

# Prof. Dr. Peter Imkeller (retired)

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## Personal data

Date of birth: February 6, 1951.  
Place of birth: Bad Königshofen, Bavaria, Germany.  
Marital status: married to Elke Imkeller, since 1982.  
Children: Martin, born 1987; Katharina, born 1988.

## Professional career

since 04/2017 retired Professor  
04/2016–03/2017 Senior Researcher  
02/2003–03/2016 Professor for Applied Probability Theory (C4), HUB  
04/1996–02/2003 Professor for Applied Probability Theory (C3), HUB  
10/1995–03/1996 Professor at Medizinische Universität Lübeck  
09/1993–09/1995 Professor at Université de Franche-Comté, Besançon, France  
07/1990–08/1993 "Oberassistent" (temporary), U Munich  
11/1988–07/1990 "Akad. Oberrat a. Z." (C2) (temporary), U Munich  
11/1982–11/1988 "Akad. Rat a. Z." (C1) (temporary), U Munich  
11/1977–10/1982 "Assistent" (C1), U Munich

## Academic education

1987 Habilitation, U Munich  
1982 Dr. rer. nat., U Munich (Supervisor: H.G. Kellerer)  
1979 Staatsexamen (exam for secondary schools in Bavaria), U Munich  
1977 Diploma in Mathematics, U Munich

## Research areas

- Stochastic analysis
- Random dynamical systems
- Stochastic dynamics
- Stochastic climate models
- Control theory and stochastic finance
- Rough path analysis and SPDE

## Organisational activities and awards (selection)

- Associate Editor: Archiv der Mathematik, 1998-2007
- Associate Editor: Stochastics and Dynamics, 2001-now
- Associate Editor: Journal of Theoretical Probability, 2007-now
- Associate Editor: Bernoulli, 2013-2016
- Associate Editor: EMS Series, 2014-now
- Associate Editor: Probability, Uncertainty and Quantitative Risk, 2016-now
- co-organizer “School and Workshop on Stochastic Optimal Control and Applications (SOCA), AIMS Ghana, 2017
- co-organizer “Workshop on Securitization of Weather and Climate Risk”, HU Berlin, 2006
- chair organizing committee AMaMeF Workshop “Information in Pricing Models”, Toulouse, 2007
- co-chair organizing committee Mathematical Modelling of Climate and Energy Risk, Banff, Canada, 2007
- co-organizer “Die versiegelte Formel. Wolfgang Döblin und die Ursprünge der Stochastischen Analysis.” Berlin-Brandenburgische Akademie der Wissenschaften
- Co-chair organizing committee of SPA 2009, Berlin
- member of the board of Berlin Mathematical School (BMS), graduate school in DFG funded Excellence Initiative, 2006–2014
- member of the CRM Scientific Advisory Board, U Autònoma, Bellaterra, Spain, 2012-now
- member of the Alexander von Humboldt Foundation Selection Board for Forster Fellowships, 2014-now
- member of the Alexander von Humboldt Foundation Selection Board for German Research Professorships at AIMS Centers in Senegal, Cameroon, Ghana, South Africa and Tanzania, 2012-now
- member of “DFG Fachkollegium Mathematik” of German Science Foundation, 2015-now
- German partner of German Research Chair at AIMS Ghana, 2016-now
- member of “Advisory Board of CIMPA”, 2017-now

## Most important externally funded projects (last five years only), (\*) indicating relevance for RTG

- (\*) Project A11 “Securitization and Equilibrium Risk Transfer”, SFB 649 “Economic Risk”, DFG, (2009–2012)
- (\*) member of board of DFG International Research Training Group (IRTG 1740) “Dynamical Phenomena in Complex Networks: Fundamentals and Applications”, HU Berlin, Physics, (2011–2014)
- (\*) Initiator and organisator ZiF Cooperation Group “Exploring climate variability: physical models, statistical inference and stochastic dynamics”, (2013)
- (\*) Project E2 “Securitization: assessment of external natural risk factors, in particular energy”, MATHEON, DFG, (2009 – 2014)
- (\*) speaker of the Research Training Group (GRK 1845) “Stochastic Analysis with Applications in Biology, Finance and Physics”, DFG, (2012 – 2017)
- (\*) Project head of the Einstein Foundation project “Game Options and Markets with Frictions”, ECMath, Berlin, (2013 – 2016)
- (\*) Project 04 “Rough Paths and random dynamical Systems”, DFG Forschergruppe 2402 “Rough Paths, Stochastic Partial Differential Equations and Related Topics”, (since 2016)

**PhD (○) and postdoc (●) supervision, with next affiliations (na) (last five years only)**

- N. dos Reis (HUB 04-10), na: (TU Berlin, U Edinburgh),
- M. Högele (HUB 06-10), na: (U Potsdam, U de los Andes, Bogota)  
(*Dissertationspreis Adlershof, 2011*),
- A. Richter (HUB 07-11), na: (ETH Zürich, Barouch College, CUNY),
- C. Hein (HUB 08-12),
- J. Zhang (HUB, 09-13), na: (TU München),
- K. Eichmann (HUB, 06-13), na: (HTW Berlin),
- N. Perkowski (HUB, 10-13), na: (U Dauphine, HU Berlin),  
(*Förderpreis der Fachgruppe Stochastik der DMV, 2016*),
- A. Fromm (HUB, 10-14), na: (TU Berlin, U Jena),
- D. Prömel (HUB 12-15), na: (ETH Zürich, U Oxford),
- J. Gairing (HUB 11-18), na: (LMU München),
- V. Feunou (HUB 12-18), na: (U Freiburg),
- L. Tangpi (HUB 12-13), na: (U Konstanz, U Vienna),
- A. Gomes (HUB 12-17),
- T. Wetzel (HUB 14-now),
- N. Esmaeeli (HUB 14), na: (Sharif U Tehran),
- J. Bielagk (HUB 11-17), na: (HU Berlin)
- A. Reveillac (HUB, 08-10), na: (U Toulouse),
- M. Grigorova (HUB 13-16), na: (U Hannover),

**List of 10 most important publications:**

Articles and book publications

[ADI06], [AI99], [IPW09], [AIDR10], [DHI13], [FIZ07], [GIP15], [GIP16], [HIM05], [Imk03], [IPW09]

**Scientific collaborators:**

- A. Debussche
- G. Dos Reis
- F. Flandoli
- Y. Hu
- Y. Ouknine
- I. Pavlyukevich
- M.-C. Quenez
- A. Reveillac
- C. Tudor

**Bibliography and Citations:**

REFERENCES

- [ADI06] S. Ankirchner, S. Dereich, and P. Imkeller. The Shannon information of filtrations and the additional logarithmic utility of insiders. *Ann. Probab.*, 34(2):743–778, 2006.
- [AI99] L. Arnold and P. Imkeller. Rotation numbers for linear stochastic differential equations. *Ann. Probab.*, 27(1):130–149, 1999.

- [AIDR10] S. Ankirchner, P. Imkeller, and G. Dos Reis. Pricing and hedging of derivatives based on non-tradable underlyings. *Mathematical Finance*, 20(2):289–312, 2010.
- [DHI13] A. Debussche, M. Hoegele, and P. Imkeller. *The Dynamics of Nonlinear Reaction-Diffusion Equations with Small Lévy Noise*. Lecture Notes in Mathematics, Vol. 2085, Springer Verlag, 2013.
- [FIZ07] S. Fang, P. Imkeller, and T. Zhang. Global flows for stochastic differential equations without global Lipschitz conditions. *Ann. Probab.*, 35(1):180–205, 2007.
- [GIP15] M. Gubinelli, P. Imkeller, and N. Perkowski. Paracontrolled distributions and singular PDEs. *Forum Math. Pi*, 3:e6, 75, 2015.
- [GIP16] M. Gubinelli, P. Imkeller, and N. Perkowski. A Fourier approach to pathwise stochastic integration. *Electr. Journal in Probab.*, 2016.
- [HIM05] Y. Hu, P. Imkeller, and M. Müller. Utility maximization in incomplete markets. *Ann. Appl. Probab.*, 15(3):1691–1712, 2005.
- [Imk03] P. Imkeller. Malliavin’s calculus in insider models: additional utility and free lunches. *Math. Finance*, 13(1):153–169, 2003.
- [IPW09] P. Imkeller, I. Pavlyukevich, and T. Wetzel. First exit times for Lévy-driven diffusions with exponentially light jumps. *Ann. Probab.*, 37(2):530–564, 2009.