

SyBBI Paper Reading Class

Graduate Institute of Systems Biology and Bioinformatics

National Central University

Fall term 2006

All classes held on Thursdays

Room 6004, Building Science 5

Schedule

- 9/14 **Class facilitator**
2pm - **Prof. HC Lee**, Course introduction and organization
Looking beyond the details: a rise in system-oriented approaches ...
Hiroaki Kitano. *Curr Genet* 2002, 41:1-10.
The Meaning of Systems Biology. MW Kirchner. *Cell* 2005, 121:503-504.
[\[talk\]](#)
- 9/21 **Guest speaker**
2pm - **Prof. JT Horng** "RNAMST: efficient and flexible approach for
identifying RNA structural homologs" [\[talk\]](#)
- 9/28 **Guest speaker**
2pm - **Prof. SL Huang** "Learning from microbes: life under stress and extreme
environment"
- 10/5 **Student speakers***
2pm – **ST Tang** A2: GeneNet: a gene network database and its automated
visualization <http://www.genenetbeef.com/>
3pm – **YS Wu** B2: Kyoto encyclopedia of genes and genomes (KEGG).
Kanehisa & Goto, *Nucl. Acids Res.* 2000, 28:27-30.
- 10/12 **Student speakers**
2pm – **SL Kuo** C3: Interpreting the protein language with proteomics...Ole N.
Jensen; *Nat Rev Mol Cell Biol.* 2006, 7:391-403
3pm – **CJ Kang** D4: A Protein Interaction Map of *Drosophila melanogaster*.
Giot et al. *Scienceexpress* 6 November 2003 pp 1-19
- 10/19 **Student speaker**
2pm – **KD Chang** E4: Gene Regulatory Networks and the Evolution of Animal
Body Plans. EH Davidson and DH Erwin. *Science* 2002, 295:1669 (2002)
Guest speaker
3pm - **Prof. HD Huang** (NCTU) "The Roles of Regulatory RNA in Biological
Systems."
- 10/26 **Student speakers**
2pm – **JH Lin** A3: Exploring the new world of the genome with DNA
microarrays. Brown & Botstein, *Nat. Gen. supplement.* 1999, 21:33-37.
3pm – **BH Lin** B3: Fabrication of microfluidic systems in poly
(dimethylsiloxane). JC McDonald et al. *Electrophoresis* 2000, 21:27-40.
- 11/2 **Student speaker**

2pm – **YT Ko** C4: Robustness of Cellular Functions. J. Sterlling et al. Cell 2004, 118:675-685.

Guest speaker

3pm - **Dr. KP Chiu** (Genomic Institute of Singapore) Systematic studies of transcriptome profiling, cancer pathway perturbation, transcription factor binding, and chromatin remodeling using PET-Tool pipeline.

11/9 (Midterm Exam Week)

11/16 **Student speakers**

2pm – **SH Wang** D5: Sniffers, buzzers, toggles and blinkers: dynamics of regulatory and signaling pathways in the cell. Tyson et al. Curr. Op. Cell Bio. 2003, 15:221-231.

3pm – **MC Kuo** E2: NCBI GEO mining millions of expression profiles - database and tools. <http://labs.ansci.uiuc.edu/loor/>

11/23 **Student speakers**

2pm – **LH Chien** A4: A genomic code for nucleosome positioning. Eran Segal et al. Nature online 16 June 2006.

3pm – **PH Chen** C5: Dynamics of the p53-Mdm2 feedback loop in individual cells. Lahav et al. Nat Gen 2004, 36:147-150.

11/30 **Student speakers**

2pm – **TT Hsu** B4: A first-draft human protein-interaction map. Lehner & Fraser. Gen Biology 5:R93 pp1-9.

3pm – **CD Yeh** D2: Systems biology mark-up language (SBML). Hucka et al. Bioinformatics 2003, 4:524-531.

12/7 **Guest speakers**

2pm – **Dr. A. Valente** (NIH, USA) The Structure of the Yeast Interactome. [\[talk\]](#)

3pm - **Prof. C.H. Chang** (YMU)

12/14 **Student speakers**

2pm – **YW Lee** E3: Mass Spectrometry. R Aebersold & M Mann. Nature 2003, 422:199-207.

3pm – **HD Chen** A5: Network biology. Barabasi & Oltvai. Nature Rev. 2004, 5:101-114

4pm – **ZM Chung** D3: A Panoramic View of Yeast Noncoding RNA Processing. WT Peng et al. Cell 2003, 113:919-933.

12/21 **Student speakers**

2pm – **YH Chi** B5: Advances in flux balance analysis. Kauffman et al. Curr. Op. Biotech. 2003, 14:491-496

3pm – **HC Wu** C2: PANTHER - A Library of Protein Families and Subfamilies Indexed by Function. <http://www.pantherdb.org/>

4pm – **SM Huo** E5: (Bacterial chemotaxis) Robustness in simple biochemical networks. Barkai & Leibler. Nature 1997, 387:913-917.

12/28 **Guest speakers**

2pm - **Prof. HF Juan** (NTU) Elucidating the Molecular Regulation from Gene Expression to Network Construction. [[talk](#)]

3pm - **Prof. HC Huang** (YMU) Network Biology of Essential Genes in E. coli. [[talk](#)]

1/4 **Guest speaker**

2pm - **Prof. AP Tsou** (YMU) Face-Off in Liver Research: Bioinformatics and Liver Biology. [[talk](#)]

1/11 Hand in term report

* Student speaker(s) to be selected from group on each Monday before presentation. Each talk is 1 hour, 30 min presentation and 30 min discussion.

HCL 2006/10/25