



## Wing Hung Wong

Stephen R. Pierce Family Goldman Sachs Professor in Science and Human Health and  
Professor of Biomedical Data Science  
Statistics

### Bio

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#### BIO

I am a professor at Stanford University with joint appointments in the Department of Statistics and the Department of Biomedical Data Science. My current research interests are Bayesian Statistics, Computational Biology and Precision Medicine.

#### ACADEMIC APPOINTMENTS

- Professor, Statistics
- Professor, Biomedical Data Science
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Institute for Computational and Mathematical Engineering (ICME)
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

#### HONORS AND AWARDS

- Founding Member, The Academy of Sciences of Hong Kong (2015)
- Academician, Academia Sinica (2010)
- Member, National Academy of Sciences (2009)
- Bahadur Lecturer, The University of Chicago (2006)
- Fellow, American Association for the Advancement of Science (2002)
- Neyman Lecturer, Institute of Mathematical Statistics (2002)
- Fellow, American Statistical Association (1998)
- COPSS Award, Committee of Presidents of Statistical Societies (1993)
- Fellow, Institute of Mathematical Statistics (1991)
- Fellow, Guggenheim Foundation (1986)

#### LINKS

- My lab site: <http://www.stanford.edu/group/wonglab/>
- faculty page: <https://statistics.stanford.edu/people/wing-hung-wong>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

The current emphasis of my lab includes gene regulatory analysis and analysis of high throughput genomics data. These areas require new methods in statistical analysis, mathematical modeling and computation. Past contributions to mainstream statistics and bioinformatics include the use of Monte Carlo algorithms in Bayesian computation, asymptotic inference in high or infinite dimensional problems, and bioinformatics tools for the analysis microarray data and sequencing data. Recently we have made a major effort to analyze gene regulatory networks based on integrative modeling of multiple types of genomics data from diverse cell types and from single cells. We have also interested in the analysis of electronic medical records.

## Teaching

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### COURSES

#### 2019-20

- A Course in Bayesian Statistics: STATS 270, STATS 370 (Win)
- Theory of Probability: STATS 116 (Aut)

#### 2018-19

- A Course in Bayesian Statistics: STATS 270, STATS 370 (Win)

#### 2017-18

- A Course in Bayesian Statistics: STATS 270, STATS 370 (Win)

#### 2016-17

- Bayesian Statistics I: STATS 270, STATS 370 (Win)
- Topic: Monte Carlo: STATS 362 (Aut)

### STANFORD ADVISEES

#### Doctoral Dissertation Reader (AC)

Jessica Hwang

#### Postdoctoral Faculty Sponsor

Zhana Duren, Tung-yu Wu, Jingxue Xin

#### Doctoral Dissertation Advisor (AC)

Xiaowei Wang

#### Postdoctoral Research Mentor

Zhana Duren

### GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biology (School of Humanities and Sciences) (Phd Program)

## Publications

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### PUBLICATIONS

- **Extensive and deep sequencing of the Venter/HuRef genome for developing and benchmarking genome analysis tools.** *Scientific data* Zhou, B., Arthur, J. G., Ho, S. S., Pattni, R., Huang, Y., Wong, W. H., Urban, A. E. 2018; 5: 180261

- **Towards high performance data analytic on heterogeneous many-core systems: A study on Bayesian Sequential Partitioning** *JOURNAL OF PARALLEL AND DISTRIBUTED COMPUTING*  
Lai, B., Wu, T., Chiu, T., Li, K., Lee, C., Chien, W., Wong, W.  
2018; 122: 36–50
- **CRISPhieRmix: a hierarchical mixture model for CRISPR pooled screens.** *Genome biology*  
Daley, T. P., Lin, Z., Lin, X., Liu, Y., Wong, W. H., Qi, L. S.  
2018; 19 (1): 159
- **CRISPR Activation Screens Systematically Identify Factors that Drive Neuronal Fate and Reprogramming.** *Cell stem cell*  
Liu, Y., Yu, C., Daley, T. P., Wang, F., Cao, W. S., Bhate, S., Lin, X., Still, C. 2., Liu, H., Zhao, D., Wang, H., Xie, X. S., Ding, et al  
2018
- **Integrative analysis of single-cell genomics data by coupled nonnegative matrix factorizations.** *Proceedings of the National Academy of Sciences of the United States of America*  
Duren, Z., Chen, X., Zamanighomi, M., Zeng, W., Satpathy, A. T., Chang, H. Y., Wang, Y., Wong, W. H.  
2018
- **Unsupervised clustering and epigenetic classification of single cells** *NATURE COMMUNICATIONS*  
Zamanighomi, M., Lin, Z., Daley, T., Chen, X., Duren, Z., Schep, A., Greenleaf, W. J., Wong, W.  
2018; 9: 2410
- **A 1.86mJ/Gb/Query Bit-Plane Payload Machine Learning Processor in 90nm CMOS**  
Ku, F., Wu, T., Liao, Y., Chang, H., Wong, W., Lee, C., IEEE  
IEEE.2018
- **DIABETIC RETINOPATHY DETECTION BASED ON DEEP CONVOLUTIONAL NEURAL NETWORKS**  
Chen, Y., Wu, T., Wong, W., Lee, C., IEEE  
IEEE.2018: 1030–34
- **CORRELATION-BASED FACE DETECTION FOR RECOGNIZING FACES IN VIDEOS**  
Hsu, H., Wu, T., Wong, W., Lee, C., IEEE  
IEEE.2018: 3101–5
- **CONFNET: PREDICT WITH CONFIDENCE**  
Wan, S., Wu, T., Wong, W. H., Lee, C., IEEE  
IEEE.2018: 2921–25
- **Challenges and recommendations for epigenomics in precision health** *NATURE BIOTECHNOLOGY*  
Carter, A. C., Chang, H. Y., Church, G., Dombkowski, A., Ecker, J. R., Gil, E., Giresi, P. G., Greely, H., Greenleaf, W. J., Hacohen, N., He, C., Hill, D., Ko, et al  
2017; 35 (12): 1128–32
- **Simultaneous inference of phenotype-associated genes and relevant tissues from GWAS data via Bayesian integration of multiple tissue-specific gene networks** *JOURNAL OF MOLECULAR CELL BIOLOGY*  
Wu, M., Lin, Z., Ma, S., Chen, T., Jiang, R., Wong, W.  
2017; 9 (6): 436–52
- **Gaining comprehensive biological insight into the transcriptome by performing a broad-spectrum RNA-seq analysis** *NATURE COMMUNICATIONS*  
Sahraeian, S., Mohiyuddin, M., Sebra, R., Tilgner, H., Afshar, P. T., Au, K., Asadi, N., Gerstein, M. B., Wong, W., Snyder, M. P., Schadt, E., Lam, H. K.  
2017; 8: 59
- **COSINE: non-seeding method for mapping long noisy sequences.** *Nucleic acids research*  
Afshar, P. T., Wong, W. H.  
2017
- **Predicting transcription factor binding motifs from DNA-binding domains, chromatin accessibility and gene expression data.** *Nucleic acids research*  
Zamanighomi, M., Lin, Z., Wang, Y., Jiang, R., Wong, W. H.  
2017; 45 (10): 5666-5677
- **Modeling gene regulation from paired expression and chromatin accessibility data.** *Proceedings of the National Academy of Sciences of the United States of America*

- Duren, Z., Chen, X., Jiang, R., Wang, Y., Wong, W. H.  
2017
- **Phased Genome Sequencing Through Chromosome Sorting.** *Methods in molecular biology (Clifton, N.J.)*  
Chen, X., Yang, H., Wong, W. H.  
2017; 1551: 171-188
  - **Convergence rates of a partition based Bayesian multivariate density estimation method**  
Liu, L., Li, D., Wong, W., Guyon, Luxburg, U. V., Bengio, S., Wallach, H., Fergus, R., Vishwanathan, S., Garnett, R.  
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2017
  - **Scalable multi-sample single-cell data analysis by Partition-Assisted Clustering and Multiple Alignments of Networks.** *PLoS computational biology*  
Li, Y. H., Li, D., Samusik, N., Wang, X., Guan, L., Nolan, G. P., Wong, W. H.  
2017; 13 (12): e1005875
  - **Simultaneous dimension reduction and adjustment for confounding variation** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Lin, Z., Yang, C., Zhu, Y., Duchi, J., Fu, Y., Wang, Y., Jiang, B., Zamanighomi, M., Xu, X., Li, M., Sestan, N., Zhao, H., Wong, et al  
2016; 113 (51): 14662-14667
  - **Modeling the causal regulatory network by integrating chromatin accessibility and transcriptome data** *NATIONAL SCIENCE REVIEW*  
Wang, Y., Jiang, R., Wong, W. H.  
2016; 3 (2): 240-251
  - **Stable 5-Hydroxymethylcytosine (5hmC) Acquisition Marks Gene Activation During Chondrogenic Differentiation** *JOURNAL OF BONE AND MINERAL RESEARCH*  
Taylor, S. E., Li, Y. H., Smeriglio, P., Rath, M., Wong, W. H., Bhutani, N.  
2016; 31 (3): 524-534
  - **Computational Aspects of Optional Polya Tree** *JOURNAL OF COMPUTATIONAL AND GRAPHICAL STATISTICS*  
Jiang, H., Mu, J. C., Yang, K., Du, C., Lu, L., Wong, W. H.  
2016; 25 (1): 301-320
  - **The primate-specific noncoding RNA HPAT5 regulates pluripotency during human preimplantation development and nuclear reprogramming** *NATURE GENETICS*  
Durruthy-Durruthy, J., Sebastiano, V., Wossidlo, M., Cepeda, D., Cui, J., Grow, E. J., Davila, J., Mall, M., Wong, W. H., Wysocka, J., Au, K. F., Pera, R. A.  
2016; 48 (1): 44-?
  - **A Hardware-Efficient Sigmoid Function With Adjustable Precision for a Neural Network System** *IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS II-EXPRESS BRIEFS*  
Tsai, C., Chih, Y., Wong, W. H., Lee, C.  
2015; 62 (11): 1073-1077
  - **Characterization of fusion genes and the significantly expressed fusion isoforms in breast cancer by hybrid sequencing** *NUCLEIC ACIDS RESEARCH*  
Weirather, J. L., Afshar, P. T., Clark, T. A., Tseng, E., Powers, L. S., Underwood, J. G., Zabner, J., Korlach, J., Wong, W. H., Au, K. F.  
2015; 43 (18)
  - **An ensemble approach to accurately detect somatic mutations using SomaticSeq** *GENOME BIOLOGY*  
Fang, L. T., Afshar, P. T., Chhibber, A., Mohiyuddin, M., Fan, Y., Mu, J. C., Gibeling, G., Barr, S., Asadi, N. B., Gerstein, M. B., Koboldt, D. C., Wang, W., Wong, et al  
2015; 16
  - **MetaSV: an accurate and integrative structural-variant caller for next generation sequencing** *BIOINFORMATICS*  
Mohiyuddin, M., Mu, J. C., Li, J., Asadi, N. B., Gerstein, M. B., Abyzov, A., Wong, W. H., Lam, H. Y.  
2015; 31 (16): 2741-2744
  - **Genome-Wide Mapping of DNA Hydroxymethylation in Osteoarthritic Chondrocytes** *ARTHRITIS & RHEUMATOLOGY*  
Taylor, S. E., Li, Y. H., Wong, W. H., Bhutani, N.  
2015; 67 (8): 2129-2140
  - **VarSim: a high-fidelity simulation and validation framework for high-throughput genome sequencing with cancer applications** *BIOINFORMATICS*

- Mu, J. C., Mohiyuddin, M., Li, J., Asadi, N. B., Gerstein, M. B., Abyzov, A., Wong, W. H., Lam, H. Y.  
2015; 31 (9): 1469-1471
- **Leveraging long read sequencing from a single individual to provide a comprehensive resource for benchmarking variant calling methods.** *Scientific reports*  
Mu, J. C., Tootoonchi Afshar, P., Mohiyuddin, M., Chen, X., Li, J., Bani Asadi, N., Gerstein, M. B., Wong, W. H., Lam, H. Y.  
2015; 5: 14493-?
  - **Learning regulatory programs by threshold SVD regression** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Ma, X., Xiao, L., Wong, W. H.  
2014; 111 (44): 15675-15680
  - **Human tRNA synthetase catalytic nulls with diverse functions.** *Science*  
Lo, W., Gardiner, E., Xu, Z., Lau, C., Wang, F., Zhou, J. J., Mendlein, J. D., Nangle, L. A., Chiang, K. P., Yang, X., Au, K., Wong, W. H., Guo, et al  
2014; 345 (6194): 328-332
  - **Modeling stochastic noise in gene regulatory systems.** *Quantitative biology (Beijing, China)*  
Meister, A., Du, C., Li, Y. H., Wong, W. H.  
2014; 2 (1): 1-29
  - **Density estimation on multivariate censored data with optional Polya tree** *BIOSTATISTICS*  
Seok, J., Tian, L., Wong, W. H.  
2014; 15 (1): 182-195
  - **Characterization of the human ESC transcriptome by hybrid sequencing** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Au, K. F., Sebastiano, V., Afshar, P. T., Durruthy, J. D., Lee, L., Williams, B. A., van Bakel, H., Schadt, E. E., Reijo-Pera, R. A., Underwood, J. G., Wong, W. H.  
2013; 110 (50): E4821-E4830
  - **Multivariate Density Estimation by Bayesian Sequential Partitioning** *JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION*  
Lu, L., Jiang, H., Wong, W. H.  
2013; 108 (504): 1402-1410
  - **Early role for IL-6 signalling during generation of induced pluripotent stem cells revealed by heterokaryon RNA-Seq.** *Nature cell biology*  
Brady, J. J., Li, M., Suthram, S., Jiang, H., Wong, W. H., Blau, H. M.  
2013; 15 (10): 1244-1252
  - **Early role for IL-6 signalling during generation of induced pluripotent stem cells revealed by heterokaryon RNA-Seq.** *Nature cell biology*  
Brady, J. J., Li, M., Suthram, S., Jiang, H., Wong, W. H., Blau, H. M.  
2013; 15 (10): 1244-1252
  - **LEARNING A NONLINEAR DYNAMICAL SYSTEM MODEL OF GENE REGULATION: A PERTURBED STEADY-STATE APPROACH** *ANNALS OF APPLIED STATISTICS*  
Meister, A., Li, Y. H., Choi, B., Wong, W. H.  
2013; 7 (3): 1311-1333
  - **Personalized prediction of first-cycle in vitro fertilization success** *FERTILITY AND STERILITY*  
Choi, B., Bosch, E., Lannon, B. M., Leveille, M., Wong, W. H., Leader, A., Pellicer, A., Penzias, A. S., Yao, M. W.  
2013; 99 (7): 1905-1911
  - **Detecting DNA modifications from SMRT sequencing data by modeling sequence context dependence of polymerase kinetic.** *PLoS computational biology*  
Feng, Z., Fang, G., Korfach, J., Clark, T., Luong, K., Zhang, X., Wong, W., Schadt, E.  
2013; 9 (3)
  - **RNA sequencing reveals a diverse and dynamic repertoire of the *Xenopus tropicalis* transcriptome over development** *GENOME RESEARCH*  
Tan, M. H., Au, K. F., Yablonovitch, A. L., Wills, A. E., Chuang, J., Baker, J. C., Wong, W. H., Li, J. B.  
2013; 23 (1): 201-216
  - **Modeling kinetic rate variation in third generation DNA sequencing data to detect putative modifications to DNA bases** *GENOME RESEARCH*

- Schadt, E. E., Banerjee, O., Fang, G., Feng, Z., Wong, W. H., Zhang, X., Kislyuk, A., Clark, T. A., Khai Luong, K., Keren-Paz, A., Chess, A., Kumar, V., Chen-Plotkin, et al  
2013; 23 (1): 129-141
- **An Oct4-Sall4-Nanog network controls developmental progression in the pre-implantation mouse embryo** *MOLECULAR SYSTEMS BIOLOGY*  
Tan, M. H., Au, K. F., Leong, D. E., Foygel, K., Wong, W. H., Yao, M. W.  
2013; 9
  - **Neural-specific Sox2 input and differential Gli-binding affinity provide context and positional information in Shh-directed neural patterning** *GENES & DEVELOPMENT*  
Peterson, K. A., Nishi, Y., Ma, W., Vedenko, A., Shokri, L., Zhang, X., McFarlane, M., Baizabal, J., Junker, J. P., van Oudenaarden, A., Mikkelsen, T., Bernstein, B. E., Bailey, et al  
2012; 26 (24): 2802-2816
  - **Activation of Innate Immunity Is Required for Efficient Nuclear Reprogramming** *CELL*  
Lee, J., Sayed, N., Hunter, A., Au, K. F., Wong, W. H., MocarSKI, E. S., Pera, R. R., Yakubov, E., Cooke, J. P.  
2012; 151 (3): 547-558
  - **Improving PacBio Long Read Accuracy by Short Read Alignment** *PLOS ONE*  
Au, K. F., Underwood, J. G., Lee, L., Wong, W. H.  
2012; 7 (10)
  - **Fast and accurate read alignment for resequencing** *BIOINFORMATICS*  
Mu, J. C., Jiang, H., Kiani, A., Mohiyuddin, M., Asadi, N. B., Wong, W. H.  
2012; 28 (18): 2366-2373
  - **Six2 and Wnt Regulate Self-Renewal and Commitment of Nephron Progenitors through Shared Gene Regulatory Networks** *DEVELOPMENTAL CELL*  
Park, J., Ma, W., O'Brien, L. L., Chung, E., Guo, J., Cheng, J., Valerius, M. T., McMahon, J. A., Wong, W. H., McMahon, A. P.  
2012; 23 (3): 637-651
  - **Predicting personalized multiple birth risks after in vitro fertilization-double embryo transfer** *FERTILITY AND STERILITY*  
Lannon, B. M., Choi, B., Hacker, M. R., Dodge, L. E., Malizia, B. A., Barrett, C. B., Wong, W. H., Yao, M. W., Penzias, A. S.  
2012; 98 (1)
  - **A Sparse Transmission Disequilibrium Test for Haplotypes Based on Bradley-Terry Graphs** *HUMAN HEREDITY*  
Ma, L., Wong, W. H., Owen, A. B.  
2012; 73 (1): 52-61
  - **Coupling Optional Polya Trees and the Two Sample Problem** *JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION*  
Ma, L., Wong, W. H.  
2011; 106 (496): 1553-1565
  - **A BOOTSTRAP-BASED NON-PARAMETRIC ANOVA METHOD WITH APPLICATIONS TO FACTORIAL MICROARRAY DATA** *STATISTICA SINICA*  
Zhou, B., Wong, W. H.  
2011; 21 (2): 495-514
  - **A New FACS Approach Isolates hESC Derived Endoderm Using Transcription Factors** *PLOS ONE*  
Pan, Y., Ouyang, Z., Wong, W. H., Baker, J. C.  
2011; 6 (3)
  - **Human transcriptome array for high-throughput clinical studies** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Xu, W., Seok, J., Mindrinos, M. N., Schweitzer, A. C., Jiang, H., Wilhelmy, J., Clark, T. A., Kapur, K., Xing, Y., Faham, M., Storey, J. D., Moldawer, L. L., Maier, et al  
2011; 108 (9): 3707-3712
  - **Statistical Modeling of RNA-Seq Data** *STATISTICAL SCIENCE*  
Salzman, J., Jiang, H., Wong, W. H.  
2011; 26 (1): 62-83

- **Completely phased genome sequencing through chromosome sorting** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Yang, H., Chen, X., Wong, W. H.  
2011; 108 (1): 12-17
- **THE ANALYSIS OF CHIP-SEQ DATA** *METHODS IN ENZYMOLOGY, VOL 497: SYNTHETIC BIOLOGY, METHODS FOR PART/DEVICE CHARACTERIZATION AND CHASSIS ENGINEERING, PT A*  
Ma, W., Wong, W. H.  
2011; 497: 51-73
- **Integration of Brassinosteroid Signal Transduction with the Transcription Network for Plant Growth Regulation in Arabidopsis** *DEVELOPMENTAL CELL*  
Sun, Y., Fan, X., Cao, D., Tang, W., He, K., Zhu, J., He, J., Bai, M., Zhu, S., Oh, E., Patil, S., Kim, T., Ji, et al  
2010; 19 (5): 765-777
- **From EM to Data Augmentation: The Emergence of MCMC Bayesian Computation in the 1980s** *STATISTICAL SCIENCE*  
Tanner, M. A., Wong, W. H.  
2010; 25 (4): 506-516
- **Deep phenotyping to predict live birth outcomes in in vitro fertilization** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Banerjee, P., Choi, B., Shahine, L. K., Jun, S. H., O'leary, K., Lathi, R. B., Westphal, L. M., Wong, W. H., Yao, M. W.  
2010; 107 (31): 13570-13575
- **Detection of splice junctions from paired-end RNA-seq data by SpliceMap** *NUCLEIC ACIDS RESEARCH*  
Au, K. F., Jiang, H., Lin, L., Xing, Y., Wong, W. H.  
2010; 38 (14): 4570-4578
- **CisGenome Browser: a flexible tool for genomic data visualization** *BIOINFORMATICS*  
Jiang, H., Wang, F., Dyer, N. P., Wong, W. H.  
2010; 26 (14): 1781-1782
- **An "Almost Exhaustive" Search-Based Sequential Permutation Method for Detecting Epistasis in Disease Association Studies** *GENETIC EPIDEMIOLOGY*  
Ma, L., Assimes, T. L., Asadi, N. B., Iribarren, C., Quertermous, T., Wong, W. H.  
2010; 34 (5): 434-443
- **Analysis of factorial time-course microarrays with application to a clinical study of burn injury.** *Proceedings of the National Academy of Sciences of the United States of America*  
Zhou, B., Xu, W., Herndon, D., Tompkins, R., Davis, R., Xiao, W., Wong, W. H., Toner, M., Warren, H. S., Schoenfeld, D. A., Rahme, L., McDonald-Smith, G. P., Hayden, et al  
2010; 107 (22): 9923-9928
- **Analysis of factorial time-course microarrays with application to a clinical study of burn injury** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Zhou, B., Xu, W., Herndon, D., Tompkins, R., Davis, R., Xiao, W., Wong, W. H.  
2010; 107 (22): 9923-9928
- **OPTIONAL POLYA TREE AND BAYESIAN INFERENCE** *ANNALS OF STATISTICS*  
Wong, W. H., Ma, L.  
2010; 38 (3): 1433-1459
- **Hedgehog pathway-regulated gene networks in cerebellum development and tumorigenesis** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Lee, E. Y., Ji, H., Ouyang, Z., Zhou, B., Ma, W., Vokes, S. A., McMahon, A. P., Wong, W. H., Scott, M. P.  
2010; 107 (21): 9736-9741
- **Modeling Co-Expression across Species for Complex Traits: Insights to the Difference of Human and Mouse Embryonic Stem Cells** *PLOS COMPUTATIONAL BIOLOGY*  
Cai, J., Xie, D., Fan, Z., Chipperfield, H., Marden, J., Wong, W. H., Zhong, S.  
2010; 6 (3)

- **Modeling non-uniformity in short-read rates in RNA-Seq data** *GENOME BIOLOGY*  
Li, J., Jiang, H., Wong, W. H.  
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- **ChIP-Seq of transcription factors predicts absolute and differential gene expression in embryonic stem cells** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Ouyang, Z., Zhou, Q., Wong, W. H.  
2009; 106 (51): 21521-21526
- **Identifiability of isoform deconvolution from junction arrays and RNA-Seq** *BIOINFORMATICS*  
Hiller, D., Jiang, H., Xu, W., Wong, W. H.  
2009; 25 (23): 3056-3059
- **Dissecting Early Differentially Expressed Genes in a Mixture of Differentiating Embryonic Stem Cells** *PLOS COMPUTATIONAL BIOLOGY*  
Hong, F., Fang, F., He, X., Cao, X., Chipperfield, H., Xie, D., Wong, W. H., Ng, H. H., Zhong, S.  
2009; 5 (12)
- **FoxOs Cooperatively Regulate Diverse Pathways Governing Neural Stem Cell Homeostasis** *CELL STEM CELL*  
Paik, J., Ding, Z., Narurkar, R., Ramkissoon, S., Muller, F., Kamoun, W. S., Chae, S., Zheng, H., Ying, H., Mahoney, J., Hiller, D., Jiang, S., Protopopov, et al  
2009; 5 (5): 540-553
- **Energy landscape of a spin-glass model: Exploration and characterization** *PHYSICAL REVIEW E*  
Zhou, Q., Wong, W. H.  
2009; 79 (5)
- **Modeling the spatio-temporal network that drives patterning in the vertebrate central nervous system** *BIOCHIMICA ET BIOPHYSICA ACTA-GENE REGULATORY MECHANISMS*  
Nishi, Y., Ji, H., Wong, W. H., McMahon, A. P., Vokes, S. A.  
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- **Cross-hybridization modeling on Affymetrix exon arrays** *BIOINFORMATICS*  
Kapur, K., Jiang, H., Xing, Y., Wong, W. H.  
2008; 24 (24): 2887-2893
- **RECONSTRUCTING THE ENERGY LANDSCAPE OF A DISTRIBUTION FROM MONTE CARLO SAMPLES** *ANNALS OF APPLIED STATISTICS*  
Zhou, Q., Wong, W. H.  
2008; 2 (4): 1307-1331
- **An integrated software system for analyzing ChIP-chip and ChIP-seq data** *NATURE BIOTECHNOLOGY*  
Ji, H., Jiang, H., Ma, W., Johnson, D. S., Myers, R. M., Wong, W. H.  
2008; 26 (11): 1293-1300
- **SeqMap: mapping massive amount of oligonucleotides to the genome** *BIOINFORMATICS*  
Jiang, H., Wong, W. H.  
2008; 24 (20): 2395-2396
- **A genome-scale analysis of the cis-regulatory circuitry underlying sonic hedgehog-mediated patterning of the mammalian limb** *GENES & DEVELOPMENT*  
Vokes, S. A., Ji, H., Wong, W. H., McMahon, A. P.  
2008; 22 (19): 2651-2663
- **Isolation and transcriptional profiling of purified hepatic cells derived from human embryonic stem cells** *STEM CELLS*  
Chiao, E., Elazar, M., Xing, Y., Xiong, A., Kmet, M., Millan, M. T., Glenn, J. S., Wong, W. H., Baker, J.  
2008; 26 (8): 2032-2041
- **Defining Human Embryo Phenotypes by Cohort-Specific Prognostic Factors** *PLOS ONE*  
Jun, S. H., Choi, B., Shahine, L., Westphal, L. M., Behr, B., Pera, R. A., Wong, W. H., Yao, M. W.  
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- **Learning causal Bayesian network structures from experimental data** *JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION*  
Ellis, B., Wong, W. H.



2008; 103 (482): 778-789

- **Reconfigurable Computing for Learning Bayesian Networks** *16th ACM/SIGDA International Symposium on Field-Programmable Gate Arrays*  
Asadi, N. B., Meng, T. H., Wong, W. H.  
ASSOC COMPUTING MACHINERY.2008: 203–211
- **Optimal discovery of a stochastic genetic network** *American Control Conference 2008*  
Raffard, R. L., Lipan, O., Wong, W. H., Tomlin, C. J.  
IEEE.2008: 2773–2779
- **Evolutionary Monte Carlo methods for clustering** *JOURNAL OF COMPUTATIONAL AND GRAPHICAL STATISTICS*  
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