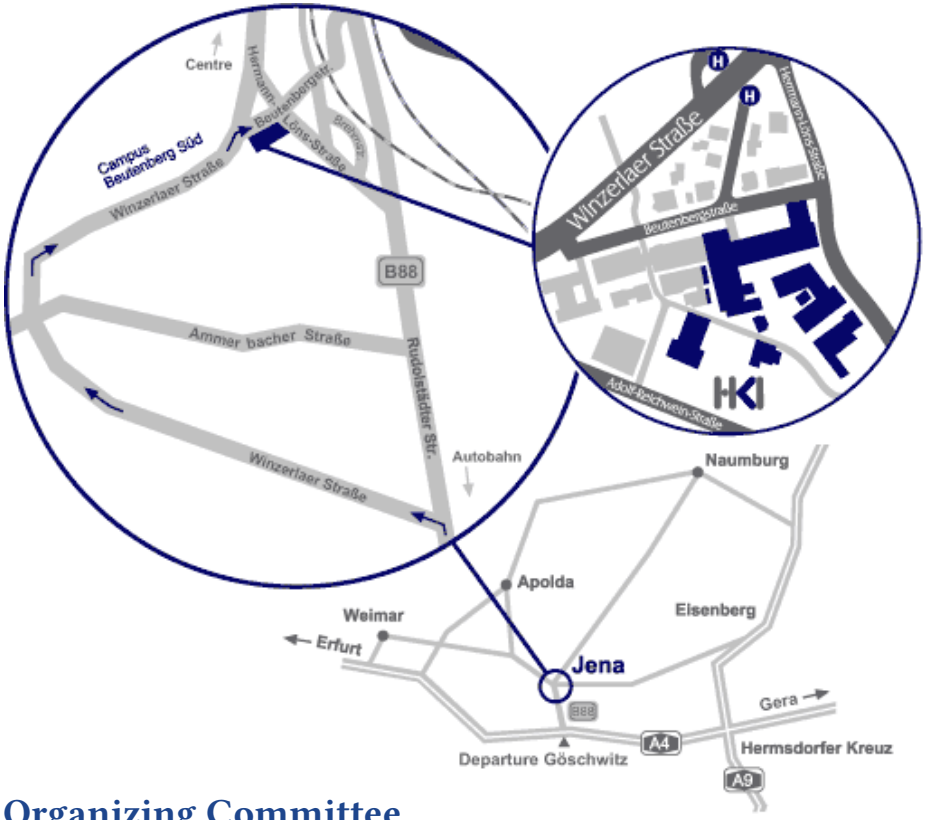
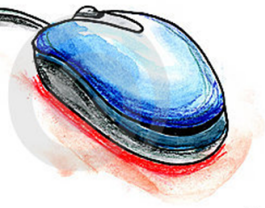
Venue: Hans-Knöll Institute (HKI),
Beutenbergstrasse 11a, D-07745 Jena, Germany



Organizing Committee

Marc Thilo Figge
Naim Al-Zaben
Ivan Belyaev
Stefanie Dietrich
Teresa Lehnert
Anna Medyukhina
Carl-Magnus Svensson
Sandra Timme

I2b0S1B6



3rd International Workshop on

Image-based Systems Biology

September 29-30, 2016
Jena
Germany

Deadlines

Abstract: June 15, 2016
Early bird registration: August 1, 2016
Late registration: September 20, 2016

Please visit the workshop website for more information:
www.image-based-systems-biology.com

Scope and Themes

The international workshop *Image-based Systems Biology* is taking place biennially since the year 2012 at the *HKI-Center for Systems Biology of Infection* in Jena, Germany.

Image-based Systems Biology is a modern approach that aims to extract spatio-temporal information contained in images in a form that it can be used to model morphological, functional and dynamical aspects of biological processes. *Image-based Systems Biology* seeks to take full advantage of the information in images and establishes an essential connection between experimental and theoretical examination of biological processes at a quantitative level. This approach includes:

- acquisition and automated analysis of image data for high-content and high-throughput screening;
- quantitative description of biological processes by appropriate characteristic measures;
- construction of image-derived spatio-temporal models and predictive computer simulations.

Researchers from all fields are invited to communicate their results focused on *Image-based Systems Biology* in order to exchange novel scientific methods and to share recent achievements from image-driven research in biology. Joint studies of experiment and theory will be highly welcomed. Furthermore, demonstrations of methods for accurate segmentation and classification of regions of interest or object-tracking that can be applied for high-content and high-throughput screening are of interest, as well as computational methods for translating images into mathematical models ranging from differential equations to agent-based methods.

You are also cordially invited to contribute to the second Special Issue on *Image-based Systems Biology* that will be published in Cytometry Part A. More information can be found at the website.

www.image-based-systems-biology.com

Invited Speakers

Prof. Dr. Niels Grabe
HAMAMATSU Tissue Imaging and Analysis Center,
BIOQUANT, University of Heidelberg, Heidelberg, Germany

Wound healing revised:
A novel reepithelialization mechanism revealed by *in vitro* and *in silico* models

Dr. Katrin Heinze
Biophotonics Group, Bio-Imaging Center and Rudolf Virchow Center
University of Würzburg, Würzburg, Germany

Robust spatiotemporal analysis of cell-vessel interplay in large tissue specimen

Prof. Dr. Erik Meijering
Biomedical Imaging Group Rotterdam
Erasmus MC - University Medical Center, Rotterdam, The Netherlands

Model-based bioimage analysis of cell shape and motion

Prof. Dr. Jean-Christophe Olivo-Marin
Quantitative Image Analysis Unit
Institut Pasteur, Paris, France

Quantitative bioimage analysis: from cells to numbers

Prof. Dr. Ernst Stelzer
Institute for Cell Biology and Neuroscience,
Buchmann Institute for Molecular Life Sciences (BMLS)
Goethe University Frankfurt, Frankfurt, Germany

Scalable quantitative characterization of three-dimensional multicellular aggregates at single cell resolution with light sheet microscopy

Dr. Johannes Textor
Tumor Immunology
Radboud University Medical Center, Nijmegen, The Netherlands

MotilityLab: Storing, sharing, and analyzing immune cell migration data