Prof. Dr. Hajo Holzmann
Philipps-University Marburg

Hans-Meerwein-Straße 6
D-35032 Marburg, Germany
Email: holzmann@mathematik.uni-marburg.de

October 2018

Curriculum Vitae

Biographical Data

born	1976
in	Lüneburg, Germany
family status	married, two children
nationality	German

University Degrees

November 2001	Diploma in Mathematics with second subject Business Administration at Göttingen University
April 2004	Dr. rer. nat. at the Faculty of Mathematics at Göttingen University
March 2005	Diploma in Economics at Göttingen University

Employment and Calls

May 2004 – August 2007	Research fellow at the Institute for Mathematical Stochastics, Göttingen University.
September 2007 December 2008	Assistant Professor of Mathematical Statistics at Karlsruhe University
January 2009 – July 2009	Professor (W2) of Mathematical and Applied Statistics at the Philipps-University Marburg
2009	Calls (W3) from the Universities Duisburg-Essen and Rostock
since August 2009	Professor (W3) of Mathematical and Applied Statistics at the Philipps-University Marburg
2014	Call (W3) from the University of Bremen

Funding

2010 - 2013	DFG Project HO 3260/3-1, topic *Structure, trends and determinants of monetary and non-monetary welfare distributions* (200,000 Euro for three years)
2009 - 2012	Project with EnBW Trading GmbH Karlsruhe, topic *Development of joint spot-price model for Electricity and Gas Markets* 70,000 Euro for three years
2013 - 2014	DFG Project (continuation) HO 3260/3-2, topic *Structure, trends and determinants of growth and welfare indices: Cluster analysis of time-dependent and multivariate data* (50,000 Euro for one year)
2016 - 2018	DFG Project HO 3260/5-1, topic *Optimal estimation and confidence sets for discontinuities in noisy, blurred regression functions* (120,000 Euro)
2019-2022	Project leader in LOEWE Schwerpunkt Natur 4.0 Punktprozesse und Strukturbrüche

Editor

Metrika (since 2017, jointly with Maria Kateri).

Associate Editor

Annals of Applied Statistics (2011-2014),

Journal of Statistical Planning and Inference (since 2015),

Referee

Annales de l'Institut Henri Poincaré (B), Annals of Statistics, Annals of Applied Statistics, Annals of the Institute of Statistical Mathematics, ASTA - Advances in Statistical Analysis, Biometrics, Biometrika, Bernoulli, Canadian Journal of Statistics, Communications in Statistics – Theory and Methods, Computational Statistics & Data Analysis, Econometrics and Statistics, Econometric Theory, Electronic Journal of Statistics, IEEE Transactions on Information Theory, Journal of Business and Economic Statistics, Journal of Classification, Journal of the American Statistical Association, Journal of Financial Econometrics, Journal of the Korean Statistical Society, Journal of the Royal Statistical Society Series B, Journal of Nonparametric Statistics, Metrika, Nonlinear Analysis: Theory, Methods & Applications, Review of Income and Wealth, Scandinavian Journal of Statistics, Science China Mathematics, Statistica Sinica, Statistics, Statistics and Decisions, Stochastics and Dynamics, Test

Service

Board (Vorstand) of the "Fachgruppe Stochastik e.V." (2014-2018)

DAGStat Vertreter des "Ausschuss Ökonometrie" des Vereins für Socialpolitik (since 2018)

Invited talks at conferences and workshops (selection)

2016	Workshop "Spatio-temporal Statistics", London
	Conference of the International Society of Nonparametric Statistics, Avignon
	Gumbel-Lecture (Plenary Talk) at the Statistischen Woche", Augsburg
2017	Workshop Stochastic models and applications, Berlin
	Workshop Nonlinear and Bayesian Inverse Problems, Leiden
	Workshop Statistic meets friends, Göttingen
2018	Workshop Model based Clustering and Classification, Catania

Invited seminars (since 2016)

Düsseldorf, Glasgow, Rostock, Mannheim, Innsbruck, Hamburg

Ph.D. Supervision

completed

Jörn Dannemann (2009) Inference for hidden Markov Models (Göttingen, Co-Supervision).

Florian Ketterer (2011) Penalized Likelihood Based Tests for Regime Switching in Autoregressive Models.

Schwaiger, Florian (2013). Inference and Application of Likelihood Based Methods for Hidden Markov Models.

Hohmann, Daniel (2014). Nonparametric estimation in models for unobservable heterogeneity.

Alexandrovich, Grigory (2014). Identification and estimation in hidden Markov models.

Leister, Anna (2016). Hidden Markov models: Estimation theory and economic applications.

Bengs, Viktor (2018). Confidence sets for change-point problems in nonparametric regression.

Werner, Heiko (2018). Uniform convergence rates and uniform adaptive estimation in mixtures of regressions.

current

Tobias Zwingmann, Philipp Hermann, Jiachun Zhang

Supervised thesis since 2012

Bachelor

2012 - 2013	Victor Bengs, Ana Iurcu, Tim Josek, Yuri Pinkhasik, Felix Schulze-Velmede
	Yimai Lin, Wei Deng, Hana Ibrahimi, Thorsten Winkelsträter,
	Tobias Zwingmann, Anastasia Krepakow, Heiko Werner
2014 - 2015	Eugen Ivanov, Philipp Hermann, Lukas Peter, Ceylan Eren
	Jan Christof Weller, Ann-Kristin Becker, Leon Roschig
2016 - 2018	Dominik Hecker, Maximilian von Knobloch, Michael Sonntag, Marcel Diehl
	Simon Blöss, Max Berger, Max, Hamscher

Master

2012 -2013	Johannes Berens, Lan Li, Yirigui Wang, Albert Horn,
	Anna Leister, Saskia Beyer, Sabrina Thorn
2014 - 2015	Daniel Aschenbach, Benjamin Streit, Martin Reuter, Viktor Bengs
	Oleksander Voloshyn, Yurij Pinkhasik
2016 - 2018	Felix Schulze-Velmede, Heiko Werner,
	David Göttlicher, Yuri Tabak, Jian Wu, Margarita Roth
	Michael Ullmer, Idris Pavel Tafo Noutseche, Jiachun Zhang
	Ann-Kristin Becker, Philipp Hermann, Alina Brücher

Ten selected publications

1. Holzmann, H., Munk, A., Suster, M., Zucchini, W. (2006). Hidden Markov models for circular and linear-circular time series. *Environmental and Ecological Statistics* **13**, 325-347.

2. Holzmann, H., Munk, A., Gneiting, T. (2006). Identifiability of finite mixtures of elliptical distributions. *Scand. J. Statist.* **33**, 753-764

3. Bissantz, N., Dümbgen, L., Holzmann, H. and Munk, A. (2007). Nonparametric confidence bands in deconvolution density estimation. *J. Royal Statist. Society Ser. B.* **69**, 483-506.

4. Bissantz, N., Holzmann, H. (2008). Statistical inference for inverse problems. *Inverse Problems* **24**.

5. Holzmann, H., Eulert, M. (2014). The role of the information set for forecasting - with applications to risk management. *Annals of Applied Statistics* **8**, 595-621.

6. Holzmann, H., Schwaiger, F. (2015). Hidden Markov Models with state-dependent mixtures: Minimal representation, model testing and applications to clustering. *Statistics and Computing* **25**, 1185-1200.

7. Chernozhukov, V., Fernández-Vál, I., Hoderlein, S., Holzmann, H., Newey, W. (2015). Nonparametric Identification in Panels using Quantiles. *Journal of Econometrics* **188**, 378-392.

8. Alexandrovich, G., Holzmann, H., Leister, A. (2016). Nonparametric identification and maximum likelihood estimation of hidden Markov models. *Biometrika* **103**, 423-434.

9. Holzmann, H., Klar, B. (2017). Focusing on regions of interest in forecast evaluation. *Annals of Applied Statistics* **11**, 2404-2431.

10. Hoderlein, H., Holzmann, H., Meister, A. (2017). The triangular model with random coefficients. *Journal of Econometrics* **201**, 144-169.