transport

Poster Presentations

Jan 2024 **21st Winter School on Mathematical Finance**, *Soesterberg, The Netherlands*.
Bicausal optimal transport for SDEs with irregular coefficients

Jan 2023 **20th Winter School on Mathematical Finance**, *Soesterberg, The Netherlands*.
Adapted Wasserstein distance between the laws of SDEs

Sep 2017 **Conference on Stochastic Control, Ambiguity and Games**, *University of Leeds*.
Stochastic optimal control problems related to martingale optimal transport

Workshops and Schools

Sep 2024 **Numerical analysis and applications of SDEs**, *Będlewo Conference Centre, Poland*.

Jan 2024 **21st Winter School on Mathematical Finance**, *Soesterberg, The Netherlands*.

Jan 2024 **Stochastic and Deterministic Analysis for Irregular Models**, *CIRM, France*.

Jan 2023 **20th Winter School on Mathematical Finance**, *Soesterberg, The Netherlands*.

July 2022 **PIMS-IFDS-NSF Summer School on Optimal Transport**, *University of Washington, Seattle, USA*.

Jan 2020 **Winter School on Theory and Practice of Optimal Stopping and Free Boundary Problems**, *University of Leeds, UK*.

Jul 2018 **Hausdorff School: Optimal Transport Meets Economic Theory**, *Hausdorff Centre for Mathematics, Universität Bonn, Germany*.

Sep 2017 **Workshop on Martingale Optimal Transport**, *University of Oxford*.

Jun 2017 **BUC-VIII: Stochastic Optimal Control**, *CIMAT, Mexico*.

Industrial Research Projects

Participated in five workshops at University of Bath, UK. Collaborated with industrial partners to formulate mathematical problems from applied challenges, presenting outcomes orally and in research proposals.

Jan 2019 **Optimal Stopping for Early Drought Detection**, *Willis Towers Watson*, ITT9.
Investigated analytical and numerical properties of optimal stopping problems for time series climate data to minimise expected detection time, constraining probability of false alarm.

Jun 2017 **Bayesian Inference on Nuclear Magnetic Resonance**, *Schlumberger*, ITT6.
Adapted C code for Bayesian inference with atomic priors in order to estimate relaxation times for nuclear magnetic resonance in rocks and to quantify the uncertainty.

Jan 2017 **Modelling Dermal Absorption of Chemicals**, *Syngenta*, ITT5.
Investigated application of random walk models to describe the absorption of chemical particles through the inhomogeneous media of human skin and leaves of plants.

Jun 2016 **Optimising the Drug Development Process**, *AstraZeneca*, ITT4.
Designed a Bayesian decision framework for the end-to-end drug development process and investigated the application of measure-valued optimal stopping to adaptive clinical trials.

Jan 2016 **Developing a Model for Sea Ice**, *Met Office*, ITT3.
Reconstructed historical sea ice concentrations using a Bayesian hierarchical model, incorporating latent Gaussian random fields, implemented in R-INLA.

Grants and Awards

2025 **Submitted Grant Proposal: FWF 1000 Ideen**, *FWF (Austrian Science Fund)*.

2024 **Scientific Research Network of The Research Foundation Flanders Travel Grant**.
Grant to attend *21st Winter School on Mathematical Finance*

2024 **Centre international de rencontres mathémathiques (CIRM) Travel Grant**.
Grant to attend research school *Stochastic and Deterministic Analysis for Irregular Models*

2023 **Scientific Research Network of The Research Foundation Flanders Travel Grant**.
Grant to attend *20th Winter School on Mathematical Finance*

2019 **University of Leeds Travel Grant**.
Grant to attend *2nd Leeds Conference on Stochastic Control and Games under Ambiguity*

2018 **Hausdorff Centre for Mathematics Travel Grant**.
Grant to attend *Hausdorff School: Optimal Transport Meets Economic Theory*

2017–2018 **Grants to organise SIAM UKIE National Student Chapter Conference**.
Grants from: SIAM; IMA; University of Bath Doctoral College, IMI, Dept. Math. Sci.

2017 **SIAM Student Chapter Certificate of Recognition**, *University of Bath*.

2015 **Howell Peregrine Prize for Best Undergraduate Project**, *University of Bristol*.

Academic Service

Jul 2024 **Minisymposium Organiser — 12th Bachelier World Congress**, *Rio de Janeiro, Brazil*.

May 2024 **Hiring Committee**, *Assistant Professor, Department of Statistics, University of Klagenfurt*.

2022–present **Referee**, *Annals of Applied Probability, Mathematics of Operations Research, SIAM Journal on Mathematical Finance, Stochastic Analysis and Applications*.

Jun 2018 **Organiser of SIAM UKIE National Student Chapter Conference**, *University of Bath*.

2017–2018 **Organiser of Postgraduate Seminar Series**, *Dept. Math. Sciences, University of Bath*.

Jun 2017 **Organiser of SAMBa Summer Conference**, *University of Bath*.

Mar 2017 **Organiser of Bath SIAM-IMA Student Conference**, *University of Bath*.

2016–2018 **Treasurer of University of Bath SIAM-IMA Student Chapter**, *University of Bath*.

Programming and Languages

Python, R, MATLAB, Fortran, C, HTML, CSS, SQL

English (Native), German (C1.1), French (B2)

Last updated: May 9, 2025