The 10th Annual International Workshop on Bioinformatics and Systems Biology is part of a collaborative educational program involving several leading research institutes: Boston University in the United States, Charité - Universitätsmedizin Berlin, Humboldt-Universität zu Berlin in Germany, Kyoto University and the University of Tokyo in Japan. This student-focused event has been held since 2001 to provide doctoral students and young researchers with opportunities to present and discuss their research objectives, approaches and results in the emerging field of genomics, systems biology and bioinformatics.

News

- Poster preparation page is open. (16 July 2010)
- Programme (tentative) page is open. (25 June 2010)
- Poster submission site (requires password) is open. (14 May 2010)
- Accepted papers page is open. (13 May 2010)
- Confirmed invited speakers page is open. (7 May 2010)
- Paper submission site (requires password) is open. (17 Mar. 2010)
- Web page is open. (11 Nov. 2009)

Steering committee:

- Minoru Kanehisa (Kyoto University)
- Edda Klipp (Humboldt-Universität zu Berlin)
- Satoru Miyano (University of Tokyo)
- Scott Mohr (Boston University)
- Thomas Tullius (Boston University)
- Iwona Wallach (Charité - Universitätsmedizin Berlin)

Scientific committee:

- Boston: Gary Benson, Eric Kolaczyk, Daniel Segrè, Avrum Spira and Yu Xia
- Berlin: Martin Falcke, Hanspeter Herzel, Hermann-Georg Holzhütter, Edda Klipp and Ernst-Walter Knapp
- Tokyo/Kyoto: Tatsuya Akutsu (Chair), Susumu Goto, Seiya Imoto,
Minoru Kanehisa, Hiroshi Mamitsuka and Satoru Miyano

Organized by

- Boston University Graduate Program in Bioinformatics
- The International Research Training Group (IRTG) Genomics and Systems Biology of Molecular Networks
- International Research and Training Program on Bioinformatics and Systems Biology, Kyoto University Bioinformatics Center
- Global COE Program - Center of Education and Research for Advanced Genome-Based Medicine, University of Tokyo

Local organizing committee:

- Tatsuya Akutsu (Chair)
- Susumu Goto
- Motoki Shiga
- Takeyuki Tamura

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http://sunflower.kuicr.kyoto-u.ac.jp/ibsb2010/
The Tenth Annual International Workshop on Bioinformatics and Systems Biology

IBSB 2010

Kyoto, Japan, 26-28 July 2010

Scope
The International Workshop on Bioinformatics and Systems Biology (IBSB) is an annual international forum for doctoral students and young researchers to present and discuss their research results and approaches in Bioinformatics and Systems Biology. Since the first workshop in Berlin (2001), the workshop has been held in Boston (2002), Berlin (2003), Kyoto (2004), Berlin (2005), Boston (2006), Tokyo (2007), Berlin (2008), and Boston (2009). In 2010, it is held in Kyoto as part of a collaborative educational program involving the leading institutions.

Organized by
- Boston - Graduate Program in Bioinformatics, Boston University
- Berlin - The International Research Training Group (IRTG) “Genomics and Systems Biology of Molecular Networks”
- Kyoto - JSPS International Training Program (ITP) “International Research and Training Program of Bioinformatics and Systems Biology”
- Tokyo - Global COE Program “Center of Education and Research for Advanced Genome-Based Medicine”

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JSPS International Training Program (ITP) “International Research and Training Program of Bioinformatics and Systems Biology”

Supported by
Institute for Chemical Research, Kyoto University

Steering Committee
- Minoru Kanehisa - Kyoto University
- Edda Klipp - Humboldt University Berlin
- Satoru Miyano - University of Tokyo
- Thomas Tullius - Boston University
- Iwona Wallach - Charité - Universitätsmedizin Berlin
Local Organizing Committee

Tatsuya Akutsu (Chair)  Kyoto University
Susumu Goto  Kyoto University
Morihiro Hayashida  Kyoto University
Motoki Shiga  Kyoto University
Takeyuki Tamura  Kyoto University

Program Committee

Tatsuya Akutsu  Kyoto University, PC Chair
Gary Benson  Boston University
Martin Falcke  Max-Delbrück Center for Molecular Medicine
Susumu Goto  Kyoto University
Hanspeter Herzel  Humboldt University Berlin
Hermann-Georg Holzhütter  Charité - Universitätsmedizin Berlin
Seiya Imoto  University of Tokyo
Minoru Kanehisa  Kyoto University
Edda Klipp  Humboldt University Berlin
Ernst-Walter Knapp  Free University Berlin
Eric Kolaczyk  Boston University
Hiroshi Mamitsuka  Kyoto University
Satoru Miyano  University of Tokyo
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Yu Xia  Boston University

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Venue

Obaku Plaza, Uji campus, Kyoto University
Gokasho, Uji, Kyoto 611-0011, Japan
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obaku@uji.kyoto-u.ac.jp
http://www.uji.kyoto-u.ac.jp/campus/facilities.html
IBSB 2010 Programme

Sunday, 25 July 2010

17:30-19:30 Reception at Hybrid space, Obaku Plaza.

Monday, 26 July 2010 (Kihada Hall, Obaku Plaza)

Invited Talk (Chair: Minoru Kanehisa)
9:00-10:00 Genome Biology and Chromatin Structure, 
*David Landsman* (National Institutes of Health, USA)

Invited Talk (Chair: Minoru Kanehisa)
10:00-11:00 Developing Data Mining Methods and Systems for Predictive Toxicology and Metabolic Prediction, 
*Stefan Kramer* (Technical University of Munich, Germany)

11:00-11:20 Break

Oral Talks (Chair: Gary Benson)
11:20-11:40 Phylogenetic Analysis of Lipid Mediator GPCRs, 
*S. Mizutani, M. Tanaka, C. E. Wheelock, M. Kanehisa and S. Goto*
11:40-12:00 Characterizing Common Substructures of Ligands for GPCR Protein Subfamilies, 
*B. Erguner, M. Hattori, S. Goto and M. Kanehisa*

12:00-14:00 Lunch and Poster Session 1 (Odd Numbers)

Invited Talk (Chair: Susumu Goto)
14:00-15:00 Including Prior Knowledge in Machine Learning for Genomic Data, 
*Jean-Philippe Vert* (Mines ParisTech, France)

Oral Talks (Chair: Susumu Goto)
15:00-15:20 G1 and G2 Arrests in Response to Osmotic Shock Are Robust Properties of the Budding Yeast Cell Cycle, 
*C. Waltermann, M. Floettmann and E. Klipp*
Robust Gene Network Analysis Reveals Alteration of the STAT5a Network as a Hallmark of Prostate Cancer,
A. Reddy, C. C. Huang, H. Liu, C. DeLisi, M. T. Nevalainen, S. Szalma and G. Bhanot

Integer Programming-based Method for Completing Signaling Pathways and its Application to Analysis of Colorectal Cancer,

Break

Oral Talks (Chair: Edda Klipp)

Comparison of Gene Expression Profiles Produced by Cage, Illumina Microarray and Real Time RT-PCR,

openSESAME: A New Tool for Discovering Biologically Relevant Connections in Public Gene Expression Data,
*Adam Gower

Discovering Causal Signaling Pathways through Gene Expression Patterns Using SPEED,
*Jignesh Parikh

Latent Pathway Identification Analysis: A Computational Method for Predicting Sources of Transcriptional Dysregulation,
*Lisa Pham

Collocation-based Sparse Estimation For Constructing Dynamic Gene Networks,

Tuesday, 27 July 2010 (Kihada Hall, Obaku Plaza)

Invited Talk (Chair: Satoru Miyano)

Between Systems and Data-driven Modeling for Computational Biology: Target Identification with Gaussian Processes,
Neil Lawrence (University of Manchester, UK)

Invited Talk (Chair: Satoru Miyano)

Using Networks to Elucidate Disease and Drugs,
Roded Sharan (Tel-Aviv University, Israel)
11:00-11:20 Break

Oral Talks (Chair: Ernst-Walter Knapp)
11:20-11:40 FluxViz - Cytoscape Plug-In for Visualization of Flux Distributions in Networks,
M. König and H.-G. Holzhütter
11:40-12:00 A Dynamic Programming Algorithm to Predict Synthesis Processes of Tree-structured Compounds with Graph Grammar,
Y. Zhao, T. Tamura, M. Hayashida and T. Akutsu

12:00-14:00 Lunch and Poster Session 2 (Even Numbers)

Oral Talks (Chair: Tatsuya Akutsu)
14:00-14:20 On the Performance of Methods for Finding a Switching Mechanism in Gene Expression,
M. Kayano, I. Takigawa, M. Shiga, K. Tsuda and H. Mamitsuka
14:20-14:40 Gene Regulatory Network Clustering for Graph Layout Based on Microarray Gene Expression Data,
K. Kojima, S. Imoto, M. Nagasaki and S. Miyano
14:40-15:00 Analyzing Gene Coexpression Data by an Evolutionary Model,
M. Schütte, M. Mutwil, S. Persson and O. Ebenhöh

15:30-18:30 Excursion to Kiyomizu Temple

18:30-20:30 Banquet at Caffe Ristorante OBLIO

Wednesday, 28 July 2010 (Kihada Hall, Obaku Plaza)

Invited Talk (Chair: Hiroshi Mamitsuka)
9:00-10:00 Leveraging Linkage Disequilibrium Structure in Genome-wide Association Studies,
Eleazar Eskin (University of California, Los Angeles, USA)

Invited Talk (Chair: Hiroshi Mamitsuka)
10:00-11:00 Genome-Phenome Association Analysis of Complex Diseases - a Structured Sparse Regression Approach,
Eric P. Xing (Carnegie Mellon University, USA)

11:00-11:20 Break
Oral Talks (Chair: Seiya Imoto)
11:20-11:40 A Systems Biology Approach: Modelling of Aquaporin-2 Trafficking, 
M. Fröhlich, P. M. T. Deen and E. Klipp
11:40-12:00 Induced Pluripotent Stem Cells: Qualitative Modeling of Direct Re-
programming, 
*Max Flottmann

12:00-14:00 Lunch and Poster Session 3 (All Numbers)

Oral Talks (Chair: Tom Tullius)
14:00-14:20 Predicting Protein Complex Geometries with Linear Scoring Func-
tions, 
O. Demir-Kavuk, F. Krull, M.-H. Chae and E.-W. Knapp
14:20-14:40 Kinetic Modelling of DNA Replication Initiation in Budding Yeast, 
M. Barberis, T. W. Spiesser and E. Klipp
14:40-15:00 Comprehensive Genomic Analysis of Sulfur-relay Pathway Genes, 
M. Kotera, T. Kobayashi, M. Hattori, T. Tokimatsu, S. Goto, H. 
Mihara and M. Kanehisa
15:00-15:20 Comparison and Modeling of Gene Regulation Using FACS-data, 
*Manuela Benary

15:20-15:40 Break

Oral Talks (Chair: Gyan Bhanot)
15:40-16:00 Next Generation Sequencing of MicroRNA in the Human Airway 
Epithelium for Discovery of Novel Biomarkers of Tobacco-smoke Ex-
posure and Lung Cancer, 
*Joseph Gerrein
16:00-16:20 Genome-wide Analysis of Plant UGT Family Based on Sequence and 
Substrate Information, 
Y. Nishimura, T. Tokimatsu, M. Kotera, S. Goto and M. Kanehisa
16:20-16:40 Different Groups of Metabolic Genes Cluster around Early and Late 
Firing Origins of Replication in Budding Yeast, 
T. W. Spiesser and E. Klipp
16:40-17:00 The Role of Promoter Methylation in Regulating the Expression of 
Genes Associated with COPD Progression, 
*John Brothers
17:00-17:20 Integrated Assessment of Genomic Correlates of Protein Evolution-
ary Rate, 
*Eric Franzosa

17:45-19:45 Closing Dinner at COOP

(* means talk without a paper)
Conference Venue
(Kihada Hall, Obaku Plaza, Uji campus, Kyoto University)
Uji campus, Kyoto University
(Address: Gokasho, Uji, Kyoto 611-0011, Japan, Tel: +81-774-38-3016/3020)

Poster Session (12:00-14:00)

26 July 2010 (Odd Numbers)
27 July 2010 (Even Numbers)
28 July 2010 (All Numbers)

NOTE: Posters should be put by 12:00, 26 July 2010, and must be removed by 17:30, 28 July 2010.