

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

<i>Associate Professor</i> Department of Statistics and Actuarial Science, University of Waterloo	12/2024 - Present Waterloo, Canada
<i>Junior Professor</i> (with positive interim evaluation after three years) Center for Mathematical Economics, Bielefeld University	06/2021 - 11/2024 Bielefeld, Germany
<i>Postdoctoral Researcher</i> Center for Mathematical Economics, Bielefeld University	04/2018 - 05/2021 Bielefeld, Germany
<i>Visiting Lecturer</i> Departamento de Matemáticas y Estadística, Universidad del Norte	01/2017 - 05/2017 Barranquilla, Colombia
<i>Visiting Lecturer</i> Maschinenbau Konstruktion und Entwicklung, HTWG Konstanz	10/2015 - 09/2017 Konstanz, Germany
<i>Teaching Assistant</i> Department of Mathematics and Statistics, University of Konstanz	05/2014 - 03/2018 Konstanz, Germany
<i>Student Teaching Assistant</i> Department of Mathematics and Statistics, University of Konstanz	10/2011 - 04/2014 Konstanz, Germany

DEGREES AND CERTIFICATES

<i>Italian National Habilitation (Abilitazione Scientifica Nazionale)</i> Academic Recruitment Field 13/D4 - I Fascia (Full Professor)	June 4, 2026 until June 4, 2038
<i>Italian National Habilitation (Abilitazione Scientifica Nazionale)</i> Academic Recruitment Field 01/A3 - I Fascia (Full Professor)	April 20, 2026 until April 20, 2038
<i>Doctor of Natural Sciences (Dr. rer. nat.)</i> , Mathematics University of Konstanz	December 20, 2017 Konstanz, Germany
<i>Master of Science (M. Sc.)</i> , Mathematics University of Konstanz	March 21, 2014 Konstanz, Germany
<i>Bachelor of Science (B. Sc.)</i> , Mathematics University of Konstanz	July 5, 2012 Konstanz, Germany

THIRD PARTY FUNDING

<i>Principal Investigator</i> Discovery Grant Natural Sciences and Engineering Research Council of Canada	05/2025 - 04/2030 207,500 CAD
<i>Principal Investigator</i> Research Training Group 2865 German Research Foundation	10/2023 - 11/2024 Approx. 470,000 Euro

Principal Investigator
Collaborative Research Center 1283, Project C7
German Research Foundation

01/2022 - 12/2025
Approx. 400,000 Euro

Co-Investigator
Collaborative Research Center 1283, Project C5
German Research Foundation

04/2018 - 12/2021

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 Grottemeyer-Preis 2021
Nominee for the Bielefeld University teaching prize

Deutschlandstipendium
Scholarship, funded by private sponsors and the Federal Government of Germany

04/2013 - 03/2014
3,600 Euro

PREPRINTS

35. C. De Vecchi, M. Nendel, and S. Vanduffel. Hidden Dependence and Aggregate Tail Risk. [arXiv:2606.30193](https://arxiv.org/abs/2606.30193), 2026.
34. B. Goldys and M. Nendel. Absolute Continuity of Monotone Aggregations under Positive Regression Dependence. [arXiv:2606.21042](https://arxiv.org/abs/2606.21042), 2026.
33. S. Fuhrmann, M. Kupper, and M. Nendel. An optimal transport foundation for a class of dynamically consistent risk measures. [arXiv:2605.21759](https://arxiv.org/abs/2605.21759), 2026.
32. M. Nendel. Asymptotic Behaviour of Unexpected Losses and Risk Ratios for Co-Monotonic Alternatives. [arXiv:2605.18049](https://arxiv.org/abs/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](https://arxiv.org/abs/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](https://arxiv.org/abs/2511.20126), 2025.
29. M. Nendel. Chernoff-Mehler Approximation for Lévy Processes with Drift. [arXiv:2511.19414](https://arxiv.org/abs/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](https://arxiv.org/abs/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](https://arxiv.org/abs/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](https://doi.org/10.1017/S0008414X26000000)

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

5th Italian Meeting on Probability and Mathematical Statistics (Università degli Studi di Palermo), 09.06.2026
 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
 RUFÉ 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 Chair of the Local Organizing Committee with F. Riedel	July 14 - 18, 2025
Risk Measures and Uncertainty in Insurance , Leibnizhaus, Hannover Organization with F.-B. Liebrich, F. Riedel, and G. Svindland	May 16 - 17, 2024
ISIPTA 2023 , Universidad de Oviedo Member of the Program Committee	July 11 - 14, 2023
11th General AMAmEF Conference , Ravensberger Spinnerei, Bielefeld Member of the Local Organizing Committee	June 26 - 30, 2023
Risk Measures and Uncertainty in Insurance , Leibnizhaus, Hannover Organization with F.-B. Liebrich, F. Riedel, and G. Svindland	May 04 - 05, 2023

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

July 08 - 12, 2019

School, Bielefeld University

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; Master and PhD Seminar (with F. Riedel)*

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); Shekzad Khudeeda (2022); Fynn Louis Nürmann (supervision with F. Riedel, 2021); Soea Drekshtagen (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).