# Curriculum Vitae
# Max Nendel

## Contact Information

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## Personal Information

Born in Singen am Hohentwiel on May 25th, 1988. Married, two children (1 and 7 years old). German citizen.

## Academic Positions

*Associate Professor* — 12/2024 - Present
Department of Statistics and Actuartial Science, University of Waterloo — Waterloo, Canada

*Junior Professor* (with positive interim evaluation after three years) — 06/2021 - 11/2024
Center for Mathematical Economics, Bielefeld University — Bielefeld, Germany

*Postdoctoral Researcher* — 04/2018 - 05/2021
Center for Mathematical Economics, Bielefeld University — Bielefeld, Germany

*Visiting Lecturer* — 01/2017 - 05/2017
Departamento de Matemáticas y Estadística, Universidad del Norte — Barranquilla, Colombia

*Visiting Lecturer* — 10/2015 - 09/2017
Maschinenbau Konstruktion und Entwicklung, HTWG Konstanz — Konstanz, Germany

*Teaching Assistant* — 05/2014 - 03/2018
Department of Mathematics and Statistics, University of Konstanz — Konstanz, Germany

*Student Teaching Assistant* — 10/2011 - 04/2014
Department of Mathematics and Statistics, University of Konstanz — Konstanz, Germany

## Degrees and Certificates

*Abilitazione Scientifica Nazionale (Italian National Habilitation)* — April 20, 2026
Settore Concorsuale 01/A3 - I Fascia (Professore Ordinario) — until April 20, 2038

*Doctor of Natural Sciences (Dr. rer. nat.)*, Mathematics — December 20, 2017
University of Konstanz — Konstanz, Germany

*Master of Science (M. Sc.)*, Mathematics — March 21, 2014
University of Konstanz — Konstanz, Germany

*Bachelor of Science (B. Sc.)*, Mathematics — July 5, 2012
University of Konstanz — Konstanz, Germany

## Third Party Funding

*Principal Investigator* — 05/2025 - 04/2030
Discovery Grant — 207,500 CAD
Natural Sciences and Engineering Research Council of Canada

*Principal Investigator* — 10/2023 - 11/2024
Research Training Group 2865 — Approx. 470,000 Euro
German Research Foundation

*Principal Investigator* — 01/2022 - 12/2025
Collaborative Research Center 1283, Project C7 — Approx. 400,000 Euro
German Research Foundation

*Co-Investigator* 04/2018 - 12/2021
Collaborative Research Center 1283, Project C5
German Research Foundation

## Grants and Honors

*Sydney Mathematical Research Institute (SMRI)*
International Visitor Program 2024-2025 8,250 AUD

*Best Master Course, Bielefeld University, Faculty of Economics and Business Administration*
Lecture Finance 2, evaluated as the best master course in the summer term 2024

*Best Master Course, Bielefeld University, Faculty of Economics and Business Administration*
Lecture Finance 3, evaluated as one of the three best master courses in the winter term 2023/24

*Wiley Top Cited Article 2021-2022*
Markov chains under nonlinear expectation, published in *Mathematical Finance*

*Karl Peter Grotemeyer-Preis 2021*
Nominee for the Bielefeld University teaching prize

*Deutschlandstipendium* 04/2013 - 03/2014
Scholarship, funded by private sponsors and the Federal Government of Germany 3,600 Euro

## Preprints

33. S. Fuhrmann, M. Kupper, and M. Nendel. An optimal transport foundation for a class of dynamically consistent risk measures. arXiv:2605.21759, 2026.

32. M. Nendel. Asymptotic Behaviour of Unexpected Losses and Risk Ratios for Co-Monotonic Alternatives. arXiv:2605.18049, 2026.

31. S. Della Corte, F. Fuchs, R.C. Kraaij, and M. Nendel. A Strict Comparison Principle for Integro-Differential Hamilton–Jacobi–Bellman Equations on Domains with Boundary. arXiv:2512.04005, 2025.

30. M. Nendel, A. Neufeld, K. Park, and A. Sgarabottolo. Scaling limits of multi-period distributionally robust optimization problems. arXiv:2511.20126, 2025.

29. M. Nendel. Chernoff-Mehler Approximation for Lévy Processes with Drift. arXiv:2511.19414, 2025.

28. J. Dianetti, M. Nendel, L. Tangpi, and S. Wang. Pasting of Equilibria and Donsker-type Results for Mean Field Games. arXiv:2411.00633, 2024.

## Publications

27. J. Blessing and M. Kupper, and M. Nendel. Convergence of infinitesimal generators and stability of convex monotone semigroups. Forthcoming in *SIAM. J. Math. Anal.* (2026+). arXiv:2305.18981

26. F. Fuchs and M. Nendel. Existence of Viscosity Solutions to Abstract Cauchy Problems via Nonlinear Semigroups. *Bull. Lond. Math. Soc.* **58** (2026), e70386 (22 pages). DOI

25. S. Della Corte, F. Fuchs, R.C. Kraaij, and M. Nendel. A comparison principle based on couplings of partial integro-differential operators. *J. Math. Pures Appl.* **210** (2026), 103872 (54 pages). DOI

24. M. Nendel and A. Sgarabottolo. A parametric approach to the estimation of convex risk functionals based on Wasserstein distance. *Appl. Math. Optim.* **93** (2026), 8 (44 pages). DOI

23. M. Kupper, M. Nendel, and A. Sgarabottolo. Hopf-Lax approximation for value functions of Lévy optimal control problems. *Proc. Amer. Math. Soc.* **154** (2026), 243-254. DOI

22. C. De Vecchi, M. Nendel, and J. Streicher. Upper Comonotonicity and Risk Aggregation under Dependence Uncertainty. *Math. Finance* **36** (2026), 118-139. DOI

21. J. Blessing, R. Denk, M. Kupper, and M. Nendel. Convex monotone semigroups and their generators with respect to Γ-convergence. *J. Funct. Anal.* **288** (2025), 110841 (73 pages). DOI

20. M. Kupper, M. Nendel, and A. Sgarabottolo. Risk measures based on weak optimal transport. *Quant. Finance* **25** (2025), 163-180. DOI

19. M. Nendel. Lower semicontinuity of monotone functionals in the mixed topology on $C_b$. *Finance Stoch.* **29** (2025), 261-287. DOI

18. B. Goldys, M. Nendel, and M. Röckner. Operator semigroups in the mixed topology and the infinitesimal description of Markov processes. *J. Differential Equations* **412** (2024), 23-86. DOI

17. P. Kurth, M. Nendel, and J. Streicher. A hypothesis test for the long-term calibration in rating systems with overlapping time windows. *Risks* **12** (2024), 131 (28 pages). DOI

16. M. Nendel and J. Streicher. An axiomatic approach to default risk and model uncertainty in rating systems. *J. Math. Econom.* **109** (2023), 102896 (19 pages). DOI

15. R. Denk, M. Kupper, and M. Nendel. Convex semigroups on lattices of continuous functions. *Publ. Res. Inst. Math. Sci.* **59** (2023), 393-421. DOI

14. J. Dianetti, G. Ferrari, M. Fischer, and M. Nendel. A unifying framework for submodular mean field games. *Math. Oper. Res.* **48** (2023), 1679-1710. DOI

13. S. Fuhrmann, M. Kupper, and M. Nendel. Wasserstein perturbations of Markovian transition semigroups. *Ann. Inst. H. Poincaré Probab. Statist.* **59** (2023), 904-932. DOI

12. F.-B. Liebrich and M. Nendel. Separability vs. robustness of Orlicz spaces: financial and economic perspectives. *SIAM J. Financial Math.* **13** (2022), 1344-1378. DOI

11. M. Nendel and M. Röckner. Upper envelopes of families of Feller semigroups and viscosity solutions to a class of nonlinear Cauchy problems. *SIAM J. Control Optim.* **59** (2021), 4400-4428. DOI

10. J. Dianetti, G. Ferrari, M. Fischer, and M. Nendel. Submodular mean field games: existence and approximation of solutions. *Ann. Appl. Probab.* **31** (2021), 2538-2566. DOI

9. M. Nendel, M.D. Schmeck, and F. Riedel. A decomposition of general premium principles into risk and deviation. *Insurance Math. Econom.* **100** (2021), 193-209. DOI

8. R. Denk, M. Kupper, and M. Nendel. Convex semigroups on $L^p$-like spaces. *J. Evol. Equ.* **21** (2021), 2491-2521. DOI

7. M. Nendel. On nonlinear expectations and Markov chains under model uncertainty. *Internat. J. Approx. Reason.* **130** (2021), 226-245. DOI

6. M. Nendel. Markov chains under nonlinear expectation. *Math. Finance* **31** (2021), 474-507. DOI

5. M. Nendel. A note on stochastic dominance, uniform integrability, and lattice properties. *Bull. Lond. Math. Soc.* **52** (2020), 907-923. DOI

4. R. Denk, M. Kupper, and M. Nendel. A semigroup approach to nonlinear Lévy processes. *Stochastic Process. Appl.* **130** (2020), 1616-1642. DOI

3. B. Barraza, R. Denk, J. Hernández, F. Kammerlander, and M. Nendel. Regularity and asymptotic behavior for a damped plate-membrane transmission problem. *J. Math. Anal. Appl.* **474** (2019), 1082-1103. DOI

2. B. Barraza, R. Denk, J. Hernández, and M. Nendel. Mapping properties for operator-valued pseudodifferential operators on toroidal Besov spaces. *J. Pseudo-Differ. Oper. Appl.* **9** (2018), 523-538. DOI

1. R. Denk, M. Kupper, and M. Nendel. Kolmogorov-type and general extension results for nonlinear expectations. *Banach J. Math. Anal.* **12** (2018), 515-540. DOI

## Selected Talks

18th Bachelier Colloquium (Métabief, France), 13.01.2026
Workshop Quantitative Methods in Finance 2025 (University of Technology, Sydney), 18.12.2025
69th Annual Meeting of the AustMS 2025 (La Trobe University, Melbourne), 09.12.2025
Research Seminar of the Centre for Quantitative Finance (National University of Singapore), 05.12.2025
Stochastics and Finance Workshop (LMU Munich), 14.11.2025
Stochastics in Mathematical Finance and Physics Conference (Hammamet), 23.10.2025
DEMO 2025 (Vrije Universiteit Brussel, held on the island of Andros), 17.09.2025
12th General AMaMeF Conference (Università degli Studi di Verona), 24.06.2025
Coloquio de Matemáticas (Universidad del Norte, Barranquilla), 21.04.2025
Quantact CIMMUL Seminar (Université Laval, Québec), 26.03.2025
Partial Differential Equations – a conference in honor of Robert Denk's 60th birthday (University of Konstanz), 21.03.2025
Stochastics and Finance Seminar (The University of Sydney), 04.02.2025
Talks in Financial and Insurance Mathematics (ETH Zurich), 19.12.2024
DEMO 2024 (Vrije Universiteit Brussel, held on the island of Ischia), 18.09.2024
QFW 2024 (Università degli Studi di Bologna), 12.04.2024
Department Seminar Statistics and Actuarial Science (University of Waterloo), 18.12.2023
Model Risk in Finance: Bridging Theory to Applications (University College Dublin), 11.12.2023
Financial Mathematics Seminar (Princeton University), 03.10.2023
AMASES 2023 (Università degli Studi di Milano-Bicocca), 22.09.2023
Seminar in Probability and Finance (Università degli Studi di Padova), 15.09.2023
The Mathematics of Subjective Probability 2023 (Università degli Studi di Milano-Bicocca), 12.09.2023
Seminário de Probabilidades e Estatística (Universidade de Coimbra), 19.07.2023
ISIPTA 2023 (Universidad de Oviedo), 13.07.2023
11th General AMaMeF Conference (Bielefeld University), 26.06.2023
Stochastic Finance Seminar (The University of Warwick, Coventry), 10.05.2023
QFW 2023 (Università degli Studi di Cassino, held in Castello Angioino, Gaeta), 20.04.2023
RUFE Johannesburg (University of Johannesburg), 07.04.2023
Research Seminar of Xin Guo (UC Berkeley), 16.12.2022
66th Annual Meeting of the AustMS 2022 (University of New South Wales, Sydney), 06.12.2022
Stochastics and Finance Seminar (The University of Sydney), 30.11.2022
MAS Colloquium (NTU Singapore), 10.11.2022
Virtual Informal Systems Seminar (McGill University, Montreal / online), 07.10.2022
AMASES 2022 (Università degli Studi di Palermo), 24.09.2022
Advances in Stochastic Control and Optimal Stopping with Applications in Finance and Economics (CIRM Luminy), 14.09.2022
Mathematics and Financial Economics - Many Player Games and Applications (HU Berlin), 30.08.2022
EURO 2022 (Aalto University, Espoo), 05.07.2022
Oberseminar Rough Paths, Stochastic Partial Differential Equations and Related Topics (TU Berlin), 23.06.2022
FDM Seminar (University of Freiburg), 10.06.2022
Oberseminar Stochastic Analysis (University of Konstanz), 07.06.2022
Taming Uncertainty and Complexity in Economics and Finance (LUISS University, Rome), 27.05.2022
Workshop on Stochastic Games and Martingale Optimal Transport (Università degli Studi di Milano), 06.05.2022

Stochastics and Finance Seminar (The University of Sydney / online), 27.04.2022
13th International Workshop on Stochastic Models and Control (Kiel University, held in Lübeck-Travemünde), 16.03.2022
Berlin Probability Colloquium (Humboldt University, Berlin), 12.01.2022
CMStatistics 2021 (King's College, London / online), 20.12.2021
Weekly Seminars on Risk Management and Actuarial Science (University of Waterloo / online), 09.12.2021
German Probability and Statistics Days 2021 (University of Mannheim / online), 28.09.2021
6th Berlin Workshop for Young Researchers in Mathematical Finance (online), 24.08.2021
ISIPTA 2021 (University of Granada / online), 07.07.2021
UQOP 2020 (online), 17.11.2020
Bernoulli-IMS One World Symposium 2020 (online), 24.08.2020 - 28.08.2020
XIII Congress GAFEVOL (Universidad del Norte, Barranquilla), 29.11.2019
Vienna Congress on Mathematical Finance - VCMF 2019 (WU Vienna), 10.09.2019
ISIPTA 2019 (Ghent University), 06.07.2019
9th general AMaMeF Conference (Sorbonne Université, Paris), 12.06.2019
Research Group Computational Mechanics (TU Munich), 10.07.2018
Workshop - Robust Finance (University of Freiburg), 16.05.2018
Mathematical Finance Seminar (Bielefeld University), 18.04.2018
13th German Probability and Statistics Days (University of Freiburg), 01.03.2018
TULKKA Workshop (University of Ulm), 25.07.2017
Mathematical Colloquium (Universidad de los Andes, Bogotá), 23.03.2017
Spring School on Evolution Equations during the Cátedra Europa 2016 (Universidad del Norte, Barranquilla), 14.03.2016 - 18.03.2016
12th German Probability and Statistics Days (University of Bochum), 02.03.2016
2nd International Workshop on Pseudodifferential Operators and Applications (Universidad del Norte, Barranquilla), 12.03.2015

## Organization of Scientific Events

*ISIPTA 2025*, ZiF, Bielefeld — July 14 - 18, 2025
Chair of the Local Organizing Committee with F. Riedel

*Risk Measures and Uncertainty in Insurance*, Leibnizhaus, Hannover — May 16 - 17, 2024
Organization with F.-B. Liebrich, F. Riedel, and G. Svindland

*ISIPTA 2023*, Universidad de Oviedo — July 11 - 14, 2023
Member of the Program Committee

*11th General AMaMeF Conference*, Ravensberger Spinnerei, Bielefeld — June 26 - 30, 2023
Member of the Local Organizing Committee

*Risk Measures and Uncertainty in Insurance*, Leibnizhaus, Hannover — May 04 - 05, 2023
Organization with F.-B. Liebrich, F. Riedel, and G. Svindland

*Workshop on Imprecise Probability and Robust Finance – ImPRooF*, Universidad Politécnica de Cartagena — September 19 - 21, 2022
Organization with J. De Bock, G. de Cooman, M. Kupper, and J.M. Zapata

*Risk Measures and Uncertainty in Insurance*, Leibnizhaus, Hannover — May 19 - 20, 2022
Organization with F.-B. Liebrich, F. Riedel, and G. Svindland

*ISIPTA 2021*, Granada / online — July 06 - 09, 2021
Member of the Program Committee

*Workshop Equilibria in Markets, Strategic Interactions, and Complex Systems*, ZiF, Bielefeld — July 16 -19, 2019
Member of the Local Organizing Committee

*Equilibria in Financial Markets: General Equilibrium and Game Theoretic Perspectives*, Summer School, Bielefeld University — July 08 - 12, 2019
Member of the Local Organizing Committee

## Editorial Duties

*International Journal of Approximate Reasoning*
Guest Editor for the Special Issue of the ISIPTA 2025

## Peer Reviewing (alphabetic order)

*AIMS Mathematics; Applicable Analysis; Applied Probability Journals; ASTIN Bulletin; Bernoulli; Dynamic Games and Applications; Economic Theory; Electronic Journal of Differential Equations; ESAIM: Probability and Statistics; Finance and Stochastics; Fuzzy Sets and Systems; Insurance: Mathematics and Economics; International Game Theory Review; International Journal of Approximate Reasoning; International Journal of Forecasting; Journal of Banking and Finance; Journal of Evolution Equations; Journal of Mathematical Analysis and Applications; Journal of Mathematical Economics; Mathematical Finance; Mathematical Methods of Operations Research; Mathematics and Financial Economics; Mathematics of Operations Research; Methodology and Computing in Applied Probability; Semigroup Forum; SIAM Journal on Control and Optimization; SIAM Journal on Financial Mathematics; SIAM Journal on Mathematical Analysis; Statistics; Stochastic Processes and their Applications; Stochastics and Dynamics; Stochastics and Partial Differential Equations: Analysis and Computations.*

## Teaching

Spring Term 2026 (University of Waterloo): *Actuarial Risk Management (ACTSC 633); Financial Mathematics III (ACTSC 631)*
Spring Term 2025 (University of Waterloo): *Actuarial Risk Management (ACTSC 633); Mathematics of Financial Markets (ACTSC 446/846)*
Summer Term 2024 (Bielefeld University): *Finance 2; Master and PhD Seminar*
Winter Term 2023/24 (Bielefeld University): *Finance 3; Seminar Finance 3: Stochastic Control and Model Uncertainty in Economics and Finance; Master and PhD Seminar (with F. Riedel)*
Summer Term 2023 (Bielefeld University): *Finance 2*
Summer Term 2022 (Bielefeld University): *Mathematics II for Economics; Master and PhD Seminar (with F. Riedel)*
Winter Term 2021/22 (Bielefeld University): *Mathematics I for Economics; Master and PhD Seminar (with F. Riedel)*
Summer Term 2021 (Bielefeld University): *Mathematics II for Economics*
Summer Term 2019 (Bielefeld University): *Lévy processes: analysis and applications*
Winter Term 2018/19 (Bielefeld University): *Seminar Finance 3: Stochastic Control in Economics and Finance (with G. Ferrari)*
Summer Term 2017 (HTWG Konstanz): *Mathematics 1 for Mechanical Engineering KE (with B. Lege)*
First Term 2017 (Universidad del Norte): *An Introduction to Stochastics and Mathematical Finance in Discrete Time*
Winter Term 2016/17 (HTWG Konstanz): *Mathematics 1 for Mechanical Engineering KE (with B. Lege)*

Winter Term 2011/12 - Winter Term 2017/18 (University of Konstanz): Tutorials in *Analysis I; Analysis II; Analysis III; Functional Analysis; Theory of Partial Differential Equations I; Complex Analysis; Fourier Transform; Stochastics I; Stochastics II; Stochastics III.*

## Supervised PhD Theses

*Fabian Fuchs (April 17, 2026); Alessandro Sgarabottolo (February 18, 2025); Jan Streicher (November 21, 2024); Sven Schweizer, formerly Fuhrmann (supervision with M. Kupper, November 10, 2023).*

## Supervised Master's Theses

*Michael Wertmann (2024); Nina Hollensteiner (2024); Nina Brinkhaus (2024); Diana Epp (2024); Kristina Wegner (2024); Tim Kleine (2022); Shekhzad Khudeeda (2022); Fynn Louis Närmann (supervision with F. Riedel, 2021); Svea Drekshagen (supervision with F. Riedel, 2021); Nathalie Evers (supervision with F. Riedel, 2021); Jonas Urban* *(supervision with F. Riedel, 2020); Katharina Willmann (supervision with F. Riedel, 2020); Xuan Dang (supervision with F. Riedel, 2019); Mohamed Anouar Ait lahbib (supervision with G. Ferrari, 2019); Yolande Tsane Nanfack (supervision with G. Ferrari, 2019).*

## Supervised Bachelor's Theses

*Martin Faigle (supervision with M. Kupper, 2018).*

## Referee for PhD Theses

*Zachary Van Oosten (University of Waterloo, May 13, 2026); Ramiro Peñas Galezo (Universidad del Norte, August 16, 2022); Thomas Krak (Ghent University, May 07, 2021).*

Date: June 2, 2026