Melanie Schienle

contact information

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personal

citizenship	German
languages	German (mother tongue), English (excellent), French (good), Italian, Arabic (very basic), Latin

academic positions

04/ 2015 -	Full Professor of Econometrics (W3, tenured), Karlsruhe Institute of Technology (KIT)
10/ 2012 – 03/ 2015	Associate Professor of Econometrics (W2, tenured), director of the Institute of Empirical Economics, Leibniz University Hannover
11/ 2008 - 09/ 2012	Assistant Professor Econometrics, Humboldt-Universität zu Berlin
10/ 2004 - 10/ 2008	Research Fellow, Department of Economics, University of Mannheim, Germany

education

06/ 2008	Ph.D in Economics “summa cum laude” – Mannheim University advisors: Prof. Dr. Enno Mammen (Mannheim), Prof. Oliver Linton, PhD. (LSE London) thesis: “Nonparametric Nonstationary Regression”
2003 - 2008	Ph.D. Studies in Economics, Mannheim University, Center of Doctoral Studies in Economics (CDSE)
2006	Visiting PhD student, London School of Economics (Prof. Oliver Linton)
09/ 2003	Diploma with distinction in Mathematics with minor in Theoretical Physics, GPA 1.0 (German scale: 1 best - 5 fail) – Karlsruhe University
1998 - 2003	Studies in Mathematics and Theoretical Physics, Karlsruhe University, Germany
2001 - 2002	Studies in Mathematics and Financial Mathematics, University of Toronto, Canada
06/1998	Highschool Diploma GPA 1.0 (German scale: 1 best - 5 fail) – Grimmelshausen-Gymnsaium Offenburg

publications

Detecting structural differences in tail dependence of financial time series (with Carsten Bormann), **Journal of Business & Economic Statistics**, conditionally accepted (12/2017)

Semiparametric Estimation with Generated Covariates (with Enno Mammen and Christoph Rothe), **Econometric Theory,** 2016, Vol. 32, No.5, 1140-1177 ; doi:10.1017/S0266466615000134

Systemic Risk Spillovers in the European Banking and Sovereign Network (with Frank Betz (EIB, Luxemburg), Nikolaus Hautsch, Tuomas Peltonen (ECB, Frankfurt)), **Journal of Financial Stability**, 2016, Vol.25 , 206–224 doi:10.1016/j.jfs.2015.10.006 - [Results reported in the ECB Financial Stability Review in May 2013 (pages 71-73 ,box 6) and Nov.2013 (page 74 ,chart 3.15)]

Beyond dimension two: A test for higher-order tail risk (with Carsten Bormann and Julia Schaumburg), **Journal of Financial Econometrics,** 2016, Vol. 14, No 3, 552-580; doi: 10.1093/jjfinec/nbv022

Financial Network Systemic Risk Contributions (with Nikolaus Hautsch and Julia Schaumburg), **Review of Finance,** 2015, Vol 19, No 2, 685-738; doi:10.1093/rof/rfu010

Nonparametric Kernel Density Estimation Near the Boundary (with Peter Malec), **Computational Statistics & Data Analysis**, 2014, Vol. 72, 57-76, doi:10.1016/j.csda.2013.10.023

Forecasting systemic impact in financial networks (with Nikolaus Hautsch and Julia Schaumburg, in press **International Journal of Forecasting**, 2014, Vol.30, No.3, 781–794; doi:10.1016/j.ijforecast.2013.09.004

Capturing the Zero: A New Class of Zero-Augmented Distributions and Multiplicative Error Processes (with Nikolaus Hautsch and Peter Malec), **Journal of Financial Econometrics**, 2013, Vol.12, No.1, 89-121; doi: 10.1093/jjfinec/nbt002

Nonparametric Regression with Nonparametrically Generated Regressors (with Enno Mammen and Christoph Rothe), the **Annals of Statistics**, 2012, Vol. 40, No. 2, 1132-1170, doi:10.1214/12-AOS995

Additive Models: Extensions and Related Models (joint with Enno Mammen and Byeong U. Park) the **Handbook of Applied Nonparametric and Semiparametric Econometrics and Statistics** (editors Racine, Ullah), Oxford University Press 2014

Generated Regressors in Nonparametric Estimation: A Short Review (joint with Enno Mammen and Christoph Rothe), **in Recent Developments in Modeling and Applications in Statistics** (editors Oliveira, da GraccaTemido, Henriques and Vichi), Springer 2013

Nonparametric Estimation of the Risk Neutral Density (with Maria Grith and Wolfgang Härdle) in **Handbook of Computational Finance** (editors Duan, Härdle, Gentle), Springer 2012

Nonparametric Nonstationary Regression
In **Oberwolfach Report**, Volume 4, Issue 2, 2007 for the Workshop on Semiparametric and Nonparametric Methods in Econometrics

papers under revision/ submitted papers

Determining Vector Error Correction Models in High Dimensions (with Chong Liang), KIT working paper, *4th round, Journal of Econometrics (12/2017)*

Testing for an Omitted Multiplicative Long-Term Component in GARCH Models (with Christian Conrad), KIT working paper, *revised and resubmitted, JBES (12/2017)*

Measuring Connectedness of Euro Area Sovereign Risk (with Rebekka Gätjen) KIT working paper, *revise and resubmit, International Journal of Forecasting(12/2017)*

Nonparametric Nonstationary Regression with Many Covariates, *revise and resubmit, Econometric Theory*

working papers and ongoing work

High-Dimensional Cointegration (with Chong Liang) working paper KIT, 2017
[contributed paper at IAAE 2016, ESEM 2016]

Consistent Estimation of Stationary and Cointegrated VARMA in High Dimensions (with Chong Liang) working paper KIT 2017

Euro area sovereign credit markets: monetary stimulations, regulations or economic fundamentals. What matters? (with Rebekka Gätjen und Jörg Urban), working paper KIT, 2017

Bootstrapped Market Impacts with Limit Order Books (with Shi Chen, Wolfgang, Härdle, Chong Liang) , working paper KIT 2017

Estimation of Covariance Matrices for High-Dimensional Time Series (with Taras Bodnar, Ostap Okhrin and Nestor Parolya) working paper Leibniz University, 2016

Testing in nonstationary component GARCH models working paper KIT, 2016
[invited paper: IMS APRM 2016, time-series conference Oxford 2015]

Nonparametric Additive Regression with Missing Data (with Oliver Linton, Enno Mammen and Kyusang Yu) working paper KIT, 2017

A REX for Banks (with Philipp Burckhardt and Julia Schaumburg) working paper Leibniz University

Nonparametric Regression with Stationary and Nonstationary Variables (with Kyusang Yu) working paper Leibniz University

Nonparametric Estimation of Euler Equations

conference/ workshop presentations

Verein für Socialpolitik, Wien, September 2017 (invited Session Ausschuss für Ökonometrie)
CFE-ERCIM, Seville, Spain, December 2016 (invited)
IMS Asia-Pacific RIM Meeting, Hong-Kong, June 2016 (invited),
HITS Workshop on Forecasting, Heidelberg, June 2016 (invited)
Dresden, March 2016 (invited)
ERCIM/CFE (invited), London, December 2015
Conference on Nonparametric Nonlinear Time Series (invited), Oxford, November 2015
World Congress of the Econometric Society, Montreal, August 2015
SYRTO Conference on Systemic Risk, Amsterdam (invited), June 2015
11th BMRC-DEMS Conference on Macro and Financial Economics/Econometrics (invited), London, May 2015
ERCIM/CFE (invited), Pisa, December 2014
IMS Asia-Pacific RIM Meeting (invited), Taipeh, July 2014
Workshop on "Non- and Semiparametric Volatility and Correlation Models ", Paderborn, July 2014
Conference on Applicable Semiparametrics (invited), Berlin, October 2013
Humboldt-Copenhagen Conference, Berlin, March 2013
IMS Asia-Pacific RIM Meeting (invited), Tokyo, July 2012
First Meeting of the Society of Nonparametric Statistics (invited), Thessaloniki, June 2012
SETA (Symposium of Econometric Theory and Applications), Shanghai, May 2012
Conference on Macro and Financial Econometrics, Heidelberg, September 2011
Verein für Socialpolitik, Frankfurt, September 2011
SETA (Symposium of Econometric Theory and Applications), Melbourne, April 2011
ESWC (Econometric Society World Congress), Shanghai, August 2010
Humboldt - Princeton Conference, Princeton, October 2009
International Symposium on Risk Management and Derivatives, Xiamen, China, July 2009
Banff Workshop "Non- and Semiparametric Methods", Banff Canada, April 2009*
Oberwolfach Workshop "Sparse Recovery Problems in High Dimensions: Statistical Inference and Learning Theory", March 2009*
ESEM (Meeting of the European Econometric Society), Milano, August 2008
German Open Conference on Probability and Statistics, Aachen, March 2008
European Winter Meeting of the Econometric Society, Brussels, November 2007
Oberwolfach Workshop "Non- and Semiparametric Methods", March 2007
ESEM (Meeting of the European Econometric Society), Vienna, August 2006
ENTER conference, Stockholm, January 2006

(* invited, presentation by coauthor)

invited seminars

2017	Cologne University, Konstanz University, Tinbergen Institute Amsterdam, HU Berlin, Toulouse University
2016	Freiburg University, Aarhus University and CREATES (DK), Uppsala University (SE)
2015	Essex University (UK)
2014	ISOR Seminar Vienna University, "Ausschuss Ökonometrie" of Verein für Socialpolitik Rauischholzhausen, Kiel University, University of Duisburg-Essen, Bonn University, Cambridge University (UK), Economic Risk Seminar HU Berlin, Osnabrück University, University of East Anglia (UK)
2013	Kiel University, European Banking Authority (EBA) in London, Karlsruhe Institute of Technology (KIT)

2012	FU Berlin
2011	Hannover University, Brunel University (UK), CORE-Ecares Seminar at Louvain-la-Neuve
2010	Heidelberg University, Humboldt University Berlin, Tilburg University and CentER
2009	Mathematical Statistics Seminar at Weierstrass Institute Berlin, University of Cyprus at Lefkosia, CRC 649 Seminar in Motzen, Economic Risk Seminar at HU Berlin, Jour fixe CRC 649, Berlin
2008	Princeton University, Humboldt University Berlin
2007	CDSEM-Seminar Mannheim University, Brown Bag Seminar Mannheim University, GREMAQ statistics and econometrics seminar Toulouse University
2006	London School of Economics, University College London
2005	Stochastics seminar Marburg University

■ grants

2017-2020	**Grant from the German Science Foundation (DFG) for "**Quantile Methods in complex financial systems**"** (220,000€)
2014-2017	**Grant from the German Science Foundation (DFG) for "**Non- and Semiparametric Methods for Euler Equations**"** (175,000€)
2015-2020	**BMBF-grant** supporting **the chair of Econometrics and Statistics at KIT** (Professorinen-Programm, 350,000€)
2010-2012	**Head of Project B11** "Non- and Semiparametric Methods for Nonlinear Cointegration Type Models in Euler Equations and Foreign Exchange Rate Markets" **within the Collaborative Research Center 649 "Economic Risk"** (110,000€)
2012-2016	**Head of Project B11** "Non- and Semiparametric Techniques for Financial Risk Measurement" (joint with Nikolaus Hautsch) **within the Collaborative Research Center 649 "Economic Risk"** (175,000€) – (due to change of university from 1/10/2012 only associated partner by DFG rules)
2011-2015	**Grant with the German-Franco-University (DFH)** (120,000€) for student scholarships and infrastructure in the double degree program HU Berlin – ENSAE Paris/ENSAI Rennes (from 10/2012 project continued by Nikolaus Hautsch at HU Berlin)

■ awards

2017	Faculty teaching award, Department of Economics and Management, KIT
2016	Certificate of excellence in teaching for the lecture "Economics III – Introduction to Econometrics" Department of Economics and Management, KIT Certificates of excellence in teaching for the lecture "Statistics II", Department of Economics and Management, KIT Certificate of excellence in teaching for the lecture "Economics III – Introduction to Econometrics" Department of Economics and Management, KIT Certificate of excellence in teaching for the seminar "Econometric Study Group: Machine Learning" Department of Economics and Management, KIT
2015	Certificate of excellence in teaching for the lecture "Statistics I" Department of Economics and Management, KIT Certificate of excellence in teaching for the lecture "Economics III- Introduction to Econometrics", Department of Economics and Management, KIT
2009	Oberwolfach Graduate Leibniz Fellow
2008	Invitation to attend the Nobel Laureates Meeting in Lindau
2007	Invitation to the Winter Meeting of the Econometric Society in Brussels
2006	Scholarship of the German Science Foundation (DFG) for research stay at LSE
2003-2004	PhD-Scholarship of the German Science Foundation (DFG)
2003	Faculty award for best graduation of the year

2000-2001	Scholarship of the province Baden-Württemberg for the Ontario/Baden Württemberg-exchange program
1998	Award for the best high school diploma of the year, prizes in mathematics, chemistry and history

teaching experience

Lectures at KIT:

Statistics I and II introductory core courses with accompanying Tutorials and R-Lab sessions for Bachelor students (Summer 2015 + Fall 2015, Summer 2017+ Fall 2017) [750 students]

Economics III - Introduction to Econometrics for Bachelor students (Summer 2015, 2016, 2017)

Applied Econometrics for Master students (Summer 2015, 2016, Fall 2017)

Financial Econometrics (Summer 2016)

Non- and Semiparametric Methods (Fall 2015, 2016)

Seminars: Applied Econometrics (Fall 2015,2016), Topics in Econometrics (Fall 2016, Summer 2017), Econometrics study group (Fall 2015, 2016, Summer 16,17)

Lectures at Leibniz University Hannover:

Empirical Economics, introductory core course with accompanying R-Lab Tutorials for Bachelor students (Summer 2013,Fall 2014) [800 students]

Applied Econometric Methods, core course for Master students (Fall 2012 and 2013) [120 students]

Applied Econometrics for Bachelor students (Fall 2012, 2013, 2014)

Financial Econometrics for Bachelor students (Summer 2014)

Non- and Semiparametric Methods for Bachelor students (Fall 2012 and Summer 2013, 2014)

Seminar in Micro-Econometrics for Bachelor students (Summer 2013, 2014)

Lectures at HU Berlin and Mannheim University:

Mathematics for PhD and advanced Master Students, course for BDPEMS and DIW graduate school (Humboldt University and DIW, Berlin, Fall 2009, 2010, 2011)

Advanced Econometrics for PhD, Master and Diploma Students (Humboldt University, Berlin, Summer 2009, 2010, 2011and 2012)

Selected Topics in Econometrics: “Econometric Techniques for Assessing Systemic Risk” for PhD and advanced Master Students (Humboldt University, Berlin, Fall 2011)

Selected Topics in Econometrics: “Semiparametric Estimation Methods” for PhD and advanced Master Students (Humboldt University, Berlin, Fall 2010)

Selected Topics in Econometrics: Bootstrap Techniques for PhD and advanced Master Students (Humboldt University, Berlin, Fall 2009)

Selected Topics in Econometrics: Parametric and Nonparametric Methods in Nonlinear Time Series for Master and Diploma Students (Humboldt University, Berlin, Winter 2008/2009)

Econometrics I for PhD Students (Mannheim University, Fall 2008)

Theoretical Econometrics for Diploma and PhD students (Mannheim University, Spring 2008)

Advanced Mathematics for PhD Students (Mannheim University, Fall 2006/2007/2008)

Seminar Nonlinear and Nonparametric Time Series (Mannheim University, Summer 2006)

Undergraduate Statistics (Mannheim University, Fall 2004, Summer and Fall 2005)

academic activities

associate editor, Journal of Time Series Analysis

memberships: European Econometric Society, Bernoulli Society, The Institute of Mathematical Statistics, the Society of Financial Econometrics, European Finance Association, CFE-network of Computational Financial Econometrics, Verein für Socialpolitik – elected member of Ausschuss für Ökonometrie, Verein für Socialpolitik

refereeing service:
The Annals of Statistics, Journal of Econometrics, Econometric Theory, Bernoulli, Journal of Business and Economic Statistics, Scandinavian Journal of Statistics, Journal of Applied Econometrics, Journal of Financial Econometrics, electronic Journal of Statistics, The Oxford Bulletin, Journal of Time Series Analysis, Economics letters, Journal of Nonparametric Statistics, The Economics of Transition, Statistics and Probability Letters,

Journal of Empirical Finance, International Journal of Forecasting, ECB working paper series, Journal of the Korean Statistical Society, Metrika, International Journal of Information Technology & Decision Making, Journal of Mathematical Finance and Economics, Journal of Financial Analysis

workshops and meetings:

joint organizer and director (together with Christian Conrad, Heidelberg and Carsten Trenkler, Mannheim) of the HeiKaMEtrics network (https://heikametrics.de) involving:

inaugural conference (09/2017) with Gumbel lecture

regular joint research seminars, joint PhD student workshops (at KIT (07/2015 +01/2018), at Heidelberg University (02/2016),at Mannheim University (11/2016)

program committee member:

- Econometric Society European summer Meeting (ESEM) 2018, Cologne
- German Probability and Stochastic Days (GPSD) 2018, Freiburg, section lead chair for Nonparametric and asymptotic statistics, joint with Jan Johannes (Heidelberg University)
- Annual meeting of the German Economic Association 2015

workshop organization:

"Modern Econometrics faces Machine Learning" (joint with Weining Wang, Wolfgang Härdle and Bernd Fitzenberger) at Humboldt University Berlin (07/06/2017)

"Methods and Challenges in Financial Risk Measurement" at Kloster Drübeck (29/04-01/05/2010)

invited session organizer at the joint Conference on Methodological and Computational Statistics (ERCIM) and Computational Financial Econometrics (CFE):

London 2015: session "Recent Advances in Time Series"

Pisa 2014: session "Recent theoretical econometric advances in financial risk measurement"

London 2013: session "Recent Advances in Non- and Semiparametric Regression"

faculty/university service:

elected member of CRYS – internal research quality assessment board at KIT

member of various hiring committees, KIT (2015-)

member of the committee of Leitprojekt 5 implementing the core strategy (Dachstrategie) of KIT 2025

elected member of the faculty board, LU Hannover (04/2013- 03/2015)

head of the joint hiring committee for the finance cluster at LU Hannover involving three full professorships in international financial markets, financial market theory and finance (2014), head of the hiring committee for a junior professorship in development economics, LU Hannover (2013), member of several other hiring committees at LU Hannover

coordinator double degree cooperation HU Berlin- ENSAE Paris, ENSAI Rennes (2008-2012)

coordinator Erasmus Mundus Proposal Master Statistics: HU Berlin, ENSAE Paris, UCL London, ETH Zurich, UC Berkeley 2010 (invited for resubmission)

faculty member of the Berlin Doctoral Program in Economics and Management Science (BDPEMS) and the DIW graduate program (2008-2012)

■ students

PhD students:

Julia Schaumburg (2008-2013): Quantile Methods for Financial Risk Management, now post-doc, VU Amsterdam

Peter Malec (2008-2013): Essays on the Econometric Analysis of High-Frequency Data, post-doc U Cambridge

Carsten Bormann (2012-2017): Multivariate Extremes in Financial Markets

Rebekka Gätjen (2013-): Econometric Techniques for Systemic Risk Measurement

Chong Liang (2013-): LASSO for Cointegration

master-/diploma students

ongoing at KIT: Carlo Siebenschuh, Elodie Grenard, Tobias Rosenberger, Konstantin Görgen

at KIT: Florian Merkel (2017), Karsten Ruppert (2017), Christian Rörig (2017) – now PhD student at Cambridge University, Frieder Conrad (2017), Phoung van Thanh (2017), Marco Hamacher (2016)

older:

Petyo Bonev (2008), *Generalized Nonparametric Likelihood Testing,* now assistant professor, Paris

Julia Schaumburg (2008), *Nonparametric Quantile Methods,* now assistant professor VU Amsterdam

Stephen Thiele (2011) *Bootstrapping Moment Conditional Models with Dependent Data,* now PhD Student

Cambridge University, UK

Carsten Bormann (2011) *Measuring Risks with Multivariate EVT,* PhD student LU Hannover/KIT now SAP

Gunavan (2012) *An Emipirical Comparison of Backtesting Techniques for VaR*. BNP Paribas

Jing Huang (2012) *An Empirical Investigation of LASSO and SCAP Methods,* PhD Student BDPEMS Berlin

Axel Groß-Klußmann (2012) *Modelling Intra-daily Stock Market Volatility,* PhD Student BDPEMS Berlin

Arthur Alik-Lagrange (2012) *Measuring Welfare and Assessing the Performance of India's National Rural Employment Guarantee Scheme,* PhD student Toulouse University

Céline Lecavellier des Étangs-Levallois (2012) *Intergenerational Economic Mobility: The Transmission of Income Level from Fathers to Sons,* PhD student Paris

Camille Dufour (2013) *Evaluation of the impact of the tuition fees policy on enrollment in Germany,* PhD in Paris

Tabea Nitschke (2013) *Estimating and Predicting Systemic Risk Contributions with a GARCH-MIDAS Model,* KPMG

bachelor students

Cindy Lamm, Jasmin Fliegner, Gunavan, Rebekka Gätjen, Karl-Friedrich Israel, Phillipp Burckhardt (faculty award, now PhD student at CMU), Lucas Tittmann, Malte Lichtenberg (all HU Berlin); Lisa Denkmann, Maximilian Pahl (LU Hannover)

Daniela Ruchser, Matthias Bitzer (KIT)

[12 - 2017]