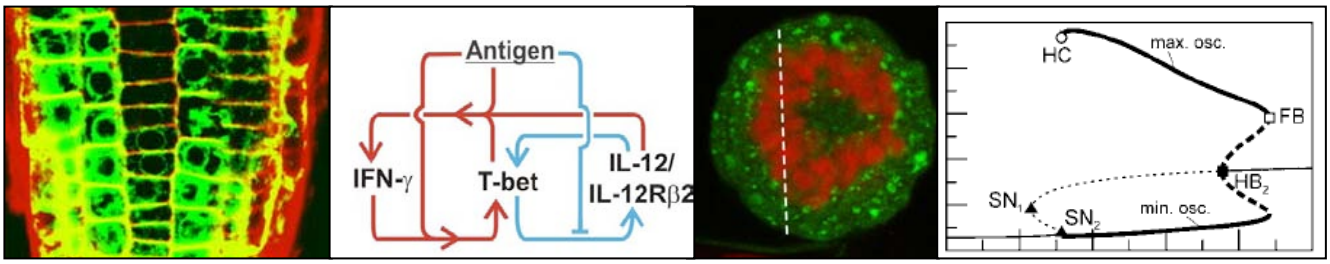
Summer School:
Mathematical Modeling in Cell Biology

June, 10-12, 2009, BioQuant, Heidelberg



Organized by:

EU-FP7 Network Systems Biology of T cell Activation (SYBILLA)

Helmholtz Alliance on Systems Biology

ViroQuant

Confirmed Speakers:

- Grégoire Altan-Bonnet, Memorial Sloan-Kettering Cancer Center, New York
- Lutz Brusch, University of Dresden
- Utz-Uwe Haus, University Magdeburg
- Thomas Höfer, DKFZ and BioQuant, Heidelberg
- Dagmar Iber, ETH Zürich, Department of Biosystems Science and Engineering, Basel
- Jon Lindquist, University & ForSys Center Magdeburg
- Nick Monk, Centre for Integrative Systems Biology, University of Nottingham
- Francois Nédélec, European Molecular Biology Laboratory, Heidelberg
- Karsten Rippe, DKFZ and BioQuant, Heidelberg

Aims and Topics:

Mathematical modeling is an important tool to dissect the functioning of molecular networks in cells, and, in recent years, has become an integral part of quantitative approaches in cell biology. This workshop features advanced applications of modeling to topical areas of cell biology including:

- Spatio-temporal pattern formation in cells
- Signaling networks in the immune system and in development
- Chromatin dynamics and gene regulation

Iterative strategies that link experimental and computational work are emphasized. Thus the workshop addresses theoreticians engaged in systems-biology collaborations as well as experimentalists interested in the utility of mathematical modeling. Care will be taken to make the presentations accessible to both sides and foster dialogue. Modeling techniques discussed in relation to experimental data include:

- Analysis and simulation of dynamical systems and stochastic processes
- Reaction-diffusion systems and spatio-temporal patterning

- Logic analysis of regulatory networks
- Parameter estimation and model identification

Besides the lectures, there will be a computer lab with worked examples. Ample time is provided for discussion with the speakers. Selected participants will present their own research projects in short talks.

Application:

The workshop mainly addresses Ph.D. students and postdoctoral researchers. To apply please submit a **brief CV** and a **half-page description of your motivation** to participate in the workshop. **If you would like to give a short talk about your work, please submit title and abstract (however, this is not compulsory for participation).** If the workshop is overbooked, participants will be selected based on their applications. Please send your application to the workshop secretary, Ms Diana Haendly (d.haendly@dkfz-heidelberg.de), until Sunday, April 26, 2009. Confirmation of your registration will be sent out until April 30, 2009.

Costs:

The workshop is sponsored by the organizing initiatives and there is no workshop fee. Please book your own accommodation in Heidelberg (for example at http://www.heidelberg-marketing.de). **The workshop will start on Wednesday, June 10th at 10 am and will end on Friday, around 4 pm.**

Organizing Committee:

- Thomas Höfer, DKFZ and BioQuant, Heidelberg
- Jan Eufinger, Helmholtz Alliance on Systems Biology - DKFZ Heidelberg
- Angela Oberthür, VIROQUANT/BIOQUANT, University of Heidelberg

Further Information:

For further information visit http://www.dkfz.de/en/sbcancer/modeling-school2009.html

Organization and Funding by:

SYBILLA SYSTEMS BIOLOGY OF T-CELL ACTIVATION

SEVENTH FRAMEWORK PROGRAMME

SBCancer.

HELMHOLTZ ASSOCIATION
Alliance on Systems Biology

ViroQuant

FORSCHUNGSEINHEITEN FORSYS DER SYSTEMBIOLOGIE

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