Curriculum Vitae with publications of the last 5 years

Reinhard Höpfner

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Prof. Dr. Reinhard Höpfner

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date and place of birth: 09. Januar 1955 in Wiesbaden (Germany)

german nationality, married, three children

Abitur 1973, Dilthey-Gymnasium, Wiesbaden.

Diplomstudium Mathematik at Johannes Gutenberg Universität Mainz 1973-80,
one year abroad at Université Scientifique et Médicale de Grenoble 1978-79;
Diplomprüfung Mathematik November 1980.

PhD degree at Johannes Gutenberg Universität Mainz 1983, 'summa cum laude', title of the thesis: 'On some classes of population size dependent Galton-Watson processes' (in german).
PhD adviser: W. Bühler.

1983 – 1992: Assistent and Hochschulassistent,
Institut für Mathematische Stochastik, Albert Ludwigs Universität Freiburg.

1991 Habilitation at Albert Ludwigs Universität Freiburg. Habilitationsschrift 'On statistical inference for Markov step processes: convergence of local models'. Head of the commission: H. Witting (Freiburg). Referees: J. Jacod (Paris VI), K. Dzhaparidze (Amsterdam) and H. Strasser (Wien).

1992 – 1997: Heisenberg grant by Deutsche Forschungsgemeinschaft. Two years of research (01.10.92–

30.09.94) at Laboratoire de Probabilités, Université Paris VI, on invitation by J. Jacod. One year of research (01.04.96–31.03.97) at Institut für Mathematische Stochastik, Universität Freiburg.

01.10.1994–31.03.1996: Lehrstuhlvertretung (18 months) at Institut für Angewandte Mathematik, Universität Bonn, on invitation by H. Föllmer.

01.04.1997–31.03.1999: Professor (C3) für Stochastik, Universität Paderborn.

23.–25.04.98: Organisation of the workshop *Statistical inference for stochastic processes* at Paderborn. Fully financed by Deutsche Forschungsgemeinschaft. Ca. 40 participants from European and non-European countries, among which J. Jacod (Paris), Yu. Kabanov (Besançon), R. Khasminskii (Detroit), Yu. Kutoyants (LeMans), M. Nussbaum (Cornell), M. Sørensen (Kopenhagen), V. Spokoini (Berlin), E. Valkeila (Helsinki), N. Yoshida (Tokyo), and others.

01.04.1999–today: Professor (C3) für Mathematische Statistik, University of Mainz.

Summer term 2004: Research sabbatical. One-month stay at Laboratoire de Probabilités, Université Paris VI, on invitation by J. Jacod

06.–08.06.2006: Organisation of the workshop *Statistical inference for stochastic processes* at Mainz. About 35 participants from European and non-European countries, mainly members of the former EU network *Statistical Methods for Dynamical Stochastic Models (DYNSTOCH)*.

Winter term 2008/09: Research sabbatical. One-week stay at Laboratoire Statistique et Processus, Université Le Mans, on invitation by Yu. Kutoyants. One-week stay in the probability/statistics group at Université Paris V, on invitation by V. Genon-Catalot. Two-weeks stay at Graduate School of Mathematical Sciences, University of Tokyo, on invitation by N. Yoshida.

September 2011: Invited professor (one month) at Laboratoire de Probabilités et Modèles Aléatoires, Université Paris VI, on invitation by M. Thieullen.

March 2012: Head of the local organizers group for *10th German Probability and Statistics Days 2012 – Stochastiktage Mainz*, 06.–09.03.2012, Universität Mainz. The congress has about 500 participants from Germany and most European countries. Sections are devoted to particular topics, with prominent keynote speakers; plenary talks are given by N. El Karoui (Paris), G. Lawler (Chicago),

P. Protter (New York) und M. Taqqu (Boston). The congress is generously supported by Deutsche Forschungsgemeinschaft and Universität Mainz. See `http://gpsd2012.uni-mainz.de`

Winter term 2013/14: Research sabbatical. One-month stay at Laboratoire de Probabilités, Université Paris VI, on invitation by M. Thieullen.

April 2014 – October 2015 / October 2015 – March 2017: Dean / Vice-Dean of the Department of Physics, Mathematics and Informatics of Johannes Gutenberg Universität Mainz.

Grants and research cooperations:

1992–1997: Heisenberg grant by Deutsche Forschungsgemeinschaft.

2000–2004: European Community Network (Human Potential Programme) *Statistical Methods for Dynamical Stochastic Models (DYNSTOCH)*: one PostDoc position (1.0 BAT2a) over one year via the Freiburg *DYNSTOCH* Team (E. Eberlein)

1997-2003: Schwerpunktprogramm *Interacting stochastic systems of high complexity* by Deutsche Forschungsgemeinschaft: one PhD position (0.5 BAT2a) over 6 years

2005–2008: *Stochastic models for information transmission in large systems of neurons*, by 'Stiftung für Innovation des Landes Rheinland-Pfalz'. Joint project with H. Luhmann, Institute of Physiology, University Medicine Mainz. Grants: one PhD position (0.5 BAT2a) in mathematics and one PhD position (0.5 BAT2a) in neurobiology, both over 3 years

2010-2011: *Inhomogeneities in time – statistical inference in diffusion processes with a view to biological data*, by 'Inneruniversitäre Forschungsförderung Stufe I der Universität Mainz': one PhD position (0.5 EG13) over one year

Publications since 2011:

(for older papers, see `www.ams.org/mathscinet` under '`hopfner, r`$*$')

(with Yu. Kutoyants) Estimating a periodicity parameter in the drift of a time inhomogeneous diffusion. Math. Methods Statist. **20(1)**, 58–74 (2011).

(with Yu. Kutoyants) On frequency estimation for a periodic ergodic diffusion process.
Problems of Information Transmission **48**, 127–141 (2012).

Asymptotic statistics. With a view to stochastic processes. de Gruyter 2014.

(with E. Löcherbach and M. Thieullen) Ergodicity for a stochastic Hodgkin-Huxley model driven by Ornstein-Uhlenbeck type input. Ann. Inst. H. Poincaré (Proba. Stat.) **52(1)**, 483–501 (2016).

(with E. Löcherbach and M. Thieullen) Ergodicity and limit theorems for degenerate diffusions with time periodic drift. Application to a stochastic Hodgkin-Huxley model.
ESAIM P+S **20**, 527–554 (2016).

(with E. Löcherbach and M. Thieullen) Strongly degenerate time inhomogeneous SDEs: densities and support properties, application to stochastic Hodgkin-Huxley systems. Bernoulli **23(4A)**, 2587–2616 (2017).