

# Curriculum Vitæ

## *Gunnar Boldhaus*

### Personal Data

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Date of Birth June 26, 1982  
Nationality German



Scientific Interests Network Theory, Boolean Networks, Dynamics On and Of Networks, Gene Regulatory Networks, Protein Interaction Networks, Evolution, Origin Of Order, Complex Systems, Neutrality, Neutral Theory Of Evolution, Robustness, Resilience, Evolvability, Synthetic Lethality

Interests Photography, Rainforests, Wildlife, Diving, Table Tennis, Long-haul Journeys

Languages German, English and French

### Address

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Working Address Professur für Bioinformatik  
Institut für Informatik  
Universität Leipzig  
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Homepage: [www.bioinf.uni-leipzig.de/~gunnar](http://www.bioinf.uni-leipzig.de/~gunnar)

### Education

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2008/02 - **Graduate studies in Computer Science**  
University of Leipzig (Germany)  
PhD thesis with Dr. Konstantin Klemm and Prof. Peter Stadler  
*Neutrality of Networks*

2001/10 - 2007/09 **Undergraduate studies in Computer Science**  
University of Leipzig (Germany) with Minors: Bioinformatics and Computational Neurobiology  
Diploma Thesis with Prof. Ralf Der (Max Planck Institute for Mathematics in the Sciences, Leipzig) and Maren Grigutsch (Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig)  
*The impact of noise in time series analysis of EEG data*  
Degree Diploma, September 29, 2007

1992/09 - 2000/07 **High school**  
Leipzig (Germany)  
Degree Abitur, July 14, 2000

## Professional experience

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2011/06 · now	Chief Technology Officer Effigos AG
2008/02 · now	Research assistant, PhD Student Bioinformatics Group University of Leipzig (Germany)
2007/11 · now	Self-employed person
2007/10 · 2008/02	Software Developer Intersolut
2004/10 · 2007/05	Student research assistant Department For Natural Language Processing University of Leipzig (Germany)
2002/02 · 2003/05	Student research assistant Department For Technical Computer Science University of Leipzig (Germany)

## Publications and Presentations

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### Articles

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arXiv	Gunnar Boldhaus, Florian Greil, Konstantin Klemm <i>Prediction of lethal and synthetically lethal knock-outs in regulatory networks.</i> <a href="#">Link to article</a>
European Physical Journal B	Gunnar Boldhaus and Konstantin Klemm <i>Regulatory networks and connected components of the neutral space – A look at functional islands.</i> <a href="#">Link to article</a>
Physical Review E	Gunnar Boldhaus, Nils Bertschinger, Johannes Rauh, Eckehard Olbrich and Konstantin Klemm <i>Robustness of Boolean dynamics under knockouts.</i> <a href="#">Link to article</a>

### Books

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Assistance in	<i>Rechnerarchitektur. Aufbau, Organisation und Implementierung, inklusive 64-Bit-Technologie und Parallelrechner</i> Paul Herrmann (ISBN-10: 3528255986)
Assistance in	<i>Einführung in z/OS und OS/390. Web-Services und Internet - Anwendungen für Mainframes</i> Paul Herrmann, Udo Kebschull, Wilhelm G. Spruth (ISBN-10: 3486273930)

## Talks & Seminars

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- 3.05.2011  
Seminar  
Gunnar Boldhaus  
*Neutrality, viability and lethality in state discrete models of regulatory networks.*  
Max-Planck-Institute for Mathematics in the Sciences  
Leipzig (Germany)
- 25.II.2010  
Talk  
Gunnar Boldhaus  
*Robustness of Boolean dynamics under knockouts*  
Halbjährliches Netzwerk-Treffen Berlin-Dresden-Göttingen-Leipzig  
Leipzig (Germany)
- 17.09.2010  
Talk  
Gunnar Boldhaus  
*Robustness of Boolean dynamics under knockouts - A case study of the yeast cell cycle.*  
ECCS10 – European Conference On Complex Systems  
Lisbon (Portugal)
- 24.06.2010  
Seminar  
Gunnar Boldhaus  
*Robustness of Boolean dynamics under knockouts - A case study of the yeast cell cycle.*  
Laboratoire de Physique Théorique et Modèles Statistiques (LPTMS)  
Université Paris-Sud  
Orsay (France)
- 23.06.2010  
Seminar  
Gunnar Boldhaus  
*Robustness of Boolean dynamics under knockouts - A case study of the yeast cell cycle.*  
Institute of Epigenomics (Genopole®)  
Évry (France)
- 4.06.2010  
Talk  
Gunnar Boldhaus  
*Can we predict Synlet pairs based on evolutionary relatedness?*  
SYNLET 8 EU Meeting  
Rüdesheim am Rhein (Germany)
- 10.12.2009  
Seminar  
Gunnar Boldhaus  
*Regulatory networks and neutrality.*  
Andreas Wagner Laboratory, University of Zürich  
Zürich (Switzerland)
- 29.09.2009  
Talk  
Gunnar Boldhaus and Konstantin Klemm  
*Regulatory networks and neutrality.*  
Frontiers in network science, advances and applications  
A Symposium of the VolkswagenStiftung  
Berlin (Germany)
- 25.09.2009  
Talk  
Gunnar Boldhaus and Konstantin Klemm  
*Regulatory networks and connected components of the neural space.*  
ECCS09 – European Conference On Complex Systems  
Warwick (UK)
- 17.09.2009  
Seminar  
Gunnar Boldhaus  
*Regulatory networks and connected components of the neural space.*  
School of Computing, National University of Singapore (NUS)  
Singapore (Singapore)

- 17.09.2009  
Seminar  
Gunnar Boldhaus  
*Regulatory networks and their space of neutral evolution.*  
A\*STAR Bioinformatics Institute  
Singapore (Singapore)
- 26.03.2009  
Talk  
Gunnar Boldhaus and Konstantin Klemm  
*Networks for cell division and their neutral mutants.*  
Annual meeting of the German Physical Society  
Dresden (Germany)
- 17.02.2009  
Talk  
Gunnar Boldhaus  
*Cell cycle networks and their neutral mutants.*  
24<sup>th</sup> TBI Winterseminar  
Bled (Slovenia)
- 04.11.2008  
Seminar  
Gunnar Boldhaus  
*The Yeast cell cycle network and its neutral mutants.*  
Institute for Cross-Disciplinary Physics and Complex Systems (IFISC)  
Universitat de les Illes Balears  
Palma de Mallorca (Spain)
- 28.07.2008  
Talk  
Gunnar Boldhaus  
*The Yeast cell cycle network and its neutral mutants.*  
Synlet 4 EU Meeting  
Leipzig (Germany)
- Posters**
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- 23.11 - 27.11.2009  
Poster  
Gunnar Boldhaus and Konstantin Klemm  
*Neutrality of regulatory Networks.*  
Darwin09 – 150 Years after Darwin: From Molecular Evolution to Language  
Palma de Mallorca (Spain)
- 10.12 - 12.12.2008  
Poster  
Gunnar Boldhaus and Konstantin Klemm  
*Networks for cell division and their neutral mutants.*  
BCNetWORKSHOP – trends and perspectives in complex networks  
Barcelona (Spain)

## Conferences, Workshops, Meetings and Schools attended

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### Conferences

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- European Conference on Complex Systems, Lisbon (Portugal), 2010
- European Conference on Complex Systems, Warwick (UK), 2009
- Annual meeting of the German Physical Society, Dresden (Germany), 2009

## Workshops

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CompPhys10 · 11th International NTZ-Workshop on New Developments in Computational Physics

Leipzig (Germany), 2010

Halbjährliches Netzwerk-Treffen Berlin-Dresden-Göttingen-Leipzig

Leipzig (Germany), 2010

Leipzig Linguistic Networks Meeting Workshop

Leipzig (Germany), 2010

Network Meeting at the Max Planck Institute For The Physics Of Complex Systems

Dresden (Germany), 2010

Darwin09 · 150 Years after Darwin: From Molecular Evolution to Language

Palma de Mallorca (Spain), 2009

Frontiers in network science, advances and applications

A Symposium of the VolkswagenStiftung

Berlin (Germany), 2009

BCNet · Trends and Perspectives in Complex Networks

Barcelona (Spain), 2008

8<sup>th</sup> German Workshop On Artificial Life

Leipzig (Germany), 2008

## Meetings

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Synlet 8 EU Meeting

Rüdesheim am Rhein (Germany), 2010

Synlet 4 EU Meeting

Leipzig (Germany), 2008

## Summer schools

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28.06 · 05.07.2009

WE-Heraeus Summer school

Steps in Evolution:

Perspectives from Physics, Biochemistry and Cell Biology – 150 Years after Darwin.

Jacobs University Bremen, Bremen (Germany)