

CURRICULUM VITAE

ANNA LEVINA

PERSON

Anna Martius
Academic name: **Anna Levina**
born on June 26, 1981, in St. Petersburg, Russia
married, 2 children
address: MPI for Mathematics in the Sciences
Inselstraße 22
04103 Leipzig, Germany
phone(office): +49 341 9959 566
email: anna@nld.ds.mpg.de

EDUCATION

- 10/2004–01/2008 Graduate student, Graduate school of Göttingen University “Identification in Mathematical Models”. Project in collaboration with Max-Planck Institute for Dynamics and Self-Organization.
Thesis mark: summa cum laude (highest praise).
- 2003–2004 Graduate student, Department of Economics, European University at St. Petersburg.
- 1998–2003 St. Petersburg State University, Department of Mathematics and Mechanics. Diploma in Mathematics, Graduated with honours.
Average mark – 4.93 (out of 5).
Diploma paper: “Limit of the correlation functions of the stochastic matrix ensemble with fixed Hilbert-Schmidt norm.”

WORKING EXPERIENCE

- 06/2011– Associate researcher, Max Planck Institute for Mathematics in the Sciences
- 05/2010– Principal investigator, Bernstein Center for Computational Neuroscience Göttingen
- 05/2012–05/2013 Maternity leave
- 02/2010–02/2011 Maternity leave
- 01/2008–02/2010 Postdoctoral researcher, Max Planck Institute for Dynamics and Self-Organization
- 10/2007–01/2008 Researcher, Max Planck Institute for Dynamics and Self-Organization
- 2003–2004 “Kenjitsu”, Outsourcing programming company, St. Petersburg. Game designer.

2002–2003	St. Petersburg State Polytechnic University of Plant Polymers. Teacher of higher mathematics.
2000–2002	Physical and mathematical gymnasium 30. Extra-curricular teacher of mathematics.
1998–2001	Teacher in the mathematical summer camps for talented children.

SCIENTIFIC ACTIVITY

- Conferences:
- Invited talk presentation: Workshop “The Brain: Criticality, Dynamics, Network and Function” Malibu 2014, Workshop “New Challenges in Complex System Physics” Samarkand 2013, Workshop “Functioning and Failure of Adaptive Biological Networks” Bielefeld 2009, ICIAM (International Council for Industrial and Applied Mathematics meeting) 2007, National Institute of Mental Health Washington 2007, ENP (Dutch Endo-Neuro-Psycho meeting) 2007.
 - Talk presentation: Dynamic Days Europe 2009, Bernstein Conference 2009, Workshop “Chaos and Dynamics in Biological Networks” Cargese 2008, DPG (Deutsche Physikalische Gesellschaft meeting) 2012, 2009, 2008.
- Reviewing: Phys. Rev. Lett., Nature Physics, Front. in Comp. Neurosci., PLOS CB, J. Phys A.
- Grant application: Project within successful grant application of BCCN, Göttingen, 2010
- Teaching:
- 2014 course “Self-organization in neuronal networks”
 - 2012–2013 co-supervision of PhD student Max Uhlig
-

HONORS AND GRANTS

- 2009 Otto Hahn Medal of the Max Planck Society
- 2009 Best talk award, Bernstein Conference 2009
- 2008 Sloan-Swartz Foundation traveling stipend
- 2003–2004 Stipend of Soros Foundation for studies in European University at St. Petersburg.
-

MISCELLANEOUS

- Languages: Russian (native), English (professional), German (fluent)
- Computer: C, Python, Matlab, Mathematica, Windows, LINUX
- Personal Interests: hiking, cycling, juggling, canoe tourism, arts.

PUBLICATIONS

(* marks selected publications)

- M. Denker, **A. Levina**. Avalanche dynamics, *submitted*
- F. Effenberger, J. Jost, **A. Levina**. Self-organization in balanced state networks by STDP and homeostatic plasticity, *under review*, 2014
- * **A. Levina**, J. M. Herrmann. The Abelian distribution, *Stochastics and Dynamics*, 2014
- **A. Levina**, J. M. Herrmann, T. Geisel. Theoretical neuroscience of self-organized criticality: from formal approaches to realistic models, *book chapter from "Criticality in Neural Systems"*, 2014
- * M. Uhlig, **A. Levina**, T. Geisel, J. M. Herrmann. Critical dynamics in associative memory networks, *Front. Comp. Neurosci*, 2013
- * J. Nagler, **A. Levina**, M. Timme. Impact of single links in competitive percolation. *Nature Physics*, 2011.
- * **A. Levina**, J. M. Herrmann, T. Geisel. First-order transition to criticality by facilitatory interconnections, *PRL*, 2009.
- **A. Levina**, A mathematical approach to self-organized criticality in neural networks, *Dissertation*, Göttingen, 2008.
- * **A. Levina**, J. M. Herrmann, T. Geisel. Dynamical synapses causing self-organized criticality in neural networks. *Nature Physics*, 2007.
- **A. Levina**, J. M. Herrmann, M. Denker. Critical branching processes in neural networks. *Proc. in appl. math. and mech. PAMM*, 2007.
- **A. Levina**, U. Ernst and J. M. Herrmann. Criticality of avalanche dynamics in adaptive recurrent networks. *Neurocomputing*, 2007.
- F. Götze, M. Gordin, **A. Levina**. Limit correlation function at zero for fixed trace random matrix ensembles. *J. of Mathematical Sciences*, 2007.
- **A. Levina**, J. M. Herrmann, T. Geisel. Dynamical synapses give rise to a power-law distribution of neuronal avalanches. *Adv. in Neural Information Processing Systems*, 2006.

Anna Levina

Leipzig, November 13, 2014