

ESMTB Infoletter

February 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.

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

Conferences

34th Conference of the Middle European Cooperation in Statistical Physics (MECO) at Leipzig, Germany

Date: 2009-03-30 to 2009-04-01

The next Annual Conference of the Middle European Cooperation in Statistical Physics (MECO) will take place at the end of March 2009 in Leipzig, Germany. The conference is addressed to theoretical as well as experimental physicists working in the domain of Statistical Mechanics/Condensed Matter Physics. The meeting will focus mainly (but not exclusively) on:

- Soft matter physics
- Magnetic systems
- Complex systems and networks
- Non-equilibrium systems
- Interdisciplinary applications

The scientific programme will consist of 10 invited lectures (40 min), about 20 contributed oral presentations (20 min) and poster contributions. Oral contributions will be selected among those who apply for an oral presentation, register, and submit an abstract before 28 February 2009. Late submissions will be considered as a poster contribution (but may not be included in the abstract booklet).

Important Deadlines:

Early payment deadline: 15 February 2009
Abstract submission deadline: 28 February 2009
Payment deadline: 15 March 2009

<http://www.physik.uni-leipzig.de/~meco34/>
<mailto:meco34@itp.uni-leipzig.de>

5th Spain, Italy, Netherlands Meeting on Game Theory (SING5) at VU University Amsterdam, The Netherlands

Date: 2009-07-01 to 2009-07-03

On July 1-3, 2009 the 5th Spain, Italy, Netherlands Meeting on Game Theory (SING5), is going to be held at VU University Amsterdam, The Netherlands.

This meeting is jointly organized by VU University Amsterdam (VU), University of Amsterdam (UvA), Centrum Wiskunde & Informatica (CWI), and the Tinbergen Institute (TI).

SING5 is the fifth in the series of successful Spain-Italy-Netherlands Meetings on Game Theory and the second one to be held in The Netherlands.

The conference program will consist of a number of invited lectures and contributed papers. Contributions from all over the world are invited and solicited. The meeting is set out to attract specialists with different backgrounds and interests covering all aspects of Game Theory, its applications, and its practice. English is the language of the meeting.

Abstract submission deadline: April 13, 2009
Notification of acceptance: April 24, 2009
Early fee deadline: May 15, 2009
Registration for presenting authors deadline: June 5, 2009

<http://www.feweb.vu.nl/sing5/>
<mailto:sing5.amsterdam@gmail.com>

3rd q-bio Conference on Cellular Information Processing at St. John's College, Santa Fe, New Mexico

Date: 2009-08-05 to 2009-08-09

The Third q-bio Conference on Cellular Information Processing will take place August 5-9, 2009 on the campus of St. Johns College in Santa Fe, New Mexico.

The theme of the conference is to advance predictive modeling of cellular regulatory systems. The emphasis is on modeling and quantitative experimentation for understanding and predicting the behaviors of specific regulatory systems, phenomena that manifest themselves in many biological systems, and/or general principles of cellular information processing.

Abstract submission, registration, and further information may be found at <http://q-bio.org>

Abstracts submitted by the deadline of April 1 will be considered for contributed talks, spotlight talks, and poster presentations.

The conference will be preceded by The Third q-bio Summer School (July 20 - Aug 4, Los Alamos, NM) and tutorials and software demonstrations on Aug 5. Satellite workshops will take place on Aug 7.

Deadlines:

Summer school applications: March 1, 2009
 Satellite workshop proposals: March 1, 2009
 Tutorial proposals: March 15, 2009
 Abstract submissions: April 1, 2009
 Early registrations: June 1, 2009

<http://q-bio.org>
<mailto:q-bio-09@cns.lanl.gov>

Workshops

New Topics on Game Theory at Sevilla, Spain

Date: 2009-04-01 to 2009-04-02

The academic program will consist of a series of plenary sessions, together with poster sessions for

which the contributions of the participants will be considered

Important dates:

Deadline for poster submission is February, 15, 2009.

Acceptance Notification: February, 20, 2009.

Registration: February, 27, 2009.

<http://www.upo.es/econ/revilla/NTGT/NTGTmain.htm>

Third Annual CompuCell3D User-Training Workshop: Developing Multi-Cell Developmental and Biomedical Simulations with CompuCell3D at Indiana University, USA

Date: 2009-08-17 to 2009-08-21

Background:

Modeling is becoming an integral part of contemporary bioscience. The Glazier-Graner-Hogeweg (GGH) model as implemented in the modeling environment, CompuCell3D allows researchers to rapidly build complex models of multi-cell processes in development and disease with resolution, from sub-cellular compartmental models to continuum models of tissues. CompuCell3D uses CC3D-ML and Python allowing compact model description for publication, and is open source, allowing users to extend, improve, validate, modify and share the both models and core software.

Goal:

By the end of the week, participants will have implemented a basic simulation of the particular biological problem they work on. Post-course support and collaboration will be available to continue simulation development.

Topics:

Introduction to GGH modeling. Applications of GGH modeling and overview of published work. Introduction to CompuCell3D. Python scripting. Basics of model building. Extending CompuCell3D. Building a basic simulation of your system.

Format:

A limited number of lectures and multiple extended hands-on computer tutorials.

Instructors:

James A. Glazier, Maciej Swat, Benjamin Zaitlen,

Abbas Shirinifard, Nikodem Poplawski, Randy Heiland (Biocomplexity Institute, Indiana University).

Target Audience:

Experimental Biologists, Cancer Biologists, Developmental and Regenerative Biologists, Medical Scientists, Biophysicists, Mathematical Biologists and Computational Biologists from advanced undergraduates to senior faculty, interested in developing multi-cell computational models, or learning how such models might help their research. No specific programming or mathematical experience is required, though familiarity with some modeling environment (e.g. Mathematica®, Maple®, Matlab®) and how to represent basic concepts like diffusion and chemical reactions mathematically, would be helpful.

Fees and Support:

The registration fee of \$500 covers workshop participation, workshop materials and lunches. Partial support for registration, travel and hotel costs may be available.

Application and Registration:

Enrollment is limited and by application only. To apply, please send a c.v., a brief statement of your current research interests and of the specific problem you would like to model. Students and postdocs should also include a letter of support from their current advisor. If travel support is requested, include a statement documenting need and amounts. Please submit all application materials electronically to Maciej Swat (mswat@indiana.edu) by June 30th, 2008. Funding will be awarded on a first-come first-served basis.

Facilities:

Participants will have access to an OSX cluster and will be able to connect to the Internet using their own laptops.

<http://www.compucell3d.org>
<mailto:mswat@indiana.edu>

Schools

Lipari International Summer School - RNAs: structure, function and therapy at Catania, Italy

Date: 2009-06-13 to 2009-06-20

The theme of the school, RNAs : structure, function and therapy, falls within the areas of Bioinformatics & Biomedicine, and deals specifically with bioinformatics and biomedical aspects of RNAs analysis. There are four lecture series, each of three hours, a lecture series of one hour, and nine tutorials, each of one hour. The lectures will cover fundamental aspects relating to the study and the analysis of transcription and translation mechanisms and their spatial-temporal regulation. Gene regulatory factors that control the expression of genomic information come in a variety of flavors, with transcription factors and microRNAs representing the most numerous gene regulatory factors in multicellular genomes. Two series of lectures are devoted to RNA interference, with special emphasis on mechanisms of post transcriptional regulation by microRNAs in vivo with case studies from the brain and the involvement of microRNAs in cancer, while the other two are devoted to mathematical, physical and computational methods needed to analyse RNAs. The tutorials will cover the most recent advances in computational methods for RNAs: sequences and structures. Moreover, they will also highlight recent additional results on protein-RNA interactions. Thus they nicely complement the main lectures. As it is clear from the enclosed bibliography, the selected themes have received much attention in the scholarly literature that ranges from Nature to BMC Bioinformatics and Bioinformatics. In its entirety the planned summer school will allow young researchers interested in bioinformatics and biomedicine to be exposed to cutting edge results in the increasingly important area of RNAs analysis in biology.

Deadline for application is March 31, 2009. Applicants must include a short curriculum vitae and specify two professors whom letters of recommendation will be asked to, if deemed necessary. Applicants will be notified about admission by April 10, 2009.

<http://lipari.cs.unict.it/LipariSchool/Bio/index.php>
<mailto:school@dmi.unict.it>

Summer School "Complex and Biofluids" at Cargèse, Corsica Island (France)

Date: 2009-06-22 to 2009-07-04

Complex fluids are abundant in industrial applications, e.g., emulsions and foams, and commonly found in biology, e.g., blood. These materials exhibit rich dynamic macroscopic behavior that stems from the interplay between microstructure distortion by external forcing (flow) and microstructure relaxation by intrinsic mechanisms (e.g. polymer recoiling, drop shape relaxation.). Understanding the microscale physics and its effect on macroscopic (effective) properties of complex fluids remains a major research problem.

The summer school will provide forum for discussion about the challenges and approaches in modeling flows of soft/complex materials, including micro- and nano-fluidics. It will foster interactions between different disciplines (physics, engineering, applied mathematics, computer science, biology and medical science) as well as different generations (expert senior scientists and students).

Topics:

- Rheology of complex fluids
- Visco-elastic instabilities
- Hydrodynamics, propulsion of soft particles: capsules, vesicles, cells
- Micro-, Nano-fluidics
- Cell adhesion and motility
- Cellular and tissue biomechanics

For PhD students a short CV, and recommendation letter(s) from the advisor(s) are required and should be sent to jessie.sitbon@ujf-grenoble.fr. Notification of acceptance will be sent by march 2009.

<http://www-lsp.ujf-grenoble.fr/Cargese2009>
<mailto:chaouqi.misbah@ujf-grenoble.fr>

21th International School for Computer Science Researchers - Molecular and Medical Image Analysis and BioInformatics at Catania, Italy

Date: 2009-07-11 to 2009-07-18

The Twenty-first International School for Com-

puter Science Researchers addresses PhD students and young researchers who want to get exposed to the forefront of research activity in the field of Molecular and Medical Imaging. The school will be held in the beautiful surroundings of the Island of Lipari.

Deadline for application is March 31, 2009. Applicants must include a short curriculum vitae and specify two professors whom letters of recommendation will be asked to, if deemed necessary. Applicants will be notified about admission by April 15, 2009.

<http://lipari.cs.unict.it/LipariSchool/CS/index.php>
<mailto:school@dmi.unict.it>

2009 Summer School on Parameter Estimation in Physiological Models at Island of Lipari (Sicily, Italy)

Date: 2009-09-13 to 2009-09-26

Within the realm of mathematical and computer modeling of physiological processes, attention has been traditionally given to direct problems, i.e. to the process whereby, starting from known facts and reasonable assumptions on the system structure, the behavior of a simplified, hypothetical system is predicted. While fundamental for the understanding of the involved mechanisms, direct modeling does not answer, in and by itself, the main experimental question, which is to infer the system structure given the experimentally observed behavior. The Lipari 2009 summer school will be dedicated to the study of modeling from the side of parameter estimation (when the investigator presumes a functional form for the family of models representing the system, and is trying to identify the relevant parameter values) and from the side of qualitative study of the models, both deterministic and stochastic (with the goal of assessing congruency of behavior of the model with the known features of the experimental system under investigation). This school will address mathematical modeling and statistical estimation in a single framework; will tightly integrate methods and applications; and will provide understanding of the methodological problems in this field and a frame of reference for more individually focused study after-school.

The summer school is intended for PhD-students and Post-Docs interested in parameter estimation for physiological models. The number of participants will be limited to 60. The issues, problems, and methodologies for modeling and parameter estimation of complex physiological systems touch several competence domains. Participants with backgrounds in applied mathematics, bioengineering, or biomedicine are welcome.

The event is structured as 13-day summer school aimed at PhD and Post-Doc students; the last 2 days of the summer school consist of a scientific workshop on mathematical models for the glucose/insulin system.

The school will be conducted during two working weeks, Monday September 14th through Wednesday September 23rd, including the morning of the intervening Saturday, for a total of 68 teaching units (including courses and participant presentations). Each day there will be 8 teaching units (lectures by instructors and invited speakers) of 40 min, including 5 min questions and discussion, separated by intervals, as well as participant presentations of 20 min each, arranged in couples and following the same schema. The Mathematical Modelling for the Glucose/Insulin system workshop will take place on Thursday 24th and Friday 25th September. Participants will be given ample opportunity to interact with instructors during and after hours.

The school will be organized along the following main courses:

- Qualitative behaviour of solutions
- Introduction to Inverse Problems
- A-priori model identifiability and robust identification
- Numerical Integration
- ML Population Estimation
- Bayesian Estimation
- Kalman filtering and Nonlinear Observer techniques
- Parameter Estimation for Stochastic Differential Equations
- Stochastic Geometry

<http://www.biomatematica.it/lipari2009>

Open Positions

Professorial position in bioinformatics at The Max Planck Institute for Biology of Ageing, Cologne, Germany

Deadline for applications: 2009-03-31

Max-Planck-Institut für Biologie des Alterns The Max Planck Institute for Biology of Ageing in Cologne has a vacancy (code 01/2009) for a W2 professorial position in bioinformatics.

We seek an experienced bioinformatician with an excellent track record in achievement and publication and in obtaining external financial support. The successful candidate will join the staff of the newly founded Max Planck Institute for Biology of Ageing. The new Institute is dedicated to understanding fundamental mechanisms of aging in various model systems, and is situated on the University of Cologne Campus. An interest in collaboration with scientists both in the MPI and in the University would be an advantage.

The candidate will also be expected contribute to and supervise the activities of a core group in bioinformatics, dedicated to developing various bioinformatics resources for data analysis and other research needs of the Institute. At present these include mass spectrometry, sequence-based gene expression profiling, analysis of transcription factor binding sites and measurement of mutation rates.

The position will be available for 5 years in the first instance, with the possibility of permanency. The employment contract is based on contracts for the civil service with a W2 professorial level.

The Max Planck Society is committed to employ more handicapped individuals and especially encourages them to apply.

Your application should be written in the English language and include a letter of application, a curriculum vitae including a description of your professional skills, together with the contact details of 3 professional referees. The vacancy will be kept open until filled.

For further inquiries you may contact info@age.mpg.de or Ms. Moeller under 0049-221-4726311.

Please send your application (quoting the above mentioned position code number) to:
Max-Planck-Institut für Biologie des Alterns
Die Verwaltung
Gleueler Str. 50
50931 Koeln

Please contact: info@age.mpg.de

PhD Fellowships in Computational Biology and Scientific Computing at FU Berlin, Germany

Deadline for applications: 2009-02-27

The International Max Planck Research School for Computational Biology and Scientific Computing, a joint graduate program of the Freie Universität Berlin and the Max Planck Institute for Molecular Genetics, Berlin, invites applications for a PhD program.

The PhD program is open for international students holding a Master (or equivalent) degree in computer science, physics, mathematics, or biology.

The closing date for applications is February 27, 2009.

A poster can be downloaded from www.imprs-cbsc.mpg.de/download/poster2009.pdf

For further details and the application procedure, please visit <http://www.imprs-cbsc.mpg.de>

Please contact:
<http://www.imprs-cbsc.mpg.de>

PhD Student in Complex Systems at Department of Physics and Astronomy, University of Calgary, Canada

Deadline for applications: 2009-03-31

The Complexity Science Group in the Department of Physics & Astronomy at the University of Calgary invites applications for a PhD position in the field of complex network theory with applications to neurosciences. The successful applicant is expected to work closely with other members of the Complexity Science Group and members of the Hotchkiss Brain Institute in an interdisciplinary environment. The candidate should possess a degree in theoretical physics or a related discipline. A background in statistical physics, computational physics, time series analysis, complex network theory and/or information theory is beneficial.

Applicants should send an email to davidson@phas.ucalgary.ca that includes a CV with a list of publications and a brief statement of research interests. Review of applications will begin on January 30, 2009 and continue until the position is filled. More information about the group is available at www.ucalgary.ca/complexity.

The application package may also be sent by mail to

Professor Jörn Davidsen
Complexity Science Group
Department of Physics and Astronomy
University of Calgary
2500 University Dr. NW
Calgary, Alberta T2N 1N4
CANADA

Please contact:
<http://www.ucalgary.ca/complexity>