

ESMTB Infoletter

November 2008



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.

Best regards, Andreas Deutsch
Dresden, 18th of November 2008

News

ESMTB new Board

The election of the Board of the Society is now over, and we welcome Andreas Deutsch (Germany), Miguel Herrero (Spain), Peter Jagers (Sweden), Daphne Manoussaki (Greece), and Andrea Pugliese (Italy) on the new Board. They take office from 1 January 2009 and will be accompanied by continuing board members Carlos Braumann (Portugal), Christine Jacob (France), Eva Kiski (Finland), Jean-Christophe Poggiale (France), and Hans Westerhoff (The Netherlands).

Conferences

Understanding VIOLENCE: Recent advances in biology, sociology, and modeling - EPFL-LATSIS Symposium 2009 at Lausanne, Switzerland

Date: 2009-02-11 to 2009-02-13

Violence is one of the most important social and public health problems worldwide. Despite great interest in understanding the major causes of violence and in developing effective prevention and intervention programs, knowledge generated by experts on different fields is nowadays fragmented and generally circumscribed to the circles where it is generated. Violent behavior is related to complex environmental and social circumstances, but heritable and other biological factors are also implicated. An integrated view of the causes of violence should take into account sociological and psychological aspects, together with biological, evolutionary and modeling approaches.

This EPFL-Latsis Symposium will bring together world leaders from each of these fields to discuss major recent advances in

-biological (genetic risk factors; stress; hormonal alterations; neuroimaging data on brain function alterations),

-psycho-sociological (hierarchical relationships and population health; elements of the micro-context; developmental trajectories) and

-modeling approaches (virtual reality and emotions; computational models on the development of hierarchical societies) to foster actual interactions between these fields.

There will be 6 sessions organized around key questions related to understanding VIOLENCE, in which presentations by invited speakers will be followed by a large discussion animated by a leading expert.

There will be poster sessions and a round table that will include representatives from major international organizations with programs on violence and representatives from institutions that directly deal with violent individuals or with their victims. The language and level in speakers presentations will be accessible to non-experts, as part of the common goal and effort for establishing a true communication among the different backgrounds and approaches.

<http://latsis2009.epfl.ch>

3rd FEBS Advanced Lecture Course Systems Biology: From Molecular Biology to Biological Function at Congress Centrum Alpbach, Austria

Date: 2009-03-07 to 2009-03-13

Systems Biology is one of the most prominent newly emerging interdisciplinary science areas. By connecting fields such as genomics, proteomics, cell biology, medicine, molecular biology and genetics, with mathematics, bioinformatics, engineering and computation, it enables discovery of yet unknown principles underlying the functioning of living cells. At the same time testable and predictive models of complex cellular pathways and eventually of whole cells are generated, which are useful for efficient experimental design and bioengineering and the network-based design of drugs and therapies. FEBSSysBio2009 will cover of SysBio from principles and methods essential and state-of-the-art aspects through the modeling of living systems to applications in biotechnology and medicine.

The Federation of the European Biochemical Societies, FEBS, is the main sponsor of this exciting event. Additional contributions (see below) from key Systems Biology funding organizations, from learned societies, from Systems Biology centers and from companies facilitate the organization of FEBSSysBio2009 and the participation of its students.

We were able to commit many leading experts to participate as lecturers, tutors, black-board teachers and informal poster discussants and we are thus confident that FEBS-SysBio2009 will again be an outstanding lecture course with an excellent scientific program. It will open the doors for regular student training in Systems Biology in Europe, provide a basis for a human network of young Systems Biology experts, and provide a centre for other Systems Biology discussions between scientists and funders.

Deadline for online applications and abstract submission: December 12, 2008

<http://www.febs-sysbio2009.org>
<mailto:info@febs-sysbio2009.org>

Open Positions

Postdoctoral position in mathematical population genetics at Georgetown University, Washington DC, USA

Deadline for applications: 2008-11-25

An NSF-funded postdoctoral position is available in the population genetics of biological invasions. Research focuses on the dynamics of single genes and quantitative traits in populations invading new spatial territory; methods include the analysis of PDE and integrodifference equation models as well as simulation. A second focus is the development of statistical tests for population structure and the action of selection on quantitative traits in spatially distributed populations. Opportunities for supervision of undergraduate research assistants and possibly summer classroom teaching will be available.

Applications should be submitted online through <http://www.mathjobs.org> ; include an AMS cover sheet, cover letter, CV, and description of research interests and background. Applicants should also arrange to have at least three letters of recommendation uploaded through <http://www.mathjobs.org> . Applications received before November 25, 2008 are guaranteed full consideration.

Inquiries (but not applications) may be addressed to Prof. Judith Miller, Department of Mathematics, Georgetown University, Washington DC USA (jrm32@georgetown.edu).

Georgetown University is an Equal Employment Opportunity/Affirmative Action employer, committed to a diverse faculty, staff, and student body. Women and minority candidates are strongly encouraged to apply.

Please contact: Prof. Judith Miller
<http://www.mathjobs.org>

Postdoc (two years, with possibility for extension): Computational modeling of structural genomic variation in hierarchically-regulated gene networks at NISB and CWI, Amsterdam, The Netherlands

Deadline for applications: 2008-11-30

The postdoc will develop and analyze theoretical, evolutionary models of hierarchical gene network regulation using discrete and/or continuous modeling approaches. Model insights and predictions based on artificial and actual regulatory networks will be interpreted in close collaboration with two functional genomics groups that participate in the NCSB: the Edwin Cuppen group at the Hubrecht laboratory, Utrecht and the Lodewyk Wessels group at the Netherlands Cancer Institute in Amsterdam.

Candidates ideally fulfill the following criteria:

- Ph.D. theoretical biology, computer science, mathematics or a related discipline
- able to communicate with scientists in biology and mathematics
- good programming skills in C++ or equivalent

Direct requests for information or applications before 1 December 2008 to:

Dr. Roeland Merks, Roeland.Merks@sysbio.nl
phone +31 20 592 4117, skype: roelandmerks, Centrum Wiskunde & Informatica (CWI) and Netherlands Institute for Systems Biology (NISB)
Kruislaan 413, 1098SJ Amsterdam, The Netherlands

Applications should include a motivation letter, a curriculum vitae, list of publications, and the names and addresses of at least two persons that can be approached to obtain further information.

Please contact: Dr. Roeland Merks
<http://www.sysbio.nl>

2 PhD positions - Multi-scale modeling and image analysis of liver regeneration at INRIA, Paris-Rocquencourt, France

Deadline for applications: 2008-12-31

We are looking for several PhD students for mathematical multi-scale modeling of lung cancer growth and therapy. Agent-based models (e.g. Drasdo, Höhme, Phys. Biol. 2, 133:2005, Block, Schöll, Drasdo, Phys. Rev. Lett., 99, 248101, 2007) and continuum modeling (e.g. Byrne and Drasdo, J. Math. Biol., 2008 (available online)) should be used to explain and predict growth and therapy of lung tumor cell populations in-vitro and in-vivo from one cell up to the centimeter scale. The models for in-vivo tumors will include angiogenesis and blood flow. Confocal microscopy images should be quantitatively analyzed to link the experimental image information to the computer simulations.

Requirements: - Master / Diploma degree in computer science, mathematics, physics, engineering or an equivalent scientific degree - Languages: English (mandatory), French (helpful), German (helpful) - Strong interdisciplinary interest and team-orientation

Recommended: - Experience with programming languages (C, C++, CUDA), modeling techniques (agent-based models) and OpenGL-based visualization techniques for the individual-based modeling and image processing part - Experience in numerical solutions of partial differential equations and modeling in the sciences for the continuum modeling part.

The persons will mainly work at INRIA Paris-Rocquencourt (close to Paris) and work closely with biologists and clinical collaboration partners. Further details are available on request from: Dirk Drasdo, phone: +33 139635036, email: dirk.drasdo@inria.fr (<http://ms.izbi.uni-leipzig.de/drasdo.html>). Applications (containing cover letter, CV, master/diploma certificate and two letters of reference) should be sent either by email: dirk.drasdo@inria.fr (preferred) or by surface mail to: Dirk Drasdo, INRIA, Domaine de Voluceau-Rocquencourt, B.P. 105, 78153 Le Chesnay Cedex France

Please contact: Dirk Drasdo

2 PhD positions or 1 PhD and one Post-doc position - Modeling and image analysis of liver regeneration at IZBI, University of Leipzig, Germany

Deadline for applications: 2008-12-31

Within two projects, the regeneration process within a single liver lobule and within a fraction of liver containing several liver lobules is studied. Normal and pathological cases, partly with and without drug administration are considered. The projects include close collaborations with experimental groups from different European countries. They are based on a information processing chain including (1) image data processing on the scale of individual cells and lobules for a statistical analysis and, (2) a quantitative dynamic agent (=cell)-based (mathematical) model of a regenerating lobule and of a group of liver lobules. The mathematical multi-scale model will eventually link molecular information to the regeneration process.

Requirements: - Master / Diploma degree in computer science, mathematics, physics or an equivalent scientific degree - Languages: English (mandatory), German (helpful), French (helpful) - Strong interdisciplinary interest and team-orientation

Recommended: - Experience with programming languages (C, C++, CUDA), modeling techniques (agent-based models) and OpenGL-based visualization techniques

The persons will be employed in at the University of Leipzig and may have different visits at INRIA Paris-Rocquencourt. Further details are available on request from: Dirk Drasdo, phone: +33 139635036, email: dirk.drasdo@inria.fr (<http://ms.izbi.uni-leipzig.de/drasdo.html>). Applications (containing cover letter, CV, master/diploma certificate and two letters of reference) should be sent either by email: dirk.drasdo@inria.fr (preferred) or by surface mail to: Dirk Drasdo, INRIA, Domaine de Voluceau-Rocquencourt, B.P. 105, 78153 Le Chesnay Cedex France

Please contact: [Dirk Drasdo](mailto:Dirk.Drasdo)

PhD Positions at Victoria University of Wellington, New Zealand

Deadline for applications: 2008-11-30

Students with a strong background in theoretical physics or chemistry are invited to apply. Programming skills and experience with computer simulation will be an advantage.

The scholarships include fees and a competitive stipend, and are available from December 2008 for up to 3 years. Applications should include a curriculum vitae and the names of two referees, however potential applicants are welcome to contact me first to discuss the available projects.

*Please contact: [Dr Nicola Gaston](mailto:Dr.Nicola.Gaston)
<http://www.macdiarmid.ac.nz/>*

Assistant Professorship in Network Science at Center for Complex Network Research, Boston, USA

Deadline for applications: 2008-11-25

The Center of Complex Network Research (CCNR), together with the Departments of Physics and Computer Science invites applications for assistant professor tenure-track position in Network Science. We are particularly interested in outstanding candidates with interest in fundamental aspects of network formation and evolution, and their applications to various real world problems, from biological to social and communication networks. Applicants interested in data mining in networks will also be considered. The main appointment will likely be in the Department of Physics, but for qualified candidates with background in other areas, like computer science or biology, appointments with the appropriate departments will also be explored.

Required qualifications include: an earned Ph.D. degree in physics, computer science, or a closely related field; a strong record of research in network science that can support the teaching mission of the appropriate department and the research missions of the Center; excellent communication skills and an interest working with students and collaborating with the community and industry. For more information about ongoing network related

research at CCNR visit www.barabasilab.com.

Review of applications will begin November 25, 2008, and will be continued until the position is filled. A letter of application that addresses the qualifications, teaching and research statements, vitae, and three recommendation letters should be submitted to Suzanne Aleva js.aleva@neu.edu; under the subject Network Science Search, or should be mailed to:

Suzanne S. Aleva
Northeastern University
Center for Complex Network Research
111 DA/ Physics
360 Huntington Avenue
Boston, MA 02115

Please contact:

<http://www.barabasilab.com>

Positions in joint experimental and theoretical systems biology projects at DKFZ, Heidelberg, Germany

Deadline for applications: 2008-12-01

The Division of Theoretical Bioinformatics at the German Cancer Research Center (DKFZ) is inviting applications from highly qualified candidates to work in interdisciplinary systems biology projects with a strong focus on medical/therapeutic applicability. The DKFZ is a world-leading institution in the field of applied and basic cancer research.

Within DKFZ, systems biology research plays a leading role and is carried out in close cooperation with BioQuant the Center for Systems Biology at the University of Heidelberg, where part of the positions will be localized.

Please contact:

<http://www.dkfz.de>

[Download PDF here](#)

Akademischer Rat / Rätin auf Zeit at Fakultät I, Universität Bayreuth, Germany

Deadline for applications: 2008-12-31

An der Fakultät I der Universität Bayreuth ist am Lehrstuhl Experimentalphysik V eine befristete Tätigkeit (ganztags) als Akademischer Rat / Rätin auf Zeit (Besoldungsgruppe A 13) im Beamtenverhältnis auf Zeit baldmöglichst zu besetzen.

Die Stelle ist zunächst auf drei Jahre befristet mit der Möglichkeit der Verlängerung um weitere drei Jahre. Vorausgesetzt wird ein Studium der Physik und Promotion. Der/die Bewerber/in soll nach der Promotion in der Regel 2 Jahre Erfahrung in der Experimentalphysik gesammelt haben. Eine Habilitation im Fach Experimentalphysik sollte angestrebt werden. Die Stelle bietet die Gelegenheit zur Weiterentwicklung eines eigenen Forschungsprofils, wobei die Forschungsinteressen auf dem Gebiet Nichtlineare Dynamik komplexer Kontinua liegen sollten. Hier kann die Universität Bayreuth mit der gleichnamigen interdisziplinären DFG-Forschergruppe 608 ein stimulierendes Umfeld bieten. Die Stelle ist mit Lehrverpflichtungen verbunden, welche im Rahmen des Lehrangebots der Fachgruppe Physik erfüllt werden müssen. Erwünscht ist hier insbesondere der Einsatz in der Experimentalphysik-Ausbildung. Schwerbehinderte werden bei gleicher Eignung bevorzugt eingestellt. Die Universität Bayreuth strebt eine Erhöhung des Anteils der Frauen an und bittet deshalb Frauen nachdrücklich um ihre Bewerbung.

Interessenten werden gebeten, ihre Bewerbung mit den üblichen Unterlagen zu richten an:

Prof. Dr. Ingo Rehberg
Experimentalphysik V
Universität Bayreuth
95440 Bayreuth

Please contact: Prof. Dr. Ingo Rehberg