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Ding-Zhu Du and Xiang-Sun Zhang

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The 4th International Conference, ISB2010
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ABOUT ISB 2010

THEME AND SCOPE

The 4th International Conference on Computational Systems Biology (ISB 2010) following the first to third International Symposium of Optimization and Systems Biology (OSB2007, OSB 2008, and OSB2009), organized by Chinese Academy of Sciences and Max Delbrück Centre for Molecular Medicine of Germany will be held in Suzhou, China from September 9 to 11, 2010. The conference is sponsored by National Natural Science Foundation of China (NSFC), Academy of Mathematics and Systems Science of CAS (AMSS), Shanghai Institutes for Biological Sciences of CAS (SIBS), Soochow University, Suzhou Industrial Park, Computational Systems Biology Society of ORSC, and also technically sponsored by IEEE SMC Society.

Systems Biology and Bioinformatics have become intensive research topics in the recent past decade and attracted great many leading scientists working in Biology, Physics, Mathematics and Computer Science. Optimization, Statistics, and many other mathematical methods have been widely used in the field. Following the successful OSB 2007-2009, the purpose of ISB 2010 is to provide an international forum for scientists, researchers to exchange ideas and approaches, including theoretical methodology development and its applications in biosciences and researches on various aspects of Computational Systems Biology.

Themes of the ISB 2010 will be interdisciplinary by its nature and focus on bridging opportunities between mathematical methods and Systems Biology studies. We are particularly interested in submissions that report on theoretical, experimental and applied research motivated by systems biology problems. Typical, but not exclusive, topics of interest are:

Gene Regulatory Networks	Biomarker Identification and Drug Discovery
Protein Interaction Networks	Microbial Community Analysis
Metabolic Networks	Qualitative Analysis of Biological Systems
Signaling Networks	Designing and Modeling Synthetic Biological Systems
Comparative Genomics	Nonlinear Dynamics and Analysis of Biological Systems
Functional Genomics	Designing Synthetic Biological Circuits
Metagenomics	High Performance Computing for Biological Data Analysis
Genome-Wide Association Study	Data Mining and Machine Learning for Biological Data
Promoter Analysis and Discovery	Information Theory and Statistical Analysis
Proteomics	Systems Biology of Cancer and Metastasis
Evolution and Phylogenetics	Systems Biology of Stem Cell
Non-coding RNAs	Quantitative Models of Cellular and Multi-Cellular Systems

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PROCEEDING PAPERS AND CONTRIBUTING AUTHORS

In Proceedings of the Fourth International Conference on Computational Systems Biology (ISB 2010), the papers are indexed by ISTP (Index to Scientific & Technical Proceedings).

Forty-four full papers in this volume cover wide range of computational systems biology. Authors of these papers come from United States, China mainland, Hong Kong, Taiwan, Japan, Korea, Czech Republic, Netherlands, Indian, Singapore, Germany, and Australia. Many active researchers in various areas contributed their overview and introduction in their fields besides specific deep research achievements.

ISB 2010 is held in Suzhou, which is a city renowned for its beautiful stone bridges, pagodas, and meticulously designed gardens which have contributed to its status as a great tourist attraction. We hope all the participants will enjoy very much not only the academic exchange, but also the beautiful trip of Suzhou.

AVAILABILITY

The electronic version of the proceedings can be downloaded from the web sites of ORSC and APORC.

ORSC: http://www.orsc.org.cn
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