Mark Podolskij

Professor of Statistics and Probability
Department of Mathematics
University of Luxembourg
(Web page at University of Luxembourg)

Maison du Nombre
6 Avenue de la Fonte
L-4364 Esch-sur-Alzette
☎ *+352-4666445545*
✉ *mark.podolskij@uni.lu*

Personal

Date of Birth: 01 September 1, 1979.

Place of Birth: Elektrostal, Russia.

Citizenship: German.

Education

2003–2006 **Ph.D. in Mathematics**, *Ruhr University of Bochum*, Germany.
Title: "New Theory on Estimation of Integrated Volatility with Applications"
(**summa cum laude**), Supervisor: Prof. Holger Dette.

1999–2003 **Diploma in Mathematics**, *Ruhr University of Bochum*, Germany.
Title: "Goodness-of-Fit Test for the Diffusion Coefficient"
(**with distinction**), Supervisor: Prof. Holger Dette.

Academic Appointments

2020–now **Full Professor of Statistics and Probability**, Department of Mathematics, University of Luxembourg, Luxembourg.

2014–2020 **Full Professor of Statistics and Probability**, Department of Mathematics, Aarhus University, Denmark.

2010–2014 **Full Professor of Statistics and Probability**, Department of Mathematics, Heidelberg University, Germany.

2008–2010 **Postdoctoral Fellow**, Department of Mathematics, ETH Zurich, Switzerland.

2007–2008 **Postdoctoral Fellow**, Department of Mathematics, Aarhus University, Denmark.

2006–2007 **Research Assistant**, Department of Mathematics, Ruhr University of Bochum, Germany.

2004 **Ph.D. Student**, Department of Mathematics, University of Paris VI, France.

Research Interests

Statistics High frequency data, inference for stochastic processes, non-parametric statistics, goodness-of-fit testing, high dimensional data, Le Cam theory, minimax bounds.

Probability Limit theorems, diffusions and fractional processes, Malliavin calculus, Stein's method, rough path theory, random matrix theory, numerical methods for stochastic processes.

Finance Estimation of volatility, statistical analysis of price models.

Physics Stochastic modelling of turbulence, intermittency, ambit fields.

Research Activity

I have **65** publications in top international statistics and probability journals such as **Annals of Statistics**, **Annals of Probability**, **Annals of Applied Probability**, **Annales de l'Institut Henri Poincaré**, **Bernoulli**, **Electronic Journal of Statistics**, **Electronic Journal of Probability**, **Finance and Stochastics**, **Stochastic Processes and Their Applications** among others. According to Google Scholar my citation number is **4300+**, my h-index is **30** and my i-index is **41**.

Editorial Work

2023–now **Associate Editor** of *Bernoulli.*

2019–2022 **Editor-in-Chief** of *Bernoulli.*

2018–2020 **Associate Editor** of *Scandinavian Journal of Statistics.*

2015–2020 **Editor-in-Chief** of *SpringerBriefs in Probability and Mathematical Statistics.*

2015–2017 **Associate Editor** of *Journal of Econometrics.*

2014–now **Associate Editor** of *Modern Stochastics: Theory and Applications.*

2013–now **Advisory Board Member** of *Lecture Notes in Mathematics*, Springer.

2013–2018 **Associate Editor** of *Latin American Journal of Probability and Mathematical Statistics.*

2013–2018 **Associate Editor** of *Bernoulli.*

2011–2014 **Associate Editor** of *Statistica Sinica.*

2011–now **Associate Editor** of *Statistics and Risk Modeling.*

2010–2013 **Associate Editor** of *Electronic Journal of Statistics.*

Supervision

2008–2018 Supervision of **11** postdoctoral fellows, **13** Ph.D. students and **30+** bachelor/master students.

Grants

2022–2027 **Co-PI** of the FNR Grant *MATHCODA: Mathematical Tools For Complex Data Structures*, (around **1.5 Mio** Euro).

2019–2024 **PI** of the **ERC Consolidator Grant** *STAMFORD: Statistical Methods for High Dimensional Diffusions*, (**1.65 Mio** Euro).

2016–2020 **PI** of the research project *Ambit fields: Probabilistic Properties and Statistical Inference*, Villum Fonden (**1.5 Mio** Euro).

2015–2019 **Co-PI** of the project *Identifying the structure of volatility in financial markets using ultra high-frequency data*, DFF - 4182-00050 (**490.000** Euro).

2013 **Visiting Professor** at University of Paris 13 (1 month).

2013 **Co-PI** of the *Research Training Group: Statistical Modeling of Complex Systems and Processes: Advanced Nonparametric Approaches.* Speaker of Team Heidelberg. German Research Foundation (**4 Mio** Euro).

2013 **Research and Travelling Grant** from *Europlace Place Institute of Finance* (**10.000** Euro).

Selected Professional Activities

2022 **Chair of the Publication Committee** of the *Bernoulli Society.*

2022 **Chair** of the Scientific Committee of the *ISI 64rd World Statistics Congress.*

2021 **Co-Chair** of the *15th International Conference on Computational and Financial Econometrics.*

2021 **Deputy Chair** of the *ISI 63rd World Statistics Congress.*

2019 **Member of Scientific Program Committee** of the *9th International Conference on Lévy Processes.*

2018 **Member of Scientific Program Committee** of the *9th International Workshop on Applied Probability.*

2017 **Co-Leader** of the section *Science and Engineering of Machine Intellegence* of DIGIT (*Centre for Digitalisation, Big Data and Data Analytics*).

2017 **Representative** of the *Bernoulli Society* at *ISI 62th World Statistics Congress.*

2017 **Member of the Executive Committee** of the *Bernoulli Society.*

2013–2014 **Heidelberg Speaker** of the Graduate School *Statistical Modeling of Complex Systems and Processes: Advanced Nonparametric Approaches.*

2012–2017 **Membership Secretary** of the *Bernoulli Society.*

2011–2014 **Deputy Director** of MATCH (*MAThematics Center Heidelberg*).

2010–2018 **External Member** of **4** habilitation committees, **10+** Ph.D. committees and **Reviewer** for science foundations in Austria, China, Finland, Germany, Israel, Poland, Romania and USA.

Membership in Scientific Societies

2016–now **Member** of the *Institute of Mathematical Statistics.*

2011–now **Elected Member** of the *International Statistical Institute.*

2011–now **Member** of the *Bernoulli Society.*

2010–now **Member** of the *German Mathematical Association.*

Awards and Honours

2018 **ERC Consolidator Grant** *STAMFORD: Statistical Methods for High Dimensional Diffusions.*

2013 **Award** for one of 10 Most Cited Articles 2005-2010 in *Stochastic Processes and Their Applications* for the paper "Microstructure Noise in the Continuous Case: The Pre-averaging Approach".

2001–2006 **Scholarship** from the *German National Academic Foundation.*

My Research Group

Dr. Wangjun Yuan, random matrix theory.

Dr. Chiara Amorino, statistics for stochastic processes.

Ph.D. student Nicolas Lengert, statistical inference for pure jump processes.

Ph.D. student Shi-Yuan Zhou, estimation of McKean-Vlasov SDEs.

Ph.D. student Akram Heidari, parametric estimation of McKean-Vlasov SDEs.

Ph.D. student Francisco Pina Monzo, estimation of high-dimensional diffusions.

Former Postdoctoral Fellows

Prof. Johanna Ziegel, University of Bern, Switzerland.

Assoc. Prof. Joachim Lebovits, University Paris 13, France.

Assoc. Prof. Bezirgen Veliyev, Aarhus University, Denmark.

Assoc. Prof. Orimar Sauri, Aalborg University, Denmark.

Assoc. Prof. Johannes Heiny, University of Stockholm, Sweden.

Ass. Prof. Stepan Mazur, Örebro University, Sweden.

Ass. Prof. Vytaute Pilipauskaite, Aalborg University, Denmark.

Dr. Mikkel Slot Nielsen, Aarhus, Denmark.

Dr. Dmytro Marushkevych, University of Copenhagen, Denmark.

Dr. Gabriela Ciolek, Paris, France.

Former Ph.D. Students

Prof. Dr. Mathias Vetter, Ph.D. thesis: "Estimation methods in noisy diffusion models".

Prof. Dr. Silja Kinnebrock, Ph.D. thesis: "Asymptotic results for semimartingales and related processes with econometric applications".

Prof. Dr. Daniel Ziggel, Ph.D. thesis: "Modellierung von Wertpapierverläufen. Neue Test- und Schätzverfahren für Hochfrequenzdaten".

Dr. Tony Huschto, Ph.D. thesis: "Numerical methods for random parameter optimal control and the optimal control of stochastic differential equations".

Dr. Christian Schmidt, Ph.D. thesis: "U- and V-statistics of Itô semimartingales".

Dr. Nopporn Thamrongrat, Ph.D. thesis: "Stable convergence in statistical inference and numerical approximation of stochastic processes".

Dr. Claudio Heinrich, Ph.D. thesis: "Fine scale properties of ambit fields - limit theory and simulation".

Dr. Dmitry Otryakhin, Ph.D. thesis: "Estimation and numerical simulation of the linear fractional stable motion and related processes".

Ph.D. student Mathias Ljungdahl, Ph.D. thesis: "Heavy-tailed Lévy-driven moving averages".

Ph.D. student Anine Eg Bolko, Ph.D. thesis: "Modelling and forecasting fractional volatility"".

Selected Invited and Plenary Talks

2023 **Invited Speaker** at the *European Meeting of Statisticians*, Warsaw.

2023 **Invited Speaker** at the *NordStat Meeting*, Gothenburg.

2023 **Invited Speaker** at the *SIAM Conference on Financial Mathematics and Engineering*, Philadelphia.

2022 **Invited Speaker** at the *16th International Conference on Computational and Financial Econometrics*, London.

2022 **Invited Speaker** at the *Lévy Processes: Theory and Applications*, Mannheim.

2022 **Invited Speaker** at the *IMS Meeting 2022*, London.

2021 **Special Invited Speaker** at the *15th International Conference on Computational and Financial Econometrics*, London.

2021 **Plenary Speaker** at *Modern Stochastics: Theory and Applications*, Kyiv.

2019 **Special Invited Speaker** at the *13th International Conference on Computational and Financial Econometrics*, London.

2019 **Invited Speaker** at *Risk and Statistics*, Ulm.

2019 **Invited Speaker** at *ISI 62nd World Statistics Congress*, Kuala Lumpur.

2019 **Plenary Speaker** at *Stochastic Models, Statistics and their Applications*, Dresden.

2018 **Invited Speaker** *Advances in Nonparametric and High-Dimensional Statistics*, Frejus.

2018 **Invited Speaker** at the *90th Anniversary of Academica Sinica*, Taiwan.

2018 **Invited Speaker** at Distinguished Session of *The 5th Institute of Mathematical Statistics Asia Pacific Rim Meeting*, Singapore.

2018 **Invited Speaker** at *Joint 2018 IMS Annual Meeting / 12th International Vilnius Conference on Probability Theory and Mathematical Statistics*, Vilnius.

2018 **Invited Speaker** at *Inference for Energy Markets*, Paris.

2018 **Invited Speaker** at *Stochastic Analysis and Its Applications*, Oaxaca.

2018 **Invited Speaker** at *8th International Workshop on High-Dimensional Analysis*, Marrakech.

2017 **Invited Speaker** at *SIAM Conference on Mathematical Modelling in Finance*, London.

2017 **Invited Speaker** at *Statistics Meets Stochastics*, Moscow.

2017 **Plenary Speaker** at *Journées de Statistiques*, Avignon.

2017 **Semi-Plenary Speaker** at *2017 North American Summer Meeting of the Econometric Society*, St. Louis.

2017 **Invited Speaker** at *Workshop on Stochastic Models, Statistics and Their Applications*, Berlin.

2016 **Invited Speaker** at *Meeting in Mathematical Statistics: Advances in Nonparametric and High-Dimensional Statistics*, Frejus.

2016 **Invited Speaker** at *High Frequency Trading: Curse or Blessing?*, Vienna.

2016 **Invited Speaker** at *26th Nordic Conference in Mathematical Statistics*, Copenhagen.

2016 **Invited Speaker** at *Workshop on Stochastic Geometry, Stereology and their Applications*, Sandbjerg.

2015 **Invited Speaker** at *Meeting in Mathematical Statistics: Advances in Nonparametric and High-Dimensional Statistics*, Frejus.

2015 **Invited Speaker** at *The Mathematics and Statistics of Quantitative Risk Management*, Oberwolfach.

2015 **Invited Speaker** at *ISI 60th World Statistics Congress*, Rio de Janeiro.

2015 **Invited Speaker** at *28th European Meeting of Statisticians*, Amsterdam.

2015 **Invited Speaker** at *Probabilistic Techniques in Modern Statistics*, Oberwolfach.

2014 **Invited Speaker** at *Stochastics of Environmental and Financial Economics*, Oslo.

2014 **Invited Speaker** at *11th Vilnius Conference on Probability and Mathematical Statistics*, Vilnius.

2013 **Plenary Speaker** at *11th Symposium on Probability and Stochastic Processes*, Guanajuato.

2013 **Gumbel Lecture** at *German Statistical Society Meeting*, Berlin.

2013 **Invited Speaker** at *Statistical Inference for Complex Time Series Data*, Oberwolfach.

2013 **Invited Speaker** at *ISI 59th World Statistics Congress*, Hong Kong.

2013 **Invited Speaker** at *Stochastic Analysis for Poisson Point Processes*, Oberwolfach.

2012 **Invited Speaker** at *8th World Congress in Probability and Statistics*, Istanbul.

2012 **Invited Speaker** at *The Mathematics and Statistics of Quantitative Risk Management*, Oberwolfach.

2011 **Special Invited Speaker** at *DMV (German Mathematical Association) Meeting*, Cologne.

2010 **Special Invited Lecture** at *28th European Meeting of Statisticians*, Piraeus.

2009 **Plenary Lecture** at *Non-Semimartingale Techniques in Mathematical Finance*, Helsinki.

2009 **Invited Speaker** at *Swiss Probability Seminar*, Bern.

2009 **Invited Speaker** at *Challenges in Statistical Theory: Complex Data Structures and Algorithmic Optimization*, Oberwolfach.

2007 **Invited Speaker** at *Lévy Processes: Theory and Applications*, Copenhagen.

2007 **Invited Speaker** at *Semiparametric and Nonparametric Methods in Finance*, Oberwolfach.

2007 **Invited Speaker** at *Lévy Processes and Related Topics in Modelling*, Oberwolfach.

Invited Lectures

2019 **High Frequency Data**, 12th European Summer School in Financial Mathematics, Padova.

2017 **High Frequency Statistics for Semimartingales**, Higher School of Economics, Moscow.

2015 **Statistical Inference for Lévy Processes**, ETH Zurich, Zurich.

2012 **Limit Theorems for Semimartingales**, International Summer Academy 2012 on Advanced Stochastic Methods to Model Risk, Ulm.

2012 **Asymptotic Theory for Brownian Semistationary Processes**, University of Columbia, New York.

2012 **Limit Theorems and Inference for High Frequency Financial Data**, 7th Conference in Actuarial Science and Finance on Samos, Samos.

Selected Non-Professional Awards

2007 Vice World Champion (draughts).

2006, 2007 European Team Champion with *Bashneft* (draughts).

2004, 2005, 2007 German Champion (draughts).

2001, 2012 Dutch Team Champion with *Witte van Moort* (draughts).

1993-1995 U16 and U19 World Champion (draughts).