

<b>Name</b> Hauke Busch	<b>Position Title</b> Freiburg Institute For Advanced Studies- LIFENET Junior Fellow
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## EDUCATION/TRAINING

Institution and Location	Degree	Year(s)	Field of Study
University of Darmstadt, Germany	Student	1992-1998	Physics
University of Darmstadt, Germany	Diploma	1998	Physics
University of Darmstadt, Germany	PhD	1999-2004	Physics
University of Heidelberg, Germany	Project leader	2004-2007	Theoretical Bioinformatics
University of Freiburg, Germany	Junior Fellow	Since Dec 2008	Systems Biology

## Positions and Honours

### Employment/Experience

1992-1998	Studies of Physics (undergrad.), Institute for Technology, University of Darmstadt, Germany
1998	Diploma in Physics, Institute for Technology, University of Darmstadt, Germany
1999-2004	PhD in Physics, Institute for Technology, University of Darmstadt, Germany
2004-2007	Postdoc fellow of the BioMS, Heidelberg, German
2004-2008	Project leader of Applied Systems Biology Group, Department of Theoretical Bioinformatics (Prof. Roland Eils), German Cancer Research Center, Heidelberg, Germany
2008-present	FRIAS Junior Fellow, Group leader of the Cell, Control & Communication Group, Freiburg Institute for Advanced Studies-LIFENET, University of Freiburg, Freiburg, Germany

### Honors, Awards, and Scholarships

Since 2008	FRIAS Junior Fellow
2009-2012	LungSys I: Systems Biology of Lung Cancer, BMBF MedSys Project
2009-2012	Chronic Wounds, BMBF MedSys Project
2010-2013	Stromal Aging, BMBF GerontoSys I Project
2011-2014	NephAge, BMBF GerontoSys II Project
2013-2016	LungSys II: Systems Biology of Lung Cancer, BMBF MedSys Project

## 10 selected publications:

M. Boerries, R. Eils and **H. Busch**, Systems Biology, in Encyclopedia of Molecular Cell Biology and Molecular Medicine, 2010, in press

Bachmann J, Raue A, Schilling M, Böhm ME, Kreutz C, Kaschek D, **Busch H**, Gretz N, Lehmann WD, Timmer J, Klingmüller U., Division of labor by dual feedback regulators controls JAK2/STAT5 signaling over broad ligand range, *Mol Syst Biol*. 2011 Jul 19;7:516.

Mesecke S, Urlaub D, **Busch H**, Eils R, Watzl C (2011). Integration of activating and inhibitory receptor signaling by regulated phosphorylation of Vav1 in immune cells, *Sci. Signal*. May 31;4(175):ra36.

Maiwald T, Schneider A, **Busch H**, Sahle S, Gretz N, Weiss TS, Kummer U, Klingmüller U, Combining theoretical analysis and experimental data generation reveals IRF9 as a crucial factor for accelerating interferon  $\alpha$ -induced early antiviral signalling, 2010, *FEBS J*. 2010 Nov;277(22):4741-54. doi: 10.1111/j.1742-4658.2010.07880.x. Epub 2010 Oct 21.

Riehl A, Bauer T, Brors B, **Busch H**, Mark R, Németh J, Gebhardt C, Bierhaus A, Nawroth P, Eils R, König R, Angel P, Hess J., Identification of the Rage-dependent gene regulatory network in a mouse model of skin inflammation, *BMC Genomics*. 2010 Oct 5;11:537.

**H. Busch**, D. Camacho, Z. Rogon, K. Breuhahn, P. Angel, R. Eils and A. Szabowski, Gene Network Dynamics controlling Keratinocyte Migration, 2008, *Mol Syst Biol* 4, 199.

**H. Busch**, W. Sandmann and V. Wolf, A numerical aggregation algorithm for the enzymecatalyzed substrate conversion, in *Lecture Notes in Computer Science*, 2006, 4210, 298.

E. Glatt, **H. Busch**, F. Kaiser and A. Zaikin, Noise-memory induced excitability and pattern formation in oscillatory neural models, *Phys. Rev.*, 2006, E 73, 026216.

M. Bentele, M. Ulrich, **H. Busch** and R. Eils, Modeling and simulation of large-scale signal transduction networks, in *Proceedings of the 4th Workshop on Computation of Biochemical Pathways and Genetic Networks*, EML, Heidelberg, 2005, edited by U. Kummer, 3.

**H. Busch** and M.-Th. Hütt, Scale-dependence of spatiotemporal filters inspired by cellular Automata. *Int. J. Bifurcation Chaos*, 2004, 14, 1957.