

# Liang-Bo Wang

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## EDUCATION

**Washington University in St. Louis**, United States

**Ph.D.** in Computational and Systems Biology

Aug 2016 – (present)

**National Taiwan University**, Taipei, Taiwan

**M.S.** in Biomedical Electronics and Bioinformatics

Jan 2014 – Jul 2016

**B.S.** in Electrical Engineering

Sep 2009 – Jan 2014

- Minor in Economics

## RESEARCH EXPERIENCE

**Microsoft Research Asia**, Beijing, China

Jul 2014 – Feb 2015

Internship

- Advisor: Dr. Eric Chang
- Topic: Cancer Image and Pathway Analysis
- Applied convolutional neural network to histopathology image analysis

**Biomedical Engineering and Bioinformatics**, National Taiwan University

Graduate Research

Jan 2014 – Present

- Advisor: Professor Eric Y. Chuang
- Topic: Integrative analysis of copy number variation, gene expression, and miRNA regulation on cancer; drug treatment prediction on lung cancer cell line

Undergraduate Research

Sep 2012 – Jan 2014

- Advisor: Professor Eric Y. Chuang
- Topic: DNA-seq, RNA-seq and small RNA-seq data processing
- Project: Nextbiopy, a web-based NGS pipeline report generator

Undergraduate Research

Sep 2011 – Nov 2012

- Advisor: Associate Professor Wei-Cheng Tian
- Project: CMOS-based tactile sensor system for blood pressure measurement

## PUBLICATIONS

### JOURNALS

- [1] Y.-P. Lai\*, **L.-B. Wang\***, L.-C. Lai, M.-H. Tsai, T.-P. Lu, and E. Y. Chuang, “iGC—an integrated analysis package of Gene expression and Copy number alteration”, Under review.
- [2] Y. Xu, F. Zhang, Z. Jia, **L.-B. Wang**, Y. Ai, M. Lai, E. Chang, “Large Scale Tissue Histopathology Image Classification, Segmentation and Visualization via Deep Convolutional Activation Features”, Under review.
- [3] **L.-B. Wang**, E. Y. Chuang, T.-P. Lu, “Identification of predictive biomarkers for ZD-6474 in lung cancer”, *Translational Cancer Research*, vol. 4, no. 4, Aug 2015.
- [4] C.-Y. Lee\*, Y.-C. Chiu\*, **L.-B. Wang\***, Y.-L. Kuo\*, E. Y. Chuang, L.-C. Lai, M.-H. Tsai, “Common applications of next-generation sequencing technologies in genomic research”, *Translational Cancer Research*, vol. 2, no. 1, Feb 2013.

## CONFERENCE PAPERS

- [1] **L.-B. Wang**, S.-Y. Dai, T.-P. Lu, L.-C. Lai, M.-H. Tsai, E. Y. Chuang, “Nextbiopy: Utilities for next-generation sequencing data processing”, *9th Asian Pacific Conference on Medical and Biological Engineering (APCMBE)*, Tainan, Taiwan, Oct 2014.
- [2] C.-Y. Lee\*, **L.-B. Wang\***, M.-H. Tsai, L.-C. Lai, E. Y. Chuang, “Identification of novel miRNAs in breast data of the next generation sequencing using miRDeep2 and Galaxy”, *AACR 104th Annual Meeting*, Washington, DC, U.S.A., Apr 2013.
- [3] Y.-C. Lin, C.-J. Hsieh, **L.-B. Wang** (presenter), J.-C. Liou, W.-C. Tian, “CMOS MEMS metal-based tactile sensors development”, *AVS 59th International Symposium & Exhibition*, Florida, U.S.A., Oct 2012.
- [4] C.-T. Sun, Y.-C. Lin, C.-J. Hsieh, J.-C. Liou, **L.-B. Wang**, W.-C. Tian, “A linear-response CMOS-MEMS capacitive tactile sensor”, *IEEE Sensors 2012*, Taipei, Taiwan, Oct 2012.

## HONORS & AWARDS

- Outstanding Summer Research Award**, 2012  
Center of Genomic Medicine, National Taiwan University
- Research Topic: miRNA discovery using NGS data
- Gold medal**, International Genetically Engineered Machine (iGEM) 2012
- Topic: A demonstration of PepdEx with mind-altering bacteria
  - Role: Biological circuit (gene network) simulation and wiki page construction

## WORK EXPERIENCE

- Pinkoi**, Taipei, Taiwan Jun 2015 – Sep 2015  
Internship
- Pinkoi is an online marketplace for unique and original design goods in Asia
  - Topic: Product search improvement
  - Improved Chinese text segmentation on ElasticSearch and added preliminary semantic search built on Word2Vec

## PROGRAMMING SKILLS

**LANGUAGES**  
Python (both scientific and web stack), R,  $\text{\LaTeX}$ , Web frontend, SQL, C

## EXTRA- CURRICULAR ACTIVITIES

- PyCon Taiwan** Organizing Committee, Taipei, Taiwan Jul 2015 – Present  
Program Chair
- PyCon APAC** Organizing Committee, Taipei, Taiwan 2014, 2015  
Public Relations Manager
- Open Source Communities**, Taipei, Taiwan 2013 – Present  
Regular Speaker
- Including Taiwan PyCon, Taipei.py, Taiwan R User Group, and PyCon China
  - Gave over 10 talks, topics included convolutional neural network, text search, HDF5, Parallel Computing, and R ggplot2 plotting.
- Photography Club**, National Taiwan University 2009 – 2013  
President Mar 2011 – Sep 2011  
Leader of Education Division Mar 2010 – Mar 2011