

ESMTB Infoletter

January 2010



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, 14th of January 2010

Conferences

7th International Symposium on Networks in Bioinformatics (ISNB2010) at Science Park Amsterdam, Amsterdam, The Netherlands

Date: 2010-04-22 to 2010-04-23

The 7th International Symposium on Networks in Bioinformatics (ISNB 2010) is scheduled on 22 and 23 April 2010 and is likely to continue its success from previous years in bringing different disciplines together to discuss ongoing research in bioinformatics and biology of networks.

The focus of 7th International Symposium on Networks in Bioinformatics will be on biological networks such as metabolic networks, signal transduction pathways and genetic regulatory networks. This year we also aim to include topics like modeling of cells, tissues, gene regulation, from DNA to transcriptional behaviour and biomineralisation.

We also want to invite researchers working on gene networks in plants (e.g. Arabidopsis), model organisms such as Drosophila and organisms with a relatively simple and basal body plan such as sponges and scleractinian corals. Understanding of these networks is crucial for understanding molecular and cellular processes in the organism or system under study. This field is subject of lively research and both experimental and computational approaches are used to elucidate the biological networks.

The bioinformatics of biological networks involves a broad range of research and approaches. Research includes the identification of regulatory elements in DNA, developmental biology, genome

context analysis, modelling and simulation of pathways, reconstruction of pathways from experimental data, visualization of pathways, and the representation of pathways in database, graphs and mark-up languages.

<http://amc-app1.amc.sara.nl/twiki/bin/view/ISNB/>
<mailto:a.h.vankampen@amc.uva.nl>

ESF Forward Look Project Consensus Conference at Madrid, Spain

Date: 2010-04-26 to 2010-04-27

The European Mathematical Society is currently involved in a Forward Look Project (a foresight exercise supported by the European Science Foundation), aimed at developing a European vision and policy recommendations on the interactions and synergy between Mathematics and economy (Industries, Companies, Banks, Insurances etc.).

The three working groups of the project (Training and careers, Interfaces between Mathematics and Industry, and Opportunities and Challenges) will be presenting their report at a Consensus Conference that will be held in Madrid on the 26th and 27th of April 2010.

The Conference will be an official event of the Spanish Presidency of EU and will be aimed at obtaining a more focussed attention to Mathematics by the European decision-makers (in particular in the preparation of the 8th Framework Program). A large participation of the community of European mathematicians is encouraged.

The Conference will include invited presentations by some major European companies (success stories and future challenges), a scientific conference

by P.L.Lions, a general survey on industrial mathematics in Europe (Alfredo Bermudez de Castro), and a general discussion on the report prepared by the Working Groups and on the Policy Recommendations that will be issued as conclusion. Anyone that wants to receive subsequent direct information should send an e-mail to: mathind@math.unifi.it. You will be kept posted!

<mailto:mathind@math.unifi.it>

Conference on Computational and Mathematical Population Dynamics (CMPD3) at Bordeaux, France

Date: 2010-05-31 to 2010-06-04

The Third Conference on Computational and Mathematical Population Dynamics (CMPD3) will take place in Bordeaux, France, from May 31 to June 4, 2010. This Conference is the third joint meeting of the Conference on Mathematical Population Dynamics (MPD) and the Conference on Deterministic and Stochastic Models for Biological Interactions (DeStoBio), with a 25-year history of international meetings.

The aim of the meeting is to bring together people from different fields (applied mathematicians, computer scientists, biologists, clinicians, epidemiologists, ecologists, ...) interested in (deterministic and/or stochastic) models for population dynamics and interactions.

Population dynamics here is intended in a very wide sense, including everything from populations of animals and plants, to populations of cells or molecules. Hence, topics of the conference will include ecology (including epidemic spread), cell population dynamics (including immunology, tumor growth) and molecular biology (including molecular evolution and genetics, genomics). The meeting will focus on modelling of quantitative data in these fields, analysis of models, and their applications.

31 January 2010: Session proposal
14 March 2010 : End of Abstract submission

<http://www.sm.u-bordeaux2.fr/CMPD3/>
<mailto:ingrid.rochel@u-bordeaux2.fr>

3rd Chaotic Modeling and Simulation International Conference (CHAOS2010) at Chania, Crete, Greece

Date: 2010-06-01 to 2010-06-04

The forthcoming 3rd International Conference (CHAOS2010) on Chaotic Modeling, Simulation and Applications (www.cmsim.info) was decided by the previous Committee meeting in June 2009 following the successful organization of the 2nd CHAOS2009 International Conference.

The study of nonlinear systems and dynamics has emerged as a major area of interdisciplinary research and found very interesting applications. This conference is intended to provide a widely selected forum among Scientists and Engineers to exchange ideas, methods, and techniques in the field of Nonlinear Dynamics, Chaos, Fractals and their applications in General Science and in Engineering Sciences.

The principal aim of Chaos2010 International Conference is to expand the development of the theories of the applied nonlinear field, the methods and the empirical data and computer techniques, and the best theoretical achievements of chaotic theory as well. Chaos2010 Conference provides a forum for bringing the various groups working in the area of Nonlinear Systems and Dynamics, Chaotic theory and Application for exchanging views and reporting research findings.

The general topics and the special sessions proposed for the Conference (Chaos2010) include but are not limited to: Chaos and Nonlinear Dynamics, Stochastic Chaos, Chemical Chaos, Data Analysis and Chaos, Hydrodynamics, Turbulence and Plasmas, Optics and Chaos, Chaotic Oscillations and Circuits, Chaos in Climate Dynamics, Geophysical Flows, Biology and Chaos, Neurophysiology and Chaos, Hamiltonian systems, Chaos in Astronomy and Astrophysics, Chaos and Solitons, Micro- and Nano-Electro-Mechanical Systems, Neural Networks and Chaos, Ecology and Economy.

For more information and electronic abstract submission please visit the conference website at: <http://www.cmsim.info/> and send email to: secretariat@cmsim.info

<http://www.cmsim.info/>
<mailto:secretariat@cmsim.info>

10th Gatherings in Biosemiotics at Braga, Portugal

Date: 2010-06-22 to 2010-06-27

The Tenth Annual International Gatherings in Biosemiotics will be held on June 22-27, 2010 at the Faculty of Philosophy of the Portuguese Catholic University (UCP) in Braga, Portugal.

The Conference Organizing Committee welcomes paper proposals from theorists and researchers in any academic discipline who are investigating the real-world use of sign processes among or within living organisms. Biologists, philosophers, and researchers from both the natural sciences and the social sciences are invited to contribute to this interdisciplinary event.

To submit a proposal, interested parties should e-mail an abstract of between 300-600 words to abs2010@biosemiotics.org by January 30 2010.

<http://www.facfil.ucp.pt/biosemiotics>
<mailto:abs2010@biosemiotics.org>

ECCS10 European Conference on Complex Systems at Lisbon, Portugal

Date: 2010-09-14 to 2010-09-17

The ECCS10 European Conference on Complex Systems will be held in Lisbon, Portugal, an organization of the Complex Systems Society.

ECCS10 will be located at the Lisbon University Institute, from the 13th to 17th September, 2010. The main conference tracks will be presented on the 13th, 14th and 17th September and the Satellite Meetings will occur on the 15th and 16th September, 2010.

Main Conference Tracks:

Track A: Policy, Planning & Infrastructure
 Policymaking; Design Processes; Environmental Decision Making; Management; Construction and Manufacturing; Energy and Sustainability; Urban Planning; Built Environment; Internet; Transport & Power Networks; Medical & Health Systems.

Track B: Collective Human Behaviour and Society
 Philosophy of Science; Economics & Finance; Sociology; Psychology; Game theory.

Track C: Interacting Populations and Environment
 Climate Change; Geography; Pollution; Demography; Ecology; Epidemiology.

Track D: Complexity and Computer Science
 Natural and Pervasive Computing; Global Computing Infrastructure; Swarms and Robot Teams; Mobile and Fleet Computing; Graphs and Neural Networks; Language and Cognition; Collaborative Human Computer Networks.

Track E: From Molecules to Living Systems
 Self-assembly & Self-organisation; Biochemistry, Cell Biology, Neuroscience; Systems Biology; Medicine & Physiology.

Track F: Mathematics and Simulation
 Mathematics; Theoretical Physics; Modelling; Theory of Simulation (both numerical mathematics and agent based); Network Theory.

<http://eccs2010.eu/>

Open Positions

PhD position in Theoretical and Mathematical Neuroscience at Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany

Deadline for applications: 2010-02-28

A position for a doctoral student at the Max-Planck-Institute for Mathematics in the Sciences is available in the Research Group of Prof. Jürgen Jost, Cognitive structures and neuronal networks: Modelling of auditory brainstem networks This is a joint project with Prof. Rudolf Rübsamen, Institute of Biology-II, Faculty of Biosciences, Pharmacy and Psychology, University of Leipzig as part of the DFG-funded Graduate College "InterNeuro" (GRK 1097) (www.uni-leipzig.de/ineuro/). Funding of the PhD project is for 3 years.

We are looking for a mathematician, a physicist or a computer scientist with a strong interest in neurobiological systems. The project will be con-

cerned with the modelling of circuits in the auditory brainstem. The experimental data will be provided from pre- and postsynaptic recordings of extracellular electrical fields in specific neurons of the auditory system. We expect to combine an ability for conceptual thinking with advanced methods of data analysis. A specific feature and the anticipated strength of the project will be the close interaction between modelling and experimental verification of model-based predictions. The student will be embedded in an active multidisciplinary research group studying many diverse complex systems at the Max Planck Institute. The Max Planck Institute for Mathematics in the Sciences is an equal opportunity employer encouraging female scientists and scientists with disabilities to apply.

Please send application material only in copy without folder or by e-mail. They will be discarded after a retention period.

Contact address:

Prof. Jürgen Jost

Max Planck Institute for Mathematics in the Sciences

Inselstrasse 22, 04103 Leipzig

Phone: +49 (0)341-9959-550

Email: jost@mis.mpg.de

Web: <http://www.mis.mpg.de>

Research associates at Indiana University, Bloomington, USA

Deadline for applications: 2010-02-28

The Biocomplexity Institute at Indiana University, Bloomington, is seeking to hire research associates to fulfill the following roles as part of recent initiatives funded by the Environmental Protection Agency and the National Institute of General Medical Sciences. Please see attached pdf for details.

All applicants will work in an interdisciplinary team including toxicologists, geneticists, developmental biologists, computer-scientists, physicists and mathematicians to develop large-scale approaches to understanding the principles of development underlying teratogenicity, normal development and developmental diseases like cancer. Interest in regenerative biology and tissue engineering appreciated. Starting salary range will be between \$30,000 and \$70,000 per year plus

standard health insurance and retirement benefits. Salary dependant on experience and qualifications. Initial appointment for one year beginning Dec. 1, 2009, renewable for up to three years depending on performance and funding availability. Send CV, research summary and 2 papers or projects, along with a brief statement of relevance of background to position applied for, to Prof. James A. Glazier, bioc@indiana.edu The Biocomplexity Institute Multidisciplinary Science Building (MSP) 1 Simon Hall 047, 212 S. Hawthorne Drive Bloomington, IN 47405-7105. Please arrange to have three letters of reference sent separately. Searches will begin immediately and will continue until positions are filled. For more information, please see www.biocomplexity.indiana.edu and www.compuce3d.org or contact Prof. Glazier by e-mail. Indiana University is an Equal Opportunity/Affirmative Action Employer.

Please contact: bioc@indiana.edu

<http://www.biocomplexity.indiana.edu>

Download PDF [here](#)

Two Assistant or Associate Professors at Arizona State University, Arizona, USA

Deadline for applications: 2010-03-31

Arizona State University's Complex Adaptive Systems Initiative (CASI) invites applications for two tenure-track or tenured positions at the rank of assistant or associate professor. The successful candidate will have a tenure-track or tenured appointment in the academic unit most suitable in view of his/her background, skills and interests, and may fulfill all or part of his/her teaching duties as part of the Applied Mathematics in the Life and Social Sciences (AMLSS) degree programs depending on experience and expertise.

We are particularly interested in candidates who are able to engage in research that crosses traditional academic boundaries while addressing scientific challenges whose answers are tied in to the study of complex processes over multiple levels of organization and several temporal and spatial scales. The areas of application include, but are not limited to, computational epidemiology, computational ecology or computational social sciences.

Minimum qualifications include a Ph.D. in the computational, mathematical or statistical sciences with a research emphasis in the application of the mathematical sciences in the life and/or social sciences by August 2010, and familiarity with the tools of the complex adaptive systems and/or network approaches. Successful candidates will be expected to conduct research and publish in an area appropriate to their expertise, including complex adaptive systems, computational and theoretical ecology and epidemiology, social networks and social dynamics. Successful candidates will provide quality teaching of undergraduate and graduate courses in the new applied mathematics in the life and social sciences degrees. They will also mentor undergraduate and graduate students involved in trans-disciplinary research, participate in oncampus interdisciplinary activities and carry out appropriate professional service.

Candidates should have demonstrated computational and modeling skills in the context of interdisciplinary and trans-disciplinary research. Candidates at the assistant professor level must also have demonstrated potential for excellence in research and teaching at all levels. Candidates at

the tenured associate professor level must have demonstrated excellence in research and teaching at all levels, and should have experience advising graduate students with diverse backgrounds and interests. All candidates must have experience in mentoring undergraduate students.

All application materials must be submitted online at <http://mathjobs.org> and include:

1. A curriculum vitae;
2. A personal statement addressing the candidates research agenda;
3. A statement of teaching philosophy and commitment to broaden participation in the mathematical sciences
4. A completed AMS Standard Cover Sheet
5. At least four letters of recommendation, including one that addresses teaching.

Review of applications will begin on February 15, 2010 and will continue weekly until the searches are closed.

Please contact:

<http://mcmsc.asu.edu/>

Download PDF [here](#)