

## Limsoon Wong

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**From:** Limsoon Wong <wongls@comp.nus.edu.sg>  
**Sent:** Thursday, February 13, 2014 11:10 AM  
**To:** 'David Hsu Xu Ye (SoC)'; 'Wynne Hsu (SoC)'; leeml@comp.nus.edu.sg; leonghw@comp.nus.edu.sg; ksung@comp.nus.edu.sg; 'Tan Kian Lee (SoC)'; thiagu@comp.nus.edu.sg; atung@comp.nus.edu.sg; nguyennn@comp.nus.edu.sg; soulsophia@gmail.com; chongket@comp.nus.edu.sg; 'Nguyen Nam Ninh'; a0068273@nus.edu.sg; ben.gyori@gmail.com; xxqxiao@gmail.com; g0800151@nus.edu.sg; g0800174@nus.edu.sg; g0900402@nus.edu.sg; gohwils@gmail.com; 'Fan Mengyuan'; dimitrios.kleftogiannis@kaust.edu.sa; vazifehdst@ut.ac.ir; kevinl@comp.nus.edu.sg; iamwym@gmail.com; zhanghao@comp.nus.edu.sg; bowenli37@hotmail.com; g0600212@nus.edu.sg; g0801861@nus.edu.sg; 'Yong Chern Han'; jin-jing@comp.nus.edu.sg; Narmada Sambaturu; jing.quan.lim@gmail.com; peiyong@comp.nus.edu.sg; a0095650@nus.edu.sg; drcyber@gmail.com; zhizhuo@comp.nus.edu.sg; Lim Jing Quan; a0068135@nus.edu.sg  
**Cc:** wongls@comp.nus.edu.sg  
**Subject:** CBL update, Oct 2013 - Feb 2014

Hi CBL Members,

I got so busy that I have not provided updates for a very long time. Let me try to catch up in this update. If I miss out anything, do let me know!

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We have two more PhD theses completed in 2013. These are:

GOH Wen Bin Wilson, "Computational Proteomics Using Network-Based Strategies", PhD thesis submitted 2013, awarded 2013, Imperial College London. (Supervisors: Limsoon Wong & Marek Sergot, October 2009--June 2013).

ZHOU Hufeng, "Computational Studies of Host-Pathogen Protein-Protein Interactions---A Case Study of the H. Sapiens-M. tuberculosis H37Rv System", PhD thesis submitted 2013, awarded 2013, National University of Singapore. (Supervisor: Limsoon Wong, September 2009--July 2013).

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We organized GIW2013, with Limsoon as conference chair and Ken as PC co-chair:

24th International Conference on Genome Informatics (GIW2013)  
Matrix, Biopolis  
16-18 December 2013

We also hosted a number of events and talks since September 2013. These are:

CS Seminar: Graph theory guided designs of supercomputer network  
Yuefan Deng, Stony Brook University  
17 March 2014 @ 2pm in Video Conference Room (COM1-02-13)

CS Seminar: Mining metabolic pathways through gene expression  
Hiroshi Mamitsuka, Kyoto University  
20 December 2013 @ 2.30pm in SR9 (COM1-02-09)

CS Seminar: Combinatorial optimization models for finding genetic signatures from gene expression datasets  
Regina Berretta, University of New Castle  
4 October 2013 @ 3pm in MR1 (COM1-03-19)

CS Seminar: Personalized information-based medicine: Huge challenges, massive opportunities and some lessons learned  
Pablo Moscato, University of New Castle  
3 October 2013 @ 3pm in MR3 (COM2-02-26)

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And we gave the following invited talks:

P. S. Thiagarajan. Analysis of ODE models of bio-pathways using statistical model checking. Invited talk at 24th International Conference on Genome Informatics, Biopolis, Singapore, 17 December 2013.

Limsoon Wong. Disease gene expression and proteomic profile analysis based on regulatory networks and systems. Invited master class at EMS Autumn School on Computational Aspects of Gene Regulation, Bedlewo, Poland, 13-19 October 2013.

Limsoon Wong. The use of context in gene expression analysis. Invited talk at the 2013 Symposium on Complex Biodynamics & Networks, Institute for Advanced Biosciences - Keio University, Tsuruoka, Japan, 12 November 2013.

Limsoon Wong. How logic empowers statistics in the analysis of extremely high-dimensional data with extremely small sample sizes. Invited talk at 4th Singapore Conference on Statistical Science, National University of Singapore, 7 February 2014.

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The papers published since September 2013 include:

Qiangfeng Peter Lau, Mong Li Lee, Wynne Hsu, Tien Yin Wong. The Singapore eye vessel assessment system, Image Analysis and Modeling in Ophthalmology, edited by Eddie Y. K. Ng, U. Rajendra Acharya, Jasjit S. Suri, Aurelio Campilho, chapter 8, pages 143--160, February 2014.

Kevin Lim, Limsoon Wong. Finding consistent disease subnetworks using PFSNet. *Bioinformatics*, 30(2):189--196, January 2014.

Limsoon Wong. The Dichotomous Intensional Expressive Power of the Nested Relational Calculus with Powerset. In *Search of Elegance in the Theory and Practice of Computation*, edited by Val Tannen, Limsoon Wong, Leonid Libkin, Wenfei Fan, Wang-Chiew Tan, Michael Fourman, pages 542--556, Springer, October 2013.

Huy Hoang Do, Wing-Kin Sung. Compressed directed acyclic word graph with application in local alignment. *Algorithmica*, 67(2): 125-141, October 2013.

Wilson Goh, Limsoon Wong. Networks in proteomic analysis of cancer. *Current Opinion in Biotechnology*, 24(6):1122--1128, December 2013.

Wilson Goh, Limsoon Wong, Judy Chia Ghee Sng. Contemporary network proteomics and its requirements. *Biology*, 3(1):22--38, December 2013.

Zhenhua Li, Ying He, Qian Liu, Liang Zhao, Limsoon Wong, Chee Keong Kwoh, Hung Nguyen, Jinyan Li. Structural analysis on mutation residues and interfacial water molecules for human TIM disease understanding. *BMC Bioinformatics*, 14(Suppl 16):S11, October 2013.

Phi-Vu Nguyen, Sriganesh Srihari, Hon Wai Leong. Identifying conserved protein complexes between species by constructing interolog networks. *BMC Bioinformatics*, 14(S16):S8, October 2013.

Daniel Portal, Hufeng Zhou, Bo Zhao, Peter Kharchenko, Elizabeth Lowry, Limsoon Wong, John Quackenbush, Dustin Halloway, Sizun Jiang, Yong Lu, Elliott Kieff. Epstein-Barr Virus Nuclear Antigen Leader Protein localizes to promoters and enhancers with cell transcription factors and EBNA2. *Proceedings of the National Academy of Sciences USA*, 110(46):18537--18542, November 2013.

Yue Wang, Wilson Goh, Limsoon Wong, Giovanni Montana. Random forests on Hadoop for genome-wide studies of multivariate neuroimaging phenotypes. *BMC Bioinformatics*, 14(Suppl 16):S6, October 2013.

Yubo Zhang, Chee-Hong Wong, Ramon Y. Birnbaum, Guoliang Li, Rebecca Favaro, Chew Yee Ngan, Joanne Lim, Eunice Tai, Huay Mei Poh, Eleanor Wong, Fabianus Hendriyan Mulawadi, Wing-Kin Sung, Silvia Nicolis, Nadav Ahituv, Yijun Ruan, Chia-Lin Wei. Chromatin connectivity maps reveal dynamic promoter-enhancer long-range associations, *Nature*, 504(7479):306--310, December 2013.

Zhizhuo Zhang, Guoliang Li, Kim-Chuan Toh, and Wing-Kin Sung. 3D chromosome modeling with semi-definite Programming and Hi-C data. *Journal of Computational Biology*, 20(11):831--846, November 2013.

Hufeng Zhou, Javad Rezaie, Willy Hugo, Shangzhi Gao, Jingjing Jin, Mengyuan Fan, Chern-Han Yong, Michal Wozniak, Limsoon Wong. Stringent DDI-based prediction of *H. sapiens*-*M. tuberculosis* H37Rv protein-protein interactions. *BMC Systems Biology*, 7(Suppl 6):S6, December

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Lastly, Limsoon was named a Fellow of the ACM in December 2013, for contributions to database theory and computational biology.

Limsoon