Symposium on Network Analysis in Natural Sciences and Engineering

part of
AISB'06: Adaptation in Artificial and Biological Systems
Bristol, UK

– Preliminary Program –

Wednesday, April 5th 2006

09:30 – 10:30	**Invited Talk: Network Analysis and Dynamic Conflict** Ulrik Brandes (University of Konstanz, Germany)
10:30 – 11:30	**Information Networks** **Statistical Analysis of Dynamic Graphs** Xiaomeng Wan, Jeannette Janssen, Nauzer Kalyaniwalla and Evangelos Milios (Dalhousie University Halifax, Canada) **Towards Associative Information Access** Michael Berthold und Andreas Nürnberger (Universität Konstanz, Otto-von-Guericke-Universität Magdeburg, Germany)
11:30 – 12:00	**Coffee Break**
12:00 – 13:30	**Analyzing Dynamic Communities and Graphs** **Generating networks with realistic properties: The topology of locally evolving random graphs** Andreas Krause (University of Bath, UK) **Community Structure in Group Living Animals** David Mawdsley and Richard James (University of Bath, UK) **Observing Dynamics in Community Structures** Tanja Falkowski and Myra Spiliopoulou (Otto-von-Guericke-Universität Magdeburg, Germany)
13:30 – 14:30	**Lunch Break**
14:30 – 16:00	**Network Theory** **General Classification of Networks** Thomas Wilhelm, Jens Hollunder, Jong-Kwang Kim and Andreas Beyer (Leibniz Institute for Age Research - Fritz Lipmann Institute, Jena, Germany) **Analytical and Numerical Results for Entrainment in Large Networks of Coupled Oscillators** Peter Grindrod and Zhivko Stoyanov (Lawson Software Magdalen Centre, University of Bath, UK) **Network Entropy and Cellular Robustness** Thomas Manke and Lloyd Demetrius (Max Planck Institute for Molecular Genetics, Germany and Harvard University, Cambridge, USA)
16:00 – 17:00	**Poster Session with Coffee** **A Discovery Method of Research Communities** Ryutaro Ichise, Hideaki Takeda and Taichi Muraki (National Institute of Informatics and TriAx Corporation, Japan) **Effects of Dimensionality over Cooperation Dynamics** Ivette C. Martinéz and Klaus Jaffe (Universidad Simon Bolivar, Venezuela) **Network Analyses to Understand the Structure of Wikipedia** Takeshi Yamada, Kazumi Saito and Kazuhiro Kazama (NTT Communication Science Laboratories, Kyoto, and NTT Network Innovation Laboratories, Tokyo, Japan) **and other…**
17:00 – 18:00	**AISB Plenary Talk: Nigel Franks**
18:30 –	**Informal Meeting of Participants for Dinner**

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Thursday, April 6th 2006

09:30 – 10:30	**AISB Plenary Talk: Owen Holland**
10:30 – 11:00	**Coffee Break**
11:00 – 12:00	**Invited Talk: Adaptation in Biological Networks: From the genome to ecosystems** Barbara Drossel (TU Darmstadt, Germany)
12:00 – 13:00	**Fault Tolerance in Communication Networks** **Fault tolerance and network integrity measures: the case of computer-based systems** Peter Andras, Olusola Idowu and Panayiotis Periorellis (University of Newcastle, UK) **Scale-free structure is not the best for the shortest path length and the robustness** Yukio Hayashi and Jun Matsukubo (Japan Advanced Institute of Science and Technology, Kitakyusyu National College of Technology, Japan)
13:00 – 14:00	**Lunch Break**
14:00 – 15:30	**Gene and Protein Interaction Networks** **Clustering Coefficients for Weighted Networks** Gabriela Kalna and Desmond J. Higham (The University of Strathclyde, Glasgow, UK) **Protein interaction network analysis reveals the importance of proteins with low degree of connectivity in neurodegenerative diseases** Joaquín Goñi, Francisco J. Esteban, Nieves Vélez de Mendizábal, Jorge Sepulcre, Sergio Ardanza-Trevijano, Pablo Villoslada (University of Navarra, University of Jaén, University of the Basque Country, Spain) **Reconstruction of Flexible Gene-Protein Interaction Networks using Piecewise Linear Modeling and Robust Regression** Ronald L. Westra , Ralf L.M. Peeters, Goele Hollanders and Karl Tuyls (Hasselt University, Belgium and Maastricht University, The Netherlands)
15:30 – 16:00	**Coffee Break**
16:00 – 17:30	**Regulatory Networks** **Scale-free Paradigm in Yeast Genetic Regulatory Networks Inferred from Microarray Data** Kevin Kontos and Gianluca Bontempi (Libre Bruxelles, Belgium) **Evolving Genetic Regulatory Networks Performing as Stochastic Switches** André Leier and Kevin Burrage (University of Queensland, Brisbane, Australia) **Noise R Us: From Gene Regulatory Networks to WWW** Margaritis Voliotis, Carmen Molina Parìs, Liverpool B. Tanniemola and Netta Cohen (University of Leeds, UK)
17:30 – 18:00	**Final Discussion and Farewell**