

# ESMTB Infoletter

## January 2009



www.esmtb.org

Dear colleague

with this ESMTB Infoletter you receive information about conferences, workshops, schools and open positions. Please send relevant information to be included in the next ESMTB infoletter to [info@esmtb.org](mailto:info@esmtb.org).

Best regards, Andreas Deutsch  
Dresden, 16th of January 2009

---

## Conferences

---

**11th International Conference on Molecular Systems Biology at Chinese Academy of Sciences - Max Planck Society, Partner Institute for Computational Biology, Shanghai**

**Date: 2009-06-21 to 2009-06-25**

For the past years, active research in systems biology has generated many promising and intriguing experimental, theoretical, and computational results. At the 11th International Conference on Molecular Systems Biology (ICMSB09, Shanghai), world experts from many relevant fields will meet in Shanghai to present and discuss recent advances and new applications in molecular systems biology, and exchange emerging research ideas. We strongly encourage participation by young researchers and graduate students from all over the world. The ICMSB09 will be hosted by the CAS-MPG Partner Institute for Computational Biology (PICB). The city of Shanghai is a dynamic center of economy, commerce, science and technology in. It provides an excellent environment for scientists to interact and identify potential collaborations.

We are now open to accept contributed talks and posters for all areas in molecular systems biology including (but not limited to) the following topics:

- Mathematical modeling and simulation of biosystems and their evolution
- Functional genomics and proteomics
- Identification and analysis of gene regulatory networks
- Identification and analysis of protein-protein interaction networks
- Identification and analysis of metabolic networks

- Computational approaches to complex genetic diseases
- Synthetic biology and circuitry

**ABSTRACT SUBMISSION DEADLINE**  
March 15, 2009

<http://www.picb.ac.cn/icmsb2009>

---

**Summer Solstice 2009 International Conference on Discrete Models of Complex Systems at Institute of Theoretical Physics and Astrophysics, University of Gdansk, Gdansk, Poland**

**Date: 2009-06-22 to 2009-06-24**

Conference Objective

Complex systems are pervasive in many fields of science and we encounter them everyday and everywhere in our life. Their examples include financial markets, highway transportation networks, telecommunication networks, human economies, social networks, immunological systems, ant colonies, ect. The key feature of a complex system is that it is composed of large number of interconnected and interacting entities exhibiting much richer dynamical properties on global scale than they could be inferred from the properties and behaviours of its individual entities. Complex systems are studied in many areas of natural sciences, social sciences, engineering and mathematical sciences. The integral part of these interdisciplinary studies forms discrete modeling. These models can be seen as the simplest laboratories to study phenomena exhibited by complex systems like self-organization processes, pattern formation, cooperation, adaptation, competition, attractors, or multi-scaling phenomena. The ob-

jective of this conference is to bring researchers working on discrete modeling of complex systems and to provide a forum for exchange of ideas and presentation of results of their research.

#### Call For Papers

Researchers and scientists working in the area of discrete modeling of complex systems are invited to submit abstracts on their research to be presented at the conference. Of particular interest are approaches: cellular automata, lattice gas cellular automata, agent based simulation models, individually based simulation models, networks. Both theoretical and applied research is of interest. Accepted abstracts will be scheduled as talks or posters.

#### Post Conference Proceedings

All participants of the Conference are invited to submit a paper for publication in the special issues of the Acta Physica Polonica B. All submissions will be peer-reviewed.

#### Important Dates

Abstract submission: May 15, 2009  
 Early registration: May 1, 2009  
 Manuscript submission: September 01, 2009

<http://www.picb.ac.cn/icmsb2009>

#### 16th Germinal Centre Conference at Frankfurt, Germany

**Date: 2009-07-05 to 2009-07-09**

Dear colleagues, we are glad to announce the 16th Germinal Centre Conference and by this the continuation of this regular and stimulating meeting. It will take place in Frankfurt (Germany) on July 5th-9th, 2009 and will be complemented by a workshop on intravital imaging techniques and a follow-up meeting on neuro-endocrine-immune interactions (July 9th-11th, 2009). The invited speakers are already confirmed and a preliminary programme is available under [www.gcc16.org](http://www.gcc16.org)

Topics of the conference:

- Lymphoid tissue onto- and neo-genesis
- Affinity maturation in germinal centres

- T and B lymphocyte differentiation and activation
- Links between innate and adaptive immunity
- Neuro-immune interactions
- Mathematical modelling of immune responses
- Intravital microscopy

You are cordially invited to submit abstracts under [www.gcc16.org](http://www.gcc16.org) or to register at the same site. Abstract submission and registration start on February 1st, 2009.

<http://www.gcc16.org>

---

#### European Conference on Complex Systems 2009 at University of Warwick, UK

**Date: 2009-09-21 to 2009-09-25**

ECCS09 will be a major international conference and event in the area of complex systems and interdisciplinary science in general. It will offer unique opportunities to study novel scientific approaches in a multitude of application areas. Two days of the conference are reserved for satellite conferences which may or may not be directly related to the conference tracks. Applications to organise a satellite conference can now be submitted via a web form. Please visit <http://eccs09.info> and go to the satellite proposal submission page. For feedback before submission write to

Conference Tracks:

- Policy, Planning & Infrastructure (Policymaking; Urban Planning; Internet; Transport & Power Networks; Medical & Health Systems)
- Collective Human Behaviour and Society (Economics & Finance; Sociology; Psychology; Game Theory)
- Interacting Populations and Environment (Climate Change; Pollution; Demography; Ecology; Epidemiology)
- Complexity and Computer Science (Robotics; Grids, Clouds & Novel Computing; Ubiquitous Computing)
- From Molecules to Living Systems (Self-assembly & Self-organisation; Neuroscience; Cell, Developmental and Systems Biology; Genetics; Medicine & Physiology)
- Mathematics and Simulation (Mathematics; Modelling; Simulation; Theoretical Physics)

Key dates: (provisional and subject to change)

- Satellite meeting proposals: final deadline 15 Feb
- Paper submission: 1 April; decisions 30 June
- Meeting registration opens soon; earlybird deadline early July; last assured chance 1 Sept.

<http://eccs09.info/>

<mailto:eccs09@warwick.ac.uk>

---

## Workshops

---

**Medizinische Systembiologie Phänomene und Modelle at Institut für Medizinische Informatik, Statistik und Epidemiologie (IMISE), Leipzig, Germany**

**Date: 2009-03-03 to 2009-03-04**

Basierend auf einer Vielzahl neuer technologischer Möglichkeiten hat sich die Menge und die Diversität zur Verfügung stehender quantitativer Daten, sowohl im experimentellen als auch im klinischen Kontext, in den letzten Jahren vervielfacht. Um zu einem umfassenden, systemischen Verständnis der jeweils betrachteten Prozesse zu gelangen, ist ein interdisziplinärer Forschungsansatz unumgänglich: Gezielte (Störungs-)Experimente und effiziente Messprotokolle sind ebenso notwendig wie eine fundierte statistische Aufarbeitung der Daten und eine Analyse des Systemverhaltens mittels dynamischer Modelle. Ziel des Workshops ist es, an verschiedenen Beispielen die interdisziplinäre Zusammenarbeit von Experimentatoren, Klinikern, Biostatistikern und Modellierern zu illustrieren. Der Workshop bietet die Möglichkeit eines intensiven, fachgebietsübergreifenden Erfahrungsaustausches sowie der Etablierung neuer Kooperationen. Im Gegensatz zu anderen systembiologischen Initiativen liegt der Schwerpunkt hierbei auf dem klar formulierten Bezug zu medizinisch motivierten Fragestellungen, d.h. zu einer Beschreibung von sowohl physiologischen als auch pathophysiologischen Vorgängen. In diesem Sinne werden einige Beispiele aus dem Verbundprojekt HaematoSys, welches innerhalb des BMBF-Programmes zur Medizinischen Systembiologie ab März 2009 gefördert wird, berichtet.

Registration: 6.2.2009

See [PDF](#) for details

<mailto:cornelia.will@imise.uni-leipzig.de>

---

## Open Positions

---

**Bioinformatics Postdoc at Netherlands Cancer Institute, Amsterdam, The Netherlands**

**Deadline for applications: 2009-01-30**

Topic:

Pathway-based tumour characterisation by alignment against cell panels along multiple molecular dimensions.

Research:

Astra Zeneca Oncology has constructed large cell panels to serve as in vitro models for drug response. These cell panels have been extensively characterized by mutation analysis, mRNA expression, aCGH, response to a wide variety of drugs, micro-RNA expression and phosphoprotein characterization. In parallel, the same measurements are being performed on a collection of colorectal samples. In this project two aims are pursued. First, a comparative analysis will be performed between the cell line data and the tumor data to determine the multi-dimensional molecular states spanned by the cell lines and whether these states faithfully recapitulate the space spanned by a representative and clinically relevant selection of tumor samples. Guided by this mapping and by following a pathway-based approach, integrative modeling will be applied on the cell line panel data to construct models predictive of resistance.

Job description:

The successful candidate will be responsible for the bioinformatics analysis of the cell line and tissue data. More specifically, these tasks include 1) constructing a comprehensive gene list of the PI3K and ERK network; 2) Molecular characterisation of the colorectal cell panel and tumour samples through integrative analysis of the various data sources within the space spanned by the identified network genes and 3) Pathway-based alignment of cell panel to tumours to determine the extent to which the cell panel recapitulates the heterogeneity in the tissue set.

Location:

The position is embedded within the Bioinformatics and statistics group lead by Dr Lodewyk Wesels (<http://bioinformatics.nki.nl>) at the Netherlands Cancer Institute, Amsterdam and the Oncology Informatics group, Discovery Medicine, Astra

Zeneca, Alderley Park, UK lead by Dr Tim French. We plan to have regular meetings, and the postdoc will also spend time at both locations.

Requirements:

Candidates should fulfill the following criteria.

- MSc or PhD in one of the following areas: bioinformatics, engineering, computer science, statistics, physics, biotechnology, or biology.
- Knowledge of fundamental aspects of cancer biology, especially signalling pathways.
- Knowledge of fundamental aspects of computer science (algorithms and data structures, programming languages).
- Knowledge or experience of informatics.
- Knowledge of statistics, artificial intelligence or bioinformatics is highly desirable.

Conditions of Employment:

The successful candidate will be employed by the Netherlands Cancer Institute. The employment conditions follow general employment rules as laid down in the CAO for hospitals. The salary will be determined depending on education and experience.

Contact and Applications:

Dr. Lodewyk Wessels, tel. +31 20 512 7987 or e-mail: [l.wessels@nki.nl](mailto:l.wessels@nki.nl) or Dr Tim French Discovery Medicine, Cancer Bioscience, tel. +44 1625-519922 or e-mail: [Tim.French@AstraZeneca.com](mailto:Tim.French@AstraZeneca.com). Applicants should send a CV, list of publications and the names and addresses of at least two persons that can be approached to obtain further information.

Please contact: [Dr. Lodewyk Wessels](mailto:Dr.Lodewyk.Wessels@nki.nl)  
<http://bioinformatics.nki.nl>

---

## Open PhD and/or postdoc positions at ETH Zurich, Switzerland

**Deadline for applications: 2009-02-15**

The successful candidate will develop his/her research in collaboration with other members of the Chair of Sociology, in particular Modeling and Simulation (SOMS) at ETH Zurich. SOMS is a

young, multidisciplinary, international group, investigating social systems from the point of view of complexity science, particularly on areas such as game theory, network theory, human interaction and coordination in space and time, quantitative sociodynamics, behavior of crowds and masses, pedestrian dynamics and panic, self-organization and collective intelligence in complex systems, artificial societies, behavioral and decision models, robust organizations and disaster response management.

As a member of the SOMS team within the Qlectives project framework, his/her work will primarily focus on: 1) developing agent-based models to study the influence of typical characteristics of complex social systems on the efficiency, stability and resilience of techno-social collectives; 2) collecting and analyzing massive empirical datasets obtained from Qlectives Living Labs and different information platforms supporting techno-social collectives.

Moreover he/she will continuously interact with other Qlectives partners and external collaborators, and will contribute to Qlectives dissemination activities by publishing in international peer-review journals, and presenting his/her research in international forums.

Qualifications and experience required:

We are looking for a highly motivated postdoctoral researcher or outstanding PhD student with international publications, particular mathematical or computer skills and/or experience in massive data evaluation, with an interdisciplinary research approach. A social science background and experience with WEB environments and Geographic Information Systems would be desirable.

Contact email address for further details: Please send your applications, including a CV, exam documents and supporting materials to Prof. Dirk Helbing [jslozano@ethz.ch](mailto:jslozano@ethz.ch) until February 15, 2009.

Please contact: [Prof. Dirk Helbing](mailto:Prof.Dirk.Helbing@ethz.ch)  
<http://www.jobs.ethz.ch>