LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

MRIC | MUNICH RISK AND INSURANCE CENTER

MRIC ANNUAL REPORT 2022

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Prof. Dr. Thomas Ackermann, LL.M. (Chair for Civil Law, European and International Business Law)
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Dr. Johannes Maier (Institute for Risk Management and Insurance)
Prof. Dr. Andreas Richter (Institute for Risk Management and Insurance)

MANAGING DIRECTOR

Dr. Johannes Maier (Institute for Risk Management and Insurance)

2. MEMBERS OF THE MUNICH RISK AND INSURANCE CENTER

PROFESSORS AT LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

Prof. Dr. Thomas Ackermann, LL.M. (Chair for Civil Law, European and International Business Law)
Prof. Dr. Francesca Biagini (Workgroup in Financial and Insurance Mathematics)
PD Dr. Dirk Deckert (Workgroup in Financial and Insurance Mathematics)
Prof. Dr. Ralf Elsas (Institute for Finance and Banking)
Prof. Dr. Florian Englmaier (Chair of Organizational Economics)
Prof. Dr. Christian Fries (Workgroup in Financial and Insurance Mathematics)
Prof. Dr. Markus Glaser (Institute for Capital Markets and Corporate Finance)
Prof. Dr. Thomas Hess (Institute for Information Systems and New Media)
Prof. Dr. Johannes Jaspersen (Professorship for Behavioral Risk Management and Insurance)
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Prof. Dr. Felix-Benedikt Liebrich (Workgroup in Financial and Insurance Mathematics)
Prof. Dr. Thilo Meyer-Brandis (Workgroup in Financial and Insurance Mathematics)
Prof. Stefan Mittnik, Ph.D. (Seminar for Financial Econometrics)
PD Dr. Ari-Pekka Perkkiö (Workgroup in Financial and Insurance Mathematics)
Prof. Dr. Andreas Richter (Institute for Risk Management and Insurance)
Prof. Dr. Simeon Schudy (Chair for Behavioral and Experimental Economics)
Prof. Dr. Manfred Schwaiger (Institute for Market-Based Management)

ASSISTANT PROFESSORS AT LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

Dr. Alexander Kalinin (Workgroup in Financial and Insurance Mathematics)
Dr. Johannes Maier (Institute for Risk Management and Insurance)
Dr. Andrea Mazzon (Workgroup in Financial and Insurance Mathematics)

ASSOCIATED MEMBERS

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Dr. Klaus Bender (Swiss Re)
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Prof. Patricia Born, Ph.D. (Florida State University)
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Prof. Benjamin Collier, Ph.D. (Temple University)
Prof. Randy Dumm, Ph.D. (Temple University)

2. MEMBERS OF THE MUNICH RISK AND INSURANCE CENTER

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Dr. Verena Jäger (Allianz)
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Dr. Lu Li (Munich Re)
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Dr. Michael Wolgast (Berlin Global Advisors)
Dr. Ferdinand Zahn (Munich Re)
Prof. Dr. Aihua Zhang (University of Leicester)

3. PERSONNEL

The following persons worked at the institutes involved in the Munich Risk and Insurance Center during the reporting period:

3.1
PERSONNEL AT THE INSTITUTE FOR RISK MANAGEMENT AND INSURANCE

PROFESSORS
Prof. Dr. Andreas Richter
Hon.-Prof. Thomas Wilson, Ph.D

ASSISTANT PROFESSORS
Dr. Johannes Maier
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3. PERSONNEL

LECTURERS

Dr. Klaus Bender (Swiss Re)
Prof. Patricia Born, Ph.D. (Florida State University)
Prof. Oliver Brand, LL.M. (Universität Mannheim)
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Prof. Randy Dumm, Ph.D. (Temple University)
Prof. Dr. Ralf Elsas (Ludwig-Maximilians-Universität München)
Dr. Florian Gallasch (Munich Re)
Emilio Galli Zugaro (Methodos S.p.A., Orvieto Academy)
Prof. Dr. Dietmar Harhoff (Max-Planck-Institut für Innovation und Wettbewerb)
Prof. Dr. Thomas Hartung (Universität der Bundeswehr München)
Prof. Dr. Thomas Hess (Ludwig-Maximilians-Universität München)
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Dr. Peter Liebwein (Swiss Re)
Prof. Dr. Stefan Mittnik (Ludwig-Maximilians-Universität München)
Dr. Stephanie Müller (Possehl Analytics)
Prof. Dr. Richard Peter (University of Iowa)
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Prof. Dr. Uwe Sunde (Ludwig-Maximilians-Universität München)
Jie Ying, Ph.D. (Southern Illinois University)
Iris Zeppezauer (Sekunde Eins)

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Lukas Huber
Kerry McCabe
Kevin Meyer

3. PERSONNEL

3.2
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PROFESSORS
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PD Dr. Dirk Deckert
Prof. Dr. Christian Fries
Prof. Dr. Lukas Gonon
Prof. Dr. Felix-Benedikt Liebrich
Prof. Dr. Thilo Meyer-Brandis
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Dr. Günter Schwarz (Munich Re)
Dr. Christoph Wagner (EY)
Dr. Yinglin Zhang (Viridium Group)

3. PERSONNEL

3.3 PERSONNEL AT THE CHAIR FOR CIVIL LAW, EUROPEAN AND INTERNATIONAL BUSINESS LAW

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Federico Ernst
Clara Folger
Luca Giehl
Sophie Zäuner

3.4 PERSONNEL AT THE PROFESSORSHIP FOR BEHAVIORAL RISK MANAGEMENT AND INSURANCE

PROFESSOR
Prof. Dr. Johannes Jaspersen

RESEARCH ASSISTANT
Andreas Dambaur

4. COURSES

4.1
COURSES AT THE INSTITUTE FOR RISK MANAGEMENT AND INSURANCE

SUMMER TERM 2022

BACHELOR OF SCIENCE:
Risiko und Versicherung (Jaspersen, Külpp)
Versicherungsbilanzen (Knoller, Stöckl)
Praxis der PR: Communicative Leadership (Galli Zugaro)
Hauptseminar: Insurance Demand and New Business Models (Richter, Müller)
Case Studies in Enterprise Risk Management (Dumm, Hubbel)
START with Business Modelling (Külpp)

MASTER OF SCIENCE:
Insurance Economics (Ying, Holzapfel)
Reinsurance (Liebwein)
Projektkurs: Versicherungsmanagement (Müller)
Value-Based Management of Financial Institutions (Wilson)
Financial Risk Management (Glaser, Richter, Külpp)

MASTER OF BUSINESS RESEARCH:
Microeconomic Modeling Methods (Peter)

ADDITIONAL SEMINARS:
Risk and Microeconomics Research Seminar (Richter)
Vertiefungskolloquium (Holzapfel, Külpp, La Bonte, Richter, Stöckl)

EXECUTIVE MASTER OF INSURANCE:
Corporate Finance (Elsas)
Current Trends in Finance and Insurance (Hartung, Reuß)
Data Analysis (Mittnik)
Insurance Accounting (Gallasch, Knoller)
Value-Based Management of Insurance Companies (Wilson)

4. COURSES

WINTER TERM 2022/2023

BACHELOR OF SCIENCE:
Insurance Management (Maier)
Risiko und Versicherung (Richter, Külpp)
Praxis der PR: Communicative Leadership (Galli Zugaro)
BWL in Theorie und Praxis – Ringvorlesung (Richter)
Hauptseminar: Information and Insurance (Richter, Stöckl)
Proseminar: Catastrophe Risk Management (Born)

MASTER OF SCIENCE:
Advanced Risk Management (Richter, Maier)
Proseminar: Aktuelle Entwicklungen in der Altersvorsorge (Ruß, Kling)
Proseminar: Asset Liability Management (Schwarz)

ADDITIONAL SEMINARS:
Risk and Microeconomics Research Seminar (Richter)
Vertiefungskolloquium (Covis, Holzapfel, Külpp, La Bonte, Lin, Richter, Stöckl)

EXECUTIVE MASTER OF INSURANCE:
Business Models and Current Challenges (Müller, Zeppezauer)
Corporate Governance (Reichl)
Digital Transformation in the Insurance Industry (Kranz, Müller)
General Business Administration (Hartung, Schiller)
General Economics (Harhoff, Sunde, Kretschmer)
Insurance Management and Economics – Principles (Richter)
Insurance Marketing (Schwaiger)
Law and Regulation (Brand, Schiller)
Management Simulation Game (Klotzbücher, von Dehn)
Mathematics Preparatory Course (Knoller)
Quantitative Methods (Knoller)
Risk Management (Bender)
Risk Theory (Knoller, Jaspersen)
Seminar: Insurance Research Projects (Richter)

4. COURSES

4.2
COURSES AT THE WORKGROUP IN FINANCIAL MATHEMATICS

SUMMER TERM 2022

BACHELOR FINANCIAL MATHEMATICS:
Angewandte Finanzmathematik (Perkkiö)

MASTER FINANCIAL MATHEMATICS:
Finanzmathematik III / Fixed Income Markets and Credit Derivates (Meyer-Brandis, Bollweg)
Finanzmathematik IV / Quantitative Risk Management (Gonon, Walter)
Mathematic(al Statistic)s and Application of Machine Learning (Deckert)
Numerical Methods for Financial Mathematics (Fries, Mazzon, Berti)
Introduction to Machine Learning and Quantum Computing (Wilbertz, Fries, Del Toro Barba, Wagner)

ADDITIONAL COURSES:
Forschungsseminar Finanzmathematik (Meyer-Brandis)
Pricing and Hedging Techniques in Incomplete Markets: Mean-Variance Hedging and Risk Minimization (Zhang)
Topics in Machine Learning and Mathematical Finance (Gonon)
Versicherungsmathematisches Kolloquium (Biagini, Fürhaupter, Meyer-Brandis, Schneemeier, Schiller)
Oberseminar Finanz- und Versicherungsmathematik (Biagini, Meyer-Brandis, Scherer, Zagst)
Applications of Convex Optimization (Perkkiö)

WINTER TERM 2022/2023

BACHELOR FINANCIAL MATHEMATICS:
Finanzmathematik in diskreter Zeit (Liebrich, Walter)

MASTER FINANCIAL MATHEMATICS:
Computational Finance and its Object Oriented Implementation (with Application to Interest-Rates and Hybrid Models) (Fries, Mazzon, Berti)
Computational Finance and its Implementation in Python with Applications to Option Pricing, Green Finance and Climate Risk (Mazzon)
Finanzmathematik II / Stochastic Calculus and Arbitrage Theory in Continuous Time (Perkkiö, Bollweg)
Modellierung und Enterprise Risk Management (Schreiber)
Financial Modelling with Stochastic Partial Differential Equations (Kalinin)

ADDITIONAL COURSES:
Ausgewählte Themen der Finanz- und Versicherungsmathematik (Liebrich)
LMU Christmas Workshop in Stochastics and Finance (Perkkiö, Liebrich)
Credit Risk Modelling (Zhang)
Fixpunktsätze und (ökonomische) Anwendungen (Liebrich)
Oberseminar Finanz- und Versicherungsmathematik (Biagini, Meyer-Brandis, Scherer, Zagst)
Quantitative Finance Interview Preparation Class (Walter, Weber)
Forschungsseminar Finanzmathematik (Perkkiö)
Versicherungsmathematisches Kolloquium (Biagini, Liebrich, Fürhaupter, Meyer-Brandis, Schneemeier, Schiller)

4.3 COURSES AT THE PROFESSORSHIP FOR BEHAVIORAL RISK MANAGEMENT AND INSURANCE

SUMMER TERM 2022

BACHELOR OF SCIENCE:
Entscheidungen unter Risiko (Jaspersen, Dambaur)
Behavioral Aspects of Risk Management and Insurance (Jaspersen, Dambaur)
Risiko und Versicherung (Jaspersen, Külpp)

MASTER OF BUSINESS RESEARCH:
Experimental Methods (Jaspersen)
Basic Readings in Accounting and Finance (Jaspersen)

WINTER TERM 2022/2023

BACHELOR OF SCIENCE:
Behavioral Aspects of Risk Management and Insurance (Jaspersen, Dambaur)
Risk Management (Jaspersen)

MASTER OF BUSINESS RESEARCH:
Experimental Methods (Jaspersen)

5. COMPLETED DOCTORAL PROJECTS

Katharina Oberpriller:
Reduced-Form Framework under Model Uncertainty and Generalized Feynman-Kac Formula in the G-Setting

Sandra Zoller:
Essays on the Value of Textual Information for Managerial Behavior under Risk and Uncertainty

6. COMPLETED MASTER THESES (EXECUTIVE MASTER OF INSURANCE)

Improving the P&C Insurance Customer Journey through Digital Innovation
Adverse Selection in Annuity Insurance – Empirical Evidence from the German Market
Corporate Leadership Development in Times of Digital Transformation
The Sustainability Challenge for Insurance Companies
Private Insurance Needs of German Civil Servants on the Example of a Flexible Disability Pension
Digital Nomads in Insurance Industry: A Successful Work Model for the Future?
The Potential of Blockchain Technology in the Insurance Industry
The Impact of Genetic Testing Regulation on Adverse Selection in Insurance Markets
Impact of Electric Vehicles (EVs) and Direct Sales Model (Agency Model) on Motor Insurance
Economic Analysis of Information Asymmetries in German Supplementary Dental Insurance
The AGENDA 2030 on Sustainable Development as Determinant for (Re-)Insurance Product Development
Metaverse — Digitale Revolution oder doch nur Utopie? Eine qualitative Studie über die Potenziale der virtuellen Welt für die Versicherungsbranche

7. FINAL THESES

7.1 FINAL THESES AT THE INSTITUTE FOR RISK MANAGEMENT AND INSURANCE

COMPLETED BACHELOR THESES:

Institutional Differences in Liability Insurance: A Comparison between the United States and Germany
The Impact of Health Insurance on Health
Risk Taking Behavior of Children and Adolescents
Ambiguity in Risk Management Decisions – What Happens If We Do Not Understand What Happens?
The Role of Probability Weighting in Risk Management Decisions
Climate Change is Not a Hoax: The Influence of Cognitive Distortions, News, Culture and Trust on Public Climate Risk Perception
Evaluating Risk Classification Bans
An Analysis of Household Savings Behavior
The Impact of CEO Overconfidence on Firm Performance
The Impact of Gender on the Willingness to Take Risks
Insurance Demand in the Presence of Background Risk
Violations of Expected Utility Theory
Individual vs. Aggregate Risk Aversion: Measurement Approaches
Are Companies Prepared for Cyber Risk?
Time-Varying Risk Aversion and Other Changes in Risk Preferences
The Impact of Social Inflation on the Insurance Industry
The Timing of Prevention Activities
Insurance in Credence Goods Markets – Blessing or Curse?

COMPLETED MASTER THESES:

The Effect of Education and Financial Literacy on Financial Decisions
Claims Auditing and Bonus-Malus Systems: An Analysis of Measures against Insurance Fraud
The Impact of Regret on Insurance Fraud
Intertemporal Prevention Decisions with Multiple Risks
The Impact of Future Income Worries on Household Saving Behavior
The Effect of Telematics on Moral Hazard in Insurance Markets

MASTER THESES IN PROGRESS:

The Impact of Macroeconomic Factors on Insurers‘ Profitability
The Impact of the COVID-19 Pandemic on the Profitability of Insurance Companies in the US
The Value of a Statistical Life in the Light of the Covid-19 Pandemic
The Impact of the COVID-19 Pandemic on the European Insurance Industry

7. FINAL THESES

7.2
FINAL THESES AT THE WORKGROUP IN FINANCIAL AND INSURANCE MATHEMATICS

COMPLETED BACHELOR THESES:

Speculative Bubbles in Discrete Time Financial Market Models
Convex Regularization of the l2-Loss in Two-Layer Neural Networks
On the Andersen-Broadie Algorithm and Other Numerical Methods for Pricing American Options
Optimale Handelsstrategien für Windenergieerzeuger
Über die Preisbildung und den optimalen Handel an Intraday-Strommärkten
Bewertung von Zahlungsströmen aus Verbindlichkeiten mit beschränkter Haftung und Kapitalanforderungen
Regularisierte lineare Regression und Anwendungen mit Lasso
Solving Parametric Kolmogorov Partial Differential Equations via Deep Learning
Path Classification by Stochastic Linear Recurrent Neural Networks
Bermudan Options Pricing with Regression Trees and Random Forests
Exponential Families in Importance Sampling and Pricing in the Black-Scholes Model
Cross Entropy Method for Variance Reduction in the Black-Scholes Model
Convex Optimization Algorithms and their Applications in Finance
Convex Duality for Optimized Certainty Equivalents
Monte Carlo Method with Importance Sampling for Portfolio Credit Risk
LP-Integrators and Stochastic Integration

COMPLETED MASTER THESES:

On the Generalization of Affine Stochastic Volatility Models
Deep Backward Schemes for High-Dimensional Nonlinear Partial Differential Equations and their Implementation for American Option Pricing
Climate Risk under Model Uncertainty
Methods for Survival Data and Competing Risks with an Application to the Insurance Sector
Shifting Martingale Measures and the Birth of a Bubble as a Submartingale
The Nature of ESG Risk Factors and their Incorporation in Contemporary Market Risk Models
A Comparison of Polynomial and Affine Processes
Neural Networks for Option Pricing and Local Volatility Calibration
Rolling the DICE Java Implementation of the DICE Model with Stochastic Interest Rates and Negative Emission Technologies
A Review of Different Deep Learning Techniques for Time Series Backcasting
Signature Regression and an Application to Credit Cycle Forecasting
Deep Hedging in Varying Market Models

Neural Network Approximations of European Option Prices in Exponential Lévy Models
Option-Based Static and Deep Hedging
Stochastic Processes and their Application to Valuation of Equity-Linked Life Insurance Contracts
Including the Dilution Effect into Heston´s Volatility Model
Frequency-Severity Modelling in the Presence of Nil-Claims
Nonlinear Filtering in Models for Interest Rate and Credit Risk
Approximate Dynamic Programming with Convex Neural Networks - Theory and Implementation

7.3
FINAL THESES AT THE PROFESSORSHIP OF BEHAVIORAL RISK MANAGEMENT AND INSURANCE

COMPLETED BACHELOR THESES:

Present Bias
Determinants of Risk-Taking Behaviour: Utility Curvature and Probability Weighting – Theory and Empirical Evidence
(Fehl-)Wahrnehmung von Risiken – Heuristiken und Verzerrungen bei der Beurteilung von Risiken
The Description Experience Gap
Insurance-Linked Securities
Overconfidence and Risk-Taking

8. PUBLICATIONS

Akhtari, B., Biagini, F., Mazzon, A. and Oberpriller, K.: Generalized Feynman-Kac Formula under Volatility Uncertainty, Stochastic Processes and their Applications, 2022

Baillon, A., Bleichrodt, H., Emirmahmutoglu, A., Jaspersen, J. and Peter, R.: When Risk Perception Gets in the Way: Probability Weighting and Underprevention, Operations Research, 70, 3, 1371-1392, 2022

Biagini, F., Gonon, L. and Reitsam, T.: Neural Network Approximation for Superhedging Prices, Mathematical Finance, 33, 1, 146-184, 2022

Biagini, F., Mazzon, A. and Oberpriller, K.: Reduced-Form Framework for Multiple Default Times under Model Uncertainty, Stochastic Processes and their Applications, 156, 1-43, 2023

Browne, M., J., Jäger, V., Richter, A. and Steinorth, P.: Family Changes and the Willingness to Take Risks, Journal of Risk and Insurance, 89, 1, 187-209, 2022

Cuchiero, C., Gonon, L., Grigoryeva, L., Ortega, J., P. and Teichmann, J.: Discrete-Time Signatures and Randomness in Reservoir Computing, IEEE Transactions on Neural Networks and Learning Systems, 33, 11, 6321-6330, 2022

Detering, N., Meyer-Brandis, T., Panagiotou, K. and Ritter, D.: Suffocating Fire Sales, SIAM Journal on Financial Mathematics, 13, 1, 70108, 2022

Gonon, L., Grohs, P., Jentzen, A., Kofler, D. and Siska, D.: Uniform Error Estimates for Artificial Neural Network Approximations for Heat Equations, IMA Journal of Numerical Analysis, 42, 3, 1991-2054, 2022

Huber, T., Jaspersen, J., Richter, A. and Strümpel, D.: On the Change of Risk Aversion in Wealth: Evidence from a Closed Economic System, Experimental Economics, 26, 1, 1-26, 2023

Jaspersen, J., Ragin, M. and Peter, R.: Probability Weighting and Insurance Demand in a Unified Framework, Geneva Risk and Insurance Review, 48, 63–109, forthcoming

Jaspersen, J., Ragin, M. and Sydnor, J.: Insurance Demand Experiments: Comparing Crowdworking to the Lab, Journal of Risk and Insurance, 89, 4, 1077-1107, 2022

Jaspersen, J., Ragin, M. and Sydnor, J.: Predicting Insurance Demand from Risk Attitudes, Journal of Risk and Insurance, 89, 1, 63-96, 2022

Jaspersen, J.: Convex Combinations in Judgment Aggregation, European Journal of Operational Research, 299, 2, 780-794, 2022

Jaspersen, J.: When Full Insurance May Not Be Optimal: The Case of Restricted Substitution, Health Economics, 31, 6, 1249-1257, 2022

8. PUBLICATIONS

Liebrich, F. and Munari, C.: Law-Invariant Functionals that Collapse to the Mean: Beyond Convexity, Mathematics and Financial Economics, 16, 447-480, 2022

Liebrich, F. and Nendel, M.: Separability vs. Robustness of Robust Orlicz Spaces: Financial and Economic Perspectives, SIAM Journal on Financial Mathematics, 13, 4, 1344-1378, 2022

Liebrich, F., Maggis, M. and Svindland, G.: Model Uncertainty: A Reverse Approach, SIAM Journal on Financial Mathematics, 13, 3, 1230-1269, 2022

Pennanen, T. and Perkkiö, A., P.: Topological Duals of Locally Convex Function Spaces, Positivity, 26, 2, 63-96, 2022

9. WORKING PAPERS

Amarante, M. and Liebrich, F.: Disentangling Distortion Risk Measures and the Expected Shortfall

Bauer, M., Berti, L. and Meyer -Brandis, T.: Strong Solutions of Mean-Field SDEs with Irregular Expectation Functionals in the Drift

Beck, C., Gonon, L. and Jentzen, A.: Overcoming the Curse of Dimensionality in the Numerical Approximation of High-Dimensional Semilinear Elliptic Partial Differential Equations

Bercher, A., Gonon, L., Jentzen, A. and Salimova, D.: Weak Error Analysis for Stochastic Gradient Descent Optimization Algorithms

Biagini, F., Bollweg, G. and Oberpriller, K.: Optional Projections of Local Martingales

Biagini, F., Gonon, L., Mazzon, A. and Meyer -Brandis, T.: Detecting Asset Price Bubbles Using Deep Learning

Biagini, F., Mazzon, A. and Perkkiö, A., P.: Optional Projections of Local Martingales

Biagini, F., Mazzon, A., Meyer -Brandis, T. and Oberpriller, K.: Liquidity Based Modeling of Asset Price Bubbles via Random Matching

Dambaur, A., Ericson, K., Jaspersen, J. and Zoller, S.: Risk Management and the Autonomy of Labor

Gonon, L., Grigoryeva, L. and Ortega, J., P.: Reservoir Kernels and Volterra Series

Gonon, L.: Deep Neural Network Expressivity for Optimal Stopping Problems

Gonon, L.: Random Feature Neural Networks Learn Black-Scholes Type PDEs without Curse of Dimensionality

Holzapfel, J., Peter, R. and Richter, A.: Mitigating Moral Hazard with Usage-Based Insurance

Holzapfel, J.: Classification Risk in Health Insurance: The Interaction of Genetics, Prevention, and Insurance

Kalinin, A., Meyer-Brandis, T. and Proske, F.: Stability, Uniqueness, and Existence of Solutions to McKean-Vlasov SDEs in Arbitrary Moments

9. WORKING PAPERS

Liebrich, F.: Are Reference Measures of Law-Invariant Functionals Unique?

Maier, J. and Fischer, D.: What Causes the Disposition Effect? A Model-Independent Analysis

Pennanen, T. and Perkkiö, A., P.: Dual Solutions in Convex Stochastic Optimization

Pennanen, T. and Perkkiö, A., P.: Dual Spaces of Cadlag Processes

Pennanen, T. and Perkkiö, A., P.: Duality in Convex Stochastic Optimization

Pennanen, T. and Perkkiö, A., P.: Dynamic Programming in Convex Stochastic Optimization

Pennanen, T. and Perkkiö, A., P.: Optimal Stopping without Snell Envelopes

Perkkiö, A., P. and Trevino, E.: Convex Duality for Partial Hedging of American Options

Perkkiö, A., P. and Trevino, E.: Convex Integral Functionals of Cadlag Processes

Perkkiö, A., P. and Trevino, E.: Michael Selections and Castaing Representations with Cadlag Functions

Richter, A., Schiller, J. and Stöckl, E.: Insurance in Credence Goods Markets - Risk Transfer and Fraud Prevention

Stöckl, E.: The Impact of Claimant Fraud on Optimal Coverage in Liability Insurance

10. CONFERENCE PRESENTATIONS AND INVITED LECTURES

Bachelier Finance Society World Congress, online, June 2022: Neural Network Approximations for the Superhedging Prices (Biagini)

CEAR/MRIC Behavioral Insurance Workshop, Munich, Germany, December 2022: Risk Management and the Autonomy of Labor (Dambauer)

4th International Conference on Computational Finance, Wuppertal, Germany, June 2022: Non-Linear Discounting and Default Compensation: When the Social Discount Rate May Become Negative (Fries)

American Risk and Insurance Association Annual Meeting, Long Beach, USA, August 2022: Technology Improvements in Monitoring – Do Policyholders Benefit? (Holzapfel)

European Group of Risk and Insurance Economists Seminar, Vienna, Austria, September 2022: Technology Improvements in Monitoring – Do Policyholders Benefit? (Holzapfel)

SCOR-TSE Annual Conference on Risk Markets and Value Creation, Toulouse, France, October 2022: Classification Risk in Health Insurance: The Interaction of Genetics, Prevention, and Insurance (Holzapfel)

Interdisziplinäres Wissenschaftliches Kolloquium, Coburg, Germany, November 2022: Classification Risk in Health Insurance: Regulierungsansätze zur Verwendung Genetischer und Verhaltensbezogener Informationen in der Krankenversicherung (Holzapfel)

CEAR/MRIC Behavioral Insurance Workshop, Munich, Germany, December 2022: Classification Risk in Health Insurance: Mitigating Moral Hazard with Usage-Based Insurance (Holzapfel).

Munich Finance Day, Munich, Germany, February 2022: A Model of Anchoring and Adjustment for Decision-Making under Risk (Jaspersen)

Munich Finance Day, Munich, Germany, July 2022: Household Take-Up of Subsidized Insurance (Jaspersen)

American Risk and Insurance Association Annual Meeting, Long Beach, USA, August 2022: Insurance Demand Experiments: Comparing Crowdworking to the Lab (Jaspersen)

European Group of Risk and Insurance Economists Seminar, Vienna, Austria, September 2022: A Model of Anchoring and Adjustment for Decision-Making under Risk (Jaspersen)

European Group of Risk and Insurance Economists Seminar, Vienna, Austria, September 2022: Household Take-Up of Subsidized Insurance (Jaspersen)

10. CONFERENCE PRESENTATIONS AND INVITED LECTURES

German Finance Association Annual Meeting, Marburg, Germany, September 2022: Household Take-Up of Subsidized Insurance (Jaspersen)

CEAR/MRIC Behavioral Insurance Workshop, Munich, Germany, December 2022: Household Take-Up of Subsidized Insurance (Jaspersen)

3rd BYO Workshop in Probability and Finance, Munich, Germany, February 2022: Stability, Uniqueness and Existence of Solutions to McKean-Vlasov SDEs (Kalinin)

10th Austrian Stochastics Days, Vienna, Austria, September 2022: Stability, Uniqueness and Existence of Solutions to McKean-Vlasov SDEs (Kalinin)

Risk Measures and Uncertainty in Insurance, Hannover, Germany, May 2022: Law Invariance Vs. Heterogeneity in Risk Sharing (Liebrich)

Risk, Uncertainty, and Decision, Paris, France, June 2022: Disentangling Distortion Risk Measures and the Expected Shortfall (Liebrich)

De Finetti Risk Seminar, Milan, Italy, September 2022: Fréchet, Lyapunov, Marinacci: A Tale of One (or Many) Probabilities (Liebrich)

10th Austrian Stochastics Days, Vienna, Austria, September 2022: Law Invariance Vs. Heterogeneity in Risk Sharing (Liebrich)

Seminar on Risk and Insurance, Department of Banking and Finance, Zurich, Switzerland, November 2022: Distortion Risk Measures: Prudence, Coherence, and the Expected Shortfall (Liebrich)

Society for Experimental Finance Conference, Bonn, Germany, June 2022: Behavioral Biases in Financial Decision Making (Maier)

CEAR/MRIC Behavioral Insurance Workshop, Munich, Germany, December 2022: What Causes the Disposition Effect? A Model-Independent Analysis (Maier)

4th International Conference on Computational Finance, Wuppertal, Germany, June 2022: Detecting Asset Price Bubbles Using Deep Learning (Mazzon)

10th Advanced Mathematical Methods for Finance Conference, Palermo, Italy, September 2022: Generalized Feynman-Kac Formula Under Volatility Uncertainty (Mazzon)

10. CONFERENCE PRESENTATIONS AND INVITED LECTURES

GrEnFin Project Final Conference, Bologna, Italy, October 2022: Optimal Portfolio Choice under Climate Risk and Model Uncertainty (Mazzon)

CFMAR Seminar, Santa Barbara, USA, November 2022: Detecting Asset Price Bubbles Using Deep Learning (Mazzon)

Joint Seminar of Peking University, Tsinghua University, and Renmin University of China, online, December 2022: Risk, Insurance, and Uncertainty Economics (Richter)

Allied Social Sciences Associations Annual Meeting, online, January 2022: The Effect of Insurance on Pricing Strategies and Fraud in Markets for Repair Goods (Stöckl)

VHB Annual Conference, online, March 2022: The effect of Insurance on Pricing Strategies and Fraud in Markets for Repair Goods (Stöckl)

Annual Conference of the German Association for Insurance Science e.V. (DVfVW), online, March 2022: The Impact of Claimant Fraud on Optimal Coverage in Liability Insurance (Stöckl)

German Finance Association Annual Meeting, Marburg, Germany, September 2022: The Impact of Claimant Fraud on Optimal Coverage in Liability Insurance (Stöckl)

Southern Economic Association Annual Meeting, Fort Lauderdale, USA, November 2022: The Impact of Claimant Fraud on Optimal Coverage in Liability Insurance (Stöckl)

Machine Learning and Monte-Carlo in Insurance, Munich, Germany, September 2022: Deep Calibration of High-Dimensional Stochastic Volatility Models Using ReLU Network Approximation (Walter)

CFMAR Seminar, University California Santa Barbara, Santa Barbara, USA, October 2022: Deep Calibration of High-Dimensional Stochastic Volatility Models Using ReLU Network Approximation (Walter)

11. AWARDS, GRANTS AND SCHOLARSHIPS

Preis für den engagiertesten Nachwuchswissenschaftler in der Lehre, Fachschaft BWL (Külpp)

Stipendium, Verein zur Förderung der Versicherungswissenschaft in München e.V. (Steibel)

Stipendium, Verein zur Förderung der Versicherungswissenschaft in München e.V. (Walter)

12. DOCTORAL WORKSHOPS

MRIC Winter Workshop, St. Johann, Austria, January 2022

MRIC Summer Workshop, St. Johann, Austria, July 2022

Behavioral Risk Management and Insurance Workshop, Munich, Germany, December 2022

13. DOCTORAL RESEARCH IN PROGRESS

Berti, Lorenzo: Multi-Dimensional Mean-Field SDEs with Irregular Expectation Functional in the Drift

Bollweg, Georg: Stochastic Models with Parameter Uncertainty

Covis, Leonardo: Essays on Risk Management and Insurance

Dambaur, Andreas: Essays in Insurance Demand

Holzapfel, Julia: Essays on Risk Management and Insurance

Külpp, Leonard: Essays on Risk Management and Insurance

La Bonte, Paulina: Essays on Risk Management and Insurance

Lin, Jialing: Essays on Risk Management and Insurance

Oberpriller, Katharina: Mathematical Models for Insurance Markets

Steibel, Annika: Stability Analysis of Pandemic Models

Stöckl, Elisabeth: Essays on Risk Management and Insurance

Walter, Niklas: Topics of Rough Volatility Models and Machine Learning in Finance

Weber, Niklas: Computing Systemic Risk Measures via Graph Neural Networks

14. ACADEMIC VISITORS TO THE MRIC

Prof. Randy Dumm, Ph.D. (Temple University): May 2022

Prof. Martin Halek, Ph.D. (University of Calgary): July 2022

Prof. Alexander Mürmann, Ph.D. (Wirtschaftsuniversität Wien): January 2022

Prof. Dr. Richard Peter (University of Iowa): June 2022

Prof. Dr. Jörg Schiller (Universität Hohenheim): January and July 2022

Jie Ying, Ph.D. (Southern Illinois University): June to July 2022

15. EXCHANGE PROGRAMS

STUDENT EXCHANGE

Collaborations with Florida State University and Georgia State University for student exchanges in the field of risk and insurance

Collaborations with University Paris Saclay and University of Bologna for a double degree in Business Mathematics

DOCTORAL EXCHANGE

Due to the Covid-19 pandemic, no doctoral exchanges took place in 2022

16. EVENTS HOSTED BY THE MRIC

CONFERENCES

CEAR/MRIC Behavioral Insurance Workshop 2022, Katholische Akademie in Bayern, Munich, Germany, December 2022

SEMINARS

Marc Ragin, Ph.D. (University of Georgia), Risk & Microeconomics Seminar: Financing Negative Shocks: Evidence from Hurricane Harvey

Jie Ying, Ph.D. (Southern Illinois University), Risk & Microeconomics Seminar: Peer-Based R2 and Mutual Fund Performance

COURSES HELD BY INTERNATIONAL GUEST LECTURERS

Prof. Patricia Born, Ph.D. (Proseminar: Catastrophe Risk Management)

Prof. Dr. Richard Peter (Microeconomic Modeling Methods)

Prof. Randy Dumm, Ph.D. (Case Studies in Enterprise Risk Management)

GUEST LECTURES

Jörg Schiller (Universität Hohenheim) in the lecture Risiko und Versicherung: Versicherungstechnische Risikopolitik

Dr. Klaus Math (LV 1871) in the lecture BWL in Theorie und Praxis: Die Versicherung existenzieller Lebensrisiken – eine spannende Herausforderung

INAUGURAL LECTURES

Prof. Dr. Johannes Jaspersen: How Do We Make Decisions under Risk?

Hon.-Prof. Thomas Wilson, Ph.D: Insurance Value and Capital Management: A Case Study Based on the Covid Experience

17. PROFESSIONAL BOARD MEMBERSHIPS AND ACADEMIC SERVICE

17.1
PROF. DR. THOMAS ACKERMANN, LL.M.

Editorial Board, Common Market Law Review

Editorial Board, Neue Zeitschrift für Kartellrecht

Head and Coordinator of the MUST (Munich University Summer Training) Program in German and European Law

Member of the Selection Committee "Juristische Bücher des Jahres"

Referee for National and International Academic Organizations and Institutions (DFG, DAAD, Studienstiftung, NVAO, EUI)

17.2
PROF. DR. FRANCESCA BIAGINI

President of the Bachelier-Finance Society

Vice-President of LMU for International Affairs and Diversity

17.3
PROF. DR. THILO MEYER-BRANDIS

Co-Director of quantLab@LMU: Computer Laboratory for Quantitative Risk Control

Managing Board, German Data Science Society

Advisory Board, Frankfurter Institut für Risikomanagement und Regulierung (FIRM)

17. PROFESSIONAL BOARD MEMBERSHIPS AND ACADEMIC SERVICE

17.4 PROF. DR. JOHANNES JASPERSEN

Editorial Board, Journal of Risk and Insurance

17.5 PROF. DR. ANDREAS RICHTER

Vice Dean of the Munich School of Management

Academic Director of the Executive Master of Insurance Program

Past President of the American Risk and Insurance Association

Executive Board, European Group of Risk and Insurance Economists

International Advisory Board, Risk and Insurance Research Center, National Chengchi University, Taiwan

Advisory Board, SKKU Graduate School of Insurance, South Korea

Advisory Board, Federal Financial Supervisory Authority (BaFin)

Advisory Board, Insurance Ombudsmann

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This report refers to the calendar year 2022. For seminar series or courses, which can be attributed to one semester, the report refers to the summer term 2022 and the winter term 2022/2023. With regard to final theses, this report lists submissions within the calendar year 2022.

Facts concerning the Workgroup in Financial and Insurance Mathematics and the Chair for Civil Law, European and International Business Law are reported whenever they reflect topics related to the field of risk management and insurance.

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