

Prof. Anton Bovier, PhD

Institute for Applied Mathematics



Rheinische Friedrich-Wilhelms-Universität Bonn

Institute for Applied Mathematics

E-Mail: bovier@uni-bonn.de

Research Expertise

The main focus of my work concerns the analysis of interacting stochastic systems of many components. This includes a special focus on models from statistical mechanics with an emphasis on disordered models, in particular spin glasses. Apart from classical aspects of equilibrium Gibbs measures I am particularly interested in aspects of long term dynamics such as metastability and aging. More recently I am also interested in application of methods from these areas in models of population genetics, ecology, and neurodegenerative diseases.

Education / Training

Technical University of Berlin, Germany
Mathematics, Habilitation, 1995

The Swiss Federal Institute of Technology (ETH), Zurich
Physics, Dr. sc. nat., 1986

University of Bonn, Germany
Physics, Diploma, 1981

Appointments / Positions Held

2008 - present

Full Professor, Institute for Applied Mathematics
University of Bonn, Germany

2003 - 2008

Full Professor, Mathematics, Technical University, Berlin,
Germany

1994 - 2008

Laboratory Head, and 2nd Deputy Director
Weierstrass-Institute for Applied Analysis and Stochastics
(WIAS), Berlin

1992 - 1995

Deputy Laboratory Head, WIAS, Berlin

1991 - 1992

Research Associate, Mathematics Department, Bochum
University, Germany

1988 - 1991

Research Associate, Physics Department University of Bonn,
Germany

1986 - 1988

Visiting Assistant Professor, Mathematics Department
University of California, Irvine, CA, USA

1982 - 1986

Assistant, Institute for Theoretical Physics, ETH-Zurich

Honors / Awards

2014

Member of Selection Committee, Heinz-Maier-Leibnitz prize

2013

Elected Fellow, Institute of Mathematical Statistics

2012

Kloosterman Chair, University Leiden, NL

2010

Lady Davies Visiting Professor, Technion, Haifa, IL

2010

Plenary Speaker, Annual Meeting of the German Mathematical
Association

2009

EURANDOM Chair, EURANDOM; Eindhoven, NL

2008

Member of the Selection Committee of the Minerva Foundation

2008

Member of the Review Board for Mathematics of the German
Research Council

2006

Invited Speaker at the International Congress of
Mathematicians, Madrid

10 Most Relevant Publications for Prof. Anton Bovier

1. **Bovier, A.** and den Hollander, F. 2015 Metastability: A Potential-Theoretic Approach. xxi + 581 pp. Grundlehren der mathematischen Wissenschaften Vol. 351, Springer, Charm.
2. Mayer, H, **Bovier, A.** 2015. Stochastic models of T-cell activation. J. Math. Biology 70: 99-132.
3. Arguin, L-P, **Bovier, A.** Kistler, N. 2013. The extremal process of branching Brownian motion. Prob. Theor. Rel. Fields: 157:535-574 .
4. Hölzel, M, **Bovier, A.** Tüting, T. 2013. Plasticity of tumor and immune cells: a source of heterogeneity and a cause for therapy resistance? Nature Reviews Cancer: 13: 365–376.
5. **Bovier, A.** Gaynard V., Svejda, A. 2013. Convergence to extremal processes in random environments and applications to extremal ageing in SK models. Probab Theor. Rel. Fields 157: 151–183.
6. Arguin, L-P, **Bovier, A.** Kistler, N. 2011. The genealogy of extremal particles of branching Brownian motion, Commun. Pure Appl. Math. 64: 1647--1676
7. **Bovier, A.** 2006. Statistical mechanics of disordered systems. A mathematical perspective, 312 + xiv pp, Cambridge Series in Statistical and Probabilistic Mathematics Cambridge University Press Vol. 18
8. **Bovier, A.** Gaynard V, Klein M. 2005. Metastability in reversible diffusion processes II. precise asymptotics for small eigenvalues. J Europ Math Soc 7: 69–99
9. Baake E, Baake M, **Bovier, A.** Klein M. 2005. An asymptotic maximum principle for essentially linear evolution models. J Math Biology 50: 83–114
10. Ben Arous G, **Bovier, A.** Gaynard V. 2003. Glauber dynamics of the random energy model. 2. Aging below the critical temperature. Commun. Math. Phys. 236: 1-54