

# 2010 IEEE BIBM Workshop Integrative Data Analysis in Systems Biology (IDASB)

## Call for paper

Systems biology is a field in biology aiming at systems level understanding of biological processes. Systems biology studies biological systems by systematically perturbing them (biologically, genetically, or chemically); monitoring the gene, protein, and informational pathway responses; integrating these data; and ultimately, formulating mathematical models that describe the structure of the system and its response to individual perturbations. Integrated ‘omics’ approach has created exciting opportunities for systems biology researchers.

This workshop aims to provide a forum for discussion on integrated data analysis approach in systems biology research such as pattern recognition, prediction and data representation and visualisation.

This workshop will feature the theme of ‘integrated approach’ and ‘complex biological system’. Research areas include, but are not limited to:

- Large-scale or cross-species data integration for the reconstruction of networks and pathways
- Quantitative understanding of dynamics of regulatory, signalling, interaction and metabolic networks through modelling and simulation techniques
- Prediction of protein/RNA structure and biological networks interactions
- Data integration and knowledge driven approach in biomarker identification and drug discovery
- Enhancement and enablement of knowledge discovery in functional genomics of disease and other phenotypes through integrated – omics approach
- Semantic webs and ontology-driven biological data integration methods
- Development of integrated systems biology visualisation and analysis tools

## Important dates

*October 10, 2010: Due date for full workshop papers submission*

*October 25, 2010: Notification of paper acceptance to authors*

*November 7, 2010: Camera-ready of accepted papers*

*December 18-21, 2010: Workshop*

## Program Chairs

**Dr Huiru (Jane) Zheng**, Lecturer, Computer Science Research Institute, School of Computing and Mathematics, University of Ulster, UK. Email: h.zheng@ulster.ac.uk

**Dr. Zhongming Zhao**, Associate Professor, Department of Biomedical Informatics, and Chief Bioinformatics Officer, Vanderbilt-Ingram Cancer Center, Vanderbilt University Medical Center, USA. Email: zhongming.zhao@vanderbilt.edu

**Dr. Rui Jiang**, Associate Professor, Ministry of Education Key Laboratory of Bioinformatics and Bioinformatics Division, Department of Automation and Tsinghua National

Laboratory for Information Science and Technology, Tsinghua University, China. Email: ruijiang@tsinghua.edu.cn

## **Program Committee Members**

Dr. Patrizio Arrigo, National Research Council (ISMAR), Italy  
Dr. Jaine Blayney, Centre for Cancer Research & Cell Biology, Queen's University Belfast, UK  
Prof. Danail Bonchev, Center for the Study of Biological Complexity, Virginia Commonwealth University, USA  
Dr. Fiona Browne, i-Path Diagnostics Ltd, UK  
Dr. Minghua Deng, Center for Theoretical Biology, Peking University, China  
Prof. Werner Dublitzky, Biomedical Research Institute, University of Ulster, UK  
Dr. Xiaodan Fan, Department of Statistics, Chinese University of Hong Kong  
Dr. Kun Huang, Department of Biomedical Informatics, Ohio State University Medical Center, USA  
Dr. Kang Li, School of Electronics, Electrical Engineering and Computer Sciences, Queen's University Belfast, UK  
Dr. Shao Li, MOE Key Laboratory of Bioinformatics and Bioinformatics Division, Department of Automation and Tsinghua National Laboratory for Information Science and Technology, Tsinghua University, China.  
Prof. Xiaohui Liu, School of Information Systems and Computing, Brunel University, UK  
Dr. Piyush Ojha, School of Computing and Mathematics, University of Ulster, UK  
Dr. Antonio Sanfilippo, Computational and Statistical Analytics Division, Pacific Northwest National Laboratory, USA  
Dr. Youqiang Song, Department of Biochemistry, University of Hong Kong  
Dr. Jingchun Sun, Department of Biomedical Informatics, Vanderbilt University Medical Center, USA  
Dr. Momiao Xiong, University of Texas Health Science Center at Houston, USA  
Dr. Jun Wan, Johns Hopkins University School of Medicine, USA  
Dr. Haiying Wang, Computer Science Research Institute, University of Ulster, UK  
Dr. Yong Wang, Academy of Mathematics and Systems Science, Chinese Academy of Sciences, China.  
Dr. Wanling Yang, Department of Paediatrics and Adolescent Medicine, University of Hong Kong  
Dr. Hong Yue, Department of Electronic and Electrical Engineering, University of Strathclyde, UK  
Dr. Xingming Zhao, Institute of Systems Biology, Shanghai University, China.

## **Paper Submission**

We invite you to submit papers with unpublished, original research describing recent advances on the areas related to this workshop. All papers will undergo peer review by the conference program committee. All papers accepted will be included in the Workshop Proceedings published by the IEEE Computer Society Press and will be available at the workshops. Authors of selected papers will be invited to extend their papers for submission to a special issue in International Journal of Computational Biology and Drug Design.

Please submit a full-length paper (6 page IEEE 2-column format) through the online submission system (you can download the format instruction here (<http://www.wici-lab.org/cyberchair/bibm10/scripts/submit.php>) for Latex or word). Electronic submissions (in PDF or Postscript format) are required. Selected participants will be asked to submit their revised papers in a format to be specified at the time of acceptance.

**Online Submission:**

<http://www.wici-lab.org/cyberchair/bibm10/scripts/submit.php>

workshop website: <http://rosalind.infj.ulst.ac.uk/idasb/idasb.html>

All submitted papers should be written in English. Submission implies the willingness of at least one of the authors to register and present the work associated with the paper submitted.