Alessandro Sgarabottolo

POSTDOCTORAL RESEARCHER AND LECTURER · FINANCIAL AND INSURANCE MATHEMATICS

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Education

Bielefeld University *Bielefeld, Germany*
DR. RER. POL. (PH.D. IN ECONOMICS) *10/2021 - 02/2025*
- Final grade: summa cum laude
- Thesis: Essays on model uncertainty in finance: from optimal transport to nonlinear semigroups
- Supervisor: Prof. Dr. Max Nendel

University of Padua *Padua, Italy*
M.SC. IN MATHEMATICS *10/2016 - 10/2018*
- Final grade: 110/110 e lode (summa cum laude)
- Thesis: Limit theorems for nearly unstable Hawkes processes and their applications

Universität Wien *Vienna, Austria*
EXCHANGE SEMESTER *10/2017 - 02/2018*
- Study focus: Lie groups, theory of distributions, and algebraic topology

University of Padua *Padua, Italy*
B.SC. IN MATHEMATICS *10/2013 - 07/2016*
- Thesis: Renewal processes, theory and examples

Conservatory of Padua *Padua, Italy*
M.A. IN VIOLIN PERFORMANCE (DIPLOMA DI VIOLINO) *09/2001 - 09/2011*
- Final grade: 10/10

Professional Experience

since 2025	**Postdoctoral Researcher and Lecturer**, Department of Mathematics, LMU München, Munich
2024 - 2024	**Research Associate**, School of Physical and Mathematical Sciences, NTU Singapore, Singapore
2021 - 2025	**Research Assistant**, Center for Mathematical Economics, Bielefeld University, Bielefeld, Germany
2019 - 2021	**Senior Quantitative Analyst**, Pricing Unit, Prometeia, Bolgona, Italy
2016 - 2018	**Freelance Violin**, Italy
2013 - 2016	**Violin tutti**, Orchestra L. Cherubini, conductor Riccardo Muti, Piacenza, Italy

Research Interests

Model uncertainty, optimal transport, distributionally robust optimization, machine learning, derivative pricing

Publications

PUBLISHED

A Parametric Approach to the Estimation of Convex Risk Functionals Based on Wasserstein Distance (with M. Nendel). Applied Mathematics and Optimization, 2026. https://doi.org/10.1007/s00245-025-10352-5

Hopf-Lax approximation for value functions of Lévy optimal control problems (with M. Kupper and M. Nendel). *Proceedings of the AMS*, 2025+. https://doi.org/10.1090/proc/17463

Risk measures based on weak optimal transport (with M. Kupper and M. Nendel). *Quantitative Finance*, 2025. https://doi.org/10.1080/14697688.2024.2403540

Preprints

Scaling limits of multi-period distributionally robust optimization problems (with A. Neufeld, M. Nendel, and K. Park). 2025. `https://arxiv.org/abs/2511.20126`

Discrete approximation of risk-based prices under volatility uncertainty (with J. Blessing and M. Kupper). 2024. https://arxiv.org/abs/2411.00713

Assessing swaption portfolios for prepayment risk mitigation: a parametric perspective (with A. Monaco and A. Perrotta). 2023. https://www.sfb1283.uni-bielefeld.de/preprints/view/2866

Presentations

Invited Talks

Oberseminar Workgroup Financial and Insurance Mathematics, LMU Munich, Munich, 20.01.2025

Workshop on Mathematical Finance, Jeju Island (Korea), 01.06.2024

Mini-Workshop on Mathematical Finance, Sungkyunkwan University, Seoul, 24.05.2024

PhD Seminar Series on Financial Modeling, University Paris 1 Panthéon-Sorbonne, online talk, 02.05.2023

Analysis Seminar Series, University College Dublin, Dublin, 7.12.2022

Research seminar, University of Vienna, Department of Mathematics , Vienna, 22.09.2022

Research seminar, University of Konstanz, Department of Mathematics and Statistics, Konstanz, 07.06.2022

Contributed Talks

14th International Symposium on Imprecise Probability: Theory and Applications - ISIPTA 2025, Bielefeld, 18.07.2025

24th Annual SAET Conference, Ischia, 05.07.2025

12th General AMaMeF Conference, Verona, 24.06.2025

INFORMS Conference on Financial Engineering and FinTech, Hong Kong Polytechnic University, Hong Kong, 19-21.08.2024

Bachelier World Congress, Rio De Janeiro, 11.07.2024

XLVII Annual Meeting of the Amases, Università Milano Bicocca, Milan, 22.09.2023

11th General AMaMeF Conference, Bielefeld, 26.06.2023

XXIV Workshop on Quantitative Finance, Angevin Castle, Gaeta, 22.04.2023

German Probability and Statistics Days, University of Duisburg Essen, Essen, 9.03.2023

QED Workshop, University of Vienna, Vienna, 24.09.2022

Workshop on Imprecise Probability and Robust Finance, Cartagena, 19.09.2022

Workshop *Risk Measures and Uncertainty in Insurance*, Leibnizhaus, Hannover, 19.05.2022

Organization of Academic Events

Stochastics and Finance Workshop (LMU Munich), 14.11.2025, co-organizer

18th BiGSEM Workshop (Bielefeld University), 4.05.2023 - 5.05.2023, co-organizer

11th General AMaMeF Conference (Bielefeld University), 26.06.2023 – 30.06.2023, member of the local organizing committee

Reviewing activities

Reviewer for the following international scientific journals: International Journal of Approximate Reasoning, Stochastic Processes and their Applications

Teaching Experience

Fall 2025	**Introduction to Probability**, Instructor	*LMU München*
Fall 2025	**Computational Finance and its Object Oriented Implementation**, Teaching Assistant	*LMU München*
Spring 2025	**Introduction to Object-Oriented Programming in Java**, Instructor	*LMU München*
Spring 2025	**Numerical Methods for Financial Mathematics**, Teaching Assistant	*LMU München*
Fall 2023	**Finance 3: Stochastic Control and Model Uncertainty in Economics and Finance**, Teaching Assistant	*Bielefeld University*
Spring 2023	**Finance 2: Financial Modeling in Continuous Time**, Teaching Assistant	*Bielefeld University*

Skills

Languages Italian (native), English (fluent), French (fluent), German (basic)

Coding Python, Java, R, VBA, Wolfram Mathematica, MATLAB