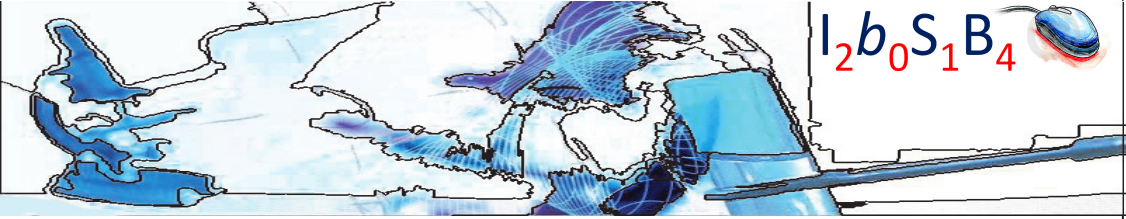

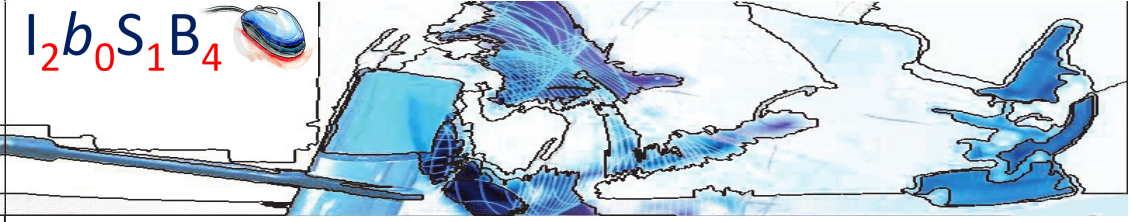

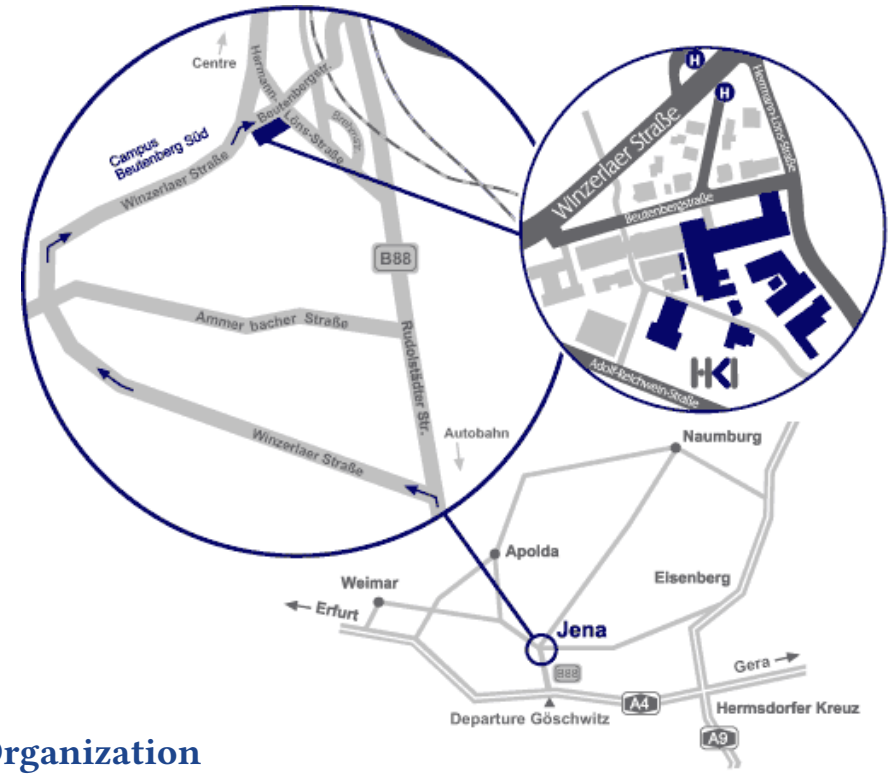

Organization

Marc Thilo Figge
Reinhard Guthke
Carl-Magnus Svensson
Anna Medyukhina
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www.image-based-systems-biology.com

Image - based Systems Biology

Workshop

September 25-26, 2014
Jena
Germany

Deadlines

Abstract: June 15, 2014
Registration: September 1, 2014

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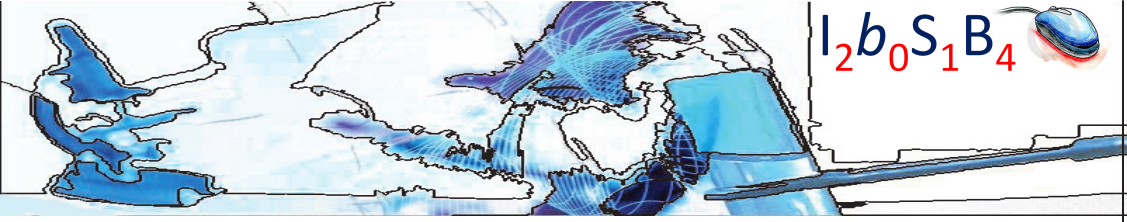
Please visit the workshop website for more information:
www.image-based-systems-biology.com



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The general experience that "a picture is worth a thousand words" also holds in the field of systems biology: *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.

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.

Invited Speakers

Dr. Joost Beltman
Netherlands Cancer Institute
Amsterdam, The Netherlands

Topic: **Analyzing and modelling immune cell migration**

Dr. Till Bretschneider
Warwick Systems Biology Centre,
University of Warwick, Coventry, United Kingdom

Topic: **Mapping amoeboid cell migration**

Prof. Dr. Stephen McKenna
Computer Vision and Image Processing,
University of Dundee, Dundee, United Kingdom

Topic: **Automating the analysis of histopathology images**

Prof. Dr. Robert F. Murphy
Lane Center for Computational Biology, Carnegie Mellon University, Pittsburgh, PA, USA and Faculty of Biology, Albert Ludwig University of Freiburg, Germany

Topic: **Image-derived spatiotemporal models of subcellular organization, differentiation and perturbation**

Porf. Dr. Jean-Christophe Olivo-Marin
Bioimage Analysis Unit, Cell Biology and Infection Department
Institut Pasteur, Paris, France

Topic: **Colocalisation analysis of biomolecules**

PD Dr. Karl Rohr
Biomedical Computer Vision
University of Heidelberg, BIOQUANT Center,
German Cancer Research Center, Heidelberg, Germany

Topic: **Tracking and registration for automatic analysis of live cell image data**

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