

ESMTB Infoletter

December 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, 16th of December 2008

Conferences

Mathematical Models of Collective Dynamics in Biology and Evolution MDBE09 at Univeristy of Leicester, UK

Date: 2009-05-11 to 2009-05-13

The scope of the conference is outlined by (although not necessarily restricted to) the following topics:

- ecology and epidemiology
- interface between ecology and evolution
- pattern formation and morphogenesis
- collective cells dynamics and applications to tumour growth

The talks are expected to be mostly grouped around these subject areas. However, we will be ready and willing to consider any submission of a potentially high scientific merit which does not exactly fall into the list above.

In order to encourage a wide participation of PhD students as well as early career researchers, there will be a poster session organised during the conference. For UK research PhD students, partial financial support is possible to contribute to the travel or accommodation expenses.

To register, please send a message to sp237@le.ac.uk (Sergei Petrovskii) with a title and a brief abstract of your presentation (one page at most, in a camera-ready format, either pdf or Word), clearly indicating whether it is intended to be a talk or a poster. Also, in case there is more than one author, please indicate it very clearly who is actually going to present the work.

The registration and abstract submission deadline is March 1, and the decision of acceptance will be made by March 15, 2009.

<http://www.math.le.ac.uk/PEOPLE/sp237/workshop/mdbe09.htm>

The 10th European Congress of Stereology and Image Analysis (ECS10) at Milan, Italy

Date: 2009-06-22 to 2009-06-26

The aim of ECS10 is to bring together leading scientists working in the areas of (but not limited to)

- Stereology
- Geometrical and Topological tools: 2D and 3D shape factors, norms, metrics, gauges, discrete geometry
- Main mathematical and physical transforms: Fourier, Karhunen-Loève, Walsh-Hadamard, Wavelets, Time-Frequency
- Stochastic geometry and related Statistical methods
- Spatial processes
- Pattern analysis
- Texture evaluation
- Image enhancement
- 3D reconstruction
- Colour images

<http://ecs10.mat.unimi.it/>
<mailto:ecs10@mat.unimi.it>

Ninth Annual International Gatherings in Biosemiotics at Charles University, Prague, Czech Republic

Date: 2009-06-30 to 2009-07-05

This is the initial Call for papers for the Ninth Annual International Gatherings in Biosemiotics, to be held on June 30 July 5, 2009 at the Department of Philosophy and History of Science, Charles University, Prague .

The Scientific Advisory Committee of the Ninth Annual Gatherings in Biosemiotics welcomes paper proposals from researchers in any academic discipline who are investigating the real-world use of sign processes among or within living organisms.

The Ninth Annual Gatherings in Biosemiotics is taking place at the Department of Philosophy and History of Science of Charles University under the kind auspices of Anton Marko, in collaboration with the International Society for Biosemiotic Studies.

<http://www.natur.cuni.cz/filosof/gatherings2009/>

International Conference on Mass-Data Analysis of Images and Signals in Medicine, Biotechnology, Chemistry and Food Industry at Leipzig, Germany

Date: 2009-07-15 to 2009-07-17

The automatic analysis of images and signals in medicine, biotechnology, and chemistry is a challenging and demanding field. Signal-producing procedures by microscopes, spectrometers and other sensors have found their way into wide fields of medicine, biotechnology, economy and environmental analysis. With this arises the problem of the automatic mass analysis of signal information. Signal-interpreting systems which generate automatically the desired target statements from the signals are therefore of compelling necessity. The continuation of mass analyses on the basis of the classical procedures leads to investments of proportions that are not feasible. New procedures and system architectures are therefore required. The scope of conference is to bring together researcher, practitioners and industry people who are dealing with mass analysis of images and signals to present

and discuss recent research in these fields.

The goals of this conference are to:

- 1) provide a forum for identifying important contributions and opportunities for research on mass data analysis on microscopic images,
- 2) promote the systematic study of how to apply automatic image analysis and interpretation procedures to that field
- 3) show case applications of mass data analysis in biology, medicine, chemistry and food

Important Dates:

Deadline for paper submission: January 6, 2009

Notification of acceptance: March 6, 2009

Final paper submission: April 27, 2009

<http://www.mda-signals.de>

Workshops

SMMS-2009: Simulation of Multiphysics Multiscale Systems at Baton Rouge, USA

Date: 2009-05-25 to 2009-05-27

Simulation of multiphysics and multiscale systems poses a grand challenge to computational science, with vast applications in chemical engineering, plasma physics, material science, biophysics, aerospace and automotive sectors. Most of the real-life systems involve interactions amongst a wide range of physical phenomena. In addition to that, the time and length scales of the individual processes involved often differ by orders of magnitude. Numerical simulation of these multiphysics and multiscale problems requires development of sophisticated models and methods for their integration, as well as efficient numerical algorithms and advanced computational techniques.

This workshop aims to bring together computational physicists, numerical specialists and computational scientists to push forward this challenging multidisciplinary research field, and to foster cross-fertilization between all fields of applications.

Important dates:

Short abstract (1 page): December 6, 2008

Full paper submission: January 9, 2009

Notification of acceptance: February 2, 2009

Camera-ready papers: February 15, 2009

<http://www.science.uva.nl/~valeria/SMMS>
<mailto:SMMS@science.uva.nl>

Cancer Systems Biology Workshop at Rostock-Warnemünde, Germany

Date: 2009-06-07 to 2009-06-11

This transatlantic summer school provides a unique training opportunity for PhD students and postdoctoral researchers, whether they are "experimentalists" or "modellers". This is a one-off, non-profit event to train researchers and attract young scientists to the field of cancer systems biology. The number of participants is strictly limited.

<http://www.sbi.uni-rostock.de/casysbio/>
<mailto:petra.gefken@uni-rostock.de>

International Workshop on Integrative Network Inference in Systems Biology at Jena, Germany

Date: 2009-10-08 to 2009-10-09

This continues as the 7th Int. Workshop a tradition of annual workshops in Jena focused on gene expression data analysis for dynamic modeling. To get an impression about the workshop topics, you may have a look at <http://www.biocontrol-jena.com/> where you will find the programme of the 6th workshop performed end of September 2008.

The Workshop will be organized by the Leibniz Institute for Natural Product Research and Infection Biology - Hans Knoell Institute (HKI) together with BioControl Jena GmbH with support of the Jena Centre for Bioinformatics (JCB) and within the framework of the German Systems Biology Initiatives HepatoSys and FORSYS, the German Research Foundation DFG Priority Programme SPP 1160.

The Workshop will take place on October 8 and 9, 2009, at the Technologie- und Innovationspark Jena (TIP), Beutenberg Campus, Wildenbruchstr. 15, D-07745 Jena, Germany. For all speakers, the participation will be free of charge. If you would like to submit an abstract (1 page) for an oral

presentation at the Workshop, please mail it to reinhard.guthke@hki-jena.de

Deadlines for submission of abstracts and registration will be defined in the complete announcement that will be issued in January 2009.

<http://www.biocontrol-jena.com/>
<mailto:reinhard.guthke@hki-jena.de>

Open Positions

Ph.D Grant at Universidad Complutense, Madrid, Spain

Deadline for applications: 2008-12-30

The Research Group on Mathematical Models in the Natural Sciences, located at Universidad Complutense de Madrid (Spain) announces a call for a Ph.D student for up to four years duration, to conduct research towards a Ph.D in Mathematics in some of the subjects described below. The details of the call, including the administrative requirements thereof, will be published soon in the web page of the Spanish Ministry for Science and Innovation (MICINN) under the heading Becas FPI: <http://www.micinn.es>

The successful candidate should have a M.Sc in Mathematics, Physics or related areas, show evidence of a good academic record, and an interest in modeling, mathematical analysis and numerical simulation of problems arising from Biology and Medicine. A working knowledge of Spanish is desirable, but not strictly necessary.

The research topics to be considered make part of the MICINN Project: Mathematical Models in Biology and Medicine (Project Code MTM2008-01867) and will be one of the following:

- Strategy optimization in radiotherapy
- Cell invasion processes: ossification, tumour growth
- Problems related to the development and functioning of the vascular system

Please contact: *Dr. Miguel A. Herrero*
<http://www.micinn.es>

PhD Fellowships in Computational Biology and Scientific Computing at International Max Planck Research School, 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 Universitaet 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.

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

Please contact:

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

Postdoctoral position for mathematical modelling of cell differentiation during biofilm formation at University of Dundee, UK

Deadline for applications: 2009-01-16

The appointed postdoctoral scientist will be part of an interdisciplinary team and will develop a multi-scale modelling approach to address, at the systems biology level, how biofilm formation is controlled. This will lead to a better understanding of microbial community dynamics with longer term impact on applications to health and industry.

This project is funded as an initiation to pump-prime interdisciplinary collaborations in Life Sciences at Dundee. It is planned to develop the ideas formulated over this time period to establish a longer term programme of funded research and suitable candidates would be well-placed to be part of this longer term plan.

Candidates should have, or be about to obtain, a PhD at the interface of mathematics and biol-

ogy. The post is available for up to 12 months in the first instance and is available immediately.

Informal enquiries can be made to Dr Fordyce Davidson (Division of Mathematics) or Dr Nicola Stanley-Wall (College of Life Sciences), e-mail: fdavidso@maths.dundee.ac.uk; n.r.stanleywall@dundee.ac.uk (applications sent to either of these addresses alone will not be considered see below).

Applications in the form of a CV and covering letter, including the names and addresses of 3 referees, should be sent to HR-LifeSciences@dundee.ac.uk quoting LS/2505. Alternatively, please send 2 hard copies of your CV and covering letter to Human Resources, College of Life Sciences, MSI/WTB/JBC Complex, University of Dundee, DD1 5EH.

Please contact: Dr Fordyce Davidson

<http://www.dundee.ac.uk/jobs>

Download PDF [here](#)

Postdoctoral Research Fellow (Applied Mathematician) at School of Biosciences, Centre for Plant Integrative Biology, Nottingham, UK

Deadline for applications: 2009-01-21

A five year programme within the Centre for Plant Integrative Biology (CPIB) at the University of Nottingham aims to create a virtual root which will serve as an exemplar for using Integrative Systems Biology to model multi-cellular systems. CPIB is jointly funded by the BBSRC and EPSRC as part of their Systems Biology Initiative to establish a number of Centres for Integrative Systems Biology. This project brings together biologists, engineers, mathematicians and computer scientists to generate new data, biological resources and virtual models that will aid understanding of how plant roots grow and develop.

Applications are invited for an applied mathematician on the above Virtual Root project to undertake deterministic (differential-equation based) modelling of gene and signalling networks involved in lateral root emergence. Other duties include publication of this research in peer-reviewed journals and presentations at national and interna-

tional conferences.

Candidates must have a PhD in applied mathematics or a related area. Research experience in mathematical modelling is essential and experience of multidisciplinary research is desirable. This post will require the person appointed to be able to work independently and as part of a team, to be flexible and to have good communication and interpersonal skills.

Salary will be within the range £27,183 - £35,469 per annum, depending on qualifications and experience (salary can progress to £38,757 per annum, subject to performance). This post will be offered on a fixed-term contract for a period of two years.

Informal enquiries may be addressed to Profes-

sor J King, School of Mathematical Sciences, Email: John.King@Nottingham.ac.uk. For general enquiries regarding CPIB contact Professor C Hodgman, School of Biosciences, Email: Charlie.Hodgman@Nottingham.ac.uk. Further details are available at: <http://jobs.nottingham.ac.uk/>.

Candidates should send a detailed CV, together with the names and addresses of two referees, to Mrs M Axinte, School of Biosciences, The University of Nottingham, Sutton Bonington Campus, Loughborough, Leicestershire, LE12 5RD. Email: Mirela.Axinte@Nottingham.ac.uk. Please quote ref. SCI/543X1. Closing date: 21 January 2009.

Please contact:

<http://jobs.nottingham.ac.uk/>