

Curriculum Vitae

Personal Details

Name: Priv.-Doz. Dr. rer. nat. habil. Dirk Hennig

Marital Status: married, one daughter

Nationality: German

Academic Degrees

University	Qualification/Title	Date
Humboldt University at Berlin	University Teaching Authorisation in Theoretical Physics (<i>venia legendi</i>), Privat-Dozent	03.04. 2008
Free University Berlin	University Teaching Authorisation in Theoretical Physics (<i>venia legendi</i>), Privat-Dozent	31.01. 2001
Free University Berlin	Habilitation, University Teaching Qualification (<i>facultas docendi</i>) in Theoretical Physics, Dr. habil.	20.11. 1997
Humboldt University at Berlin	Doctoral Degree in Theoretical Physics, Dr. rer. nat.	17.11. 1992
Humboldt University at Berlin	Diplom in Physics	20.06. 1989

Positions in Academia

Employer	Grade	From - To
Department of Mathematics, University of Portsmouth, UK	Senior Lecturer	04.11.2012 - 31.08.2015
Department of Mathematics, University of Portsmouth, UK	Senior Lecturer	01.06.2009 - 31.07.2011
Institute of Physics, Humboldt University at Berlin, Germany	Researcher	01.07.2005 - 31.05.2009
Instituto Pluridisciplinar, Universidad Complutense, Madrid, Spain	Researcher	01.03.2005 - 30.06.2005
Department of Physics, Free University Berlin, Germany	Lecturer	01.07.2004 - 28.02.2005
Department of Physics, Free University Berlin, Germany	Heisenberg Fellow	01.07.1999 - 30.06.2004
Department of Physics, Free University Berlin, Germany	Researcher	01.08.1993 - 31.12.1998
Department of Physics, University of North Texas, Denton, USA	Postdoctoral Researcher	01.05.1993 - 31.07.1993
Department of Physics, Free University Berlin, Germany	Postdoctoral Researcher	01.09.1992 - 30.04.1993

Awards and Grants

March 2005 - December 2012 European Union Grant No. SPARK FP6-004690; (co-investigator)

July 2005 - June 2008 Volkswagen Foundation, Priority Area: 'New Conceptual Approaches to Modeling and Simulation of Complex Systems' (co-investigator within the joint Augsburg-Berlin Project No. I/80425)

May 2000 - April 2004 Leader of the Berlin node in the European Commission RTN project 'LOCNET: "Localisation by Nonlinearity and Spatial Discreteness, and Energy Transfer, in Crystals, Biomolecules and Josephson Arrays"

July 1999 - June 2004 Heisenberg Fellowship of the German Research Foundation (DFG) (principal investigator)

February 1995 - December 1998 Collaborative Research Center (Sonderforschungsbereich) 337 'Energy and charge transfer in molecular aggregates' (co-investigator)

1993 Carl-Ramsauer-Prize for the Doctoral Thesis

Refereeing activities for 26 international journals

30 invited research stays at institutions abroad

Scientific Interests

Nonlinear and stochastic dynamics with application to biophysical problems, nanotechnology, and neurobiology.

Analytical and numerical methods for the treatment of networks of coupled nonlinear oscillators and Langevin systems.

Research Topics

- Nonlinear dynamics of networks of coupled oscillator systems: energy localisation and breather solutions; Hamiltonian ratchets, transport in phase space
- Stochastic systems: noise-driven ratchets; biomotors; rate processes and barrier crossings; translocation and dislocation of polymers through nanopores, self-propelled motion in molecular motors
- Models of charge and energy transport in biomolecules: transport mediated by breather solutions, polarons and solitons; energy localisation in DNA molecules and the denaturation process, unzipping of duplex DNA molecules

- Neuronal model systems: coupled neurons with focus on spontaneous firing activities; synchronisation and pattern formation in neuronal networks

Publications

More than 100 refereed articles. Among them two review articles in Physics Report.