

**Leo Wang-Kit Cheung**

708-327-9001

[lcheung@lumc.edu](mailto:lcheung@lumc.edu)

## PROFILE

Dr. Cheung is an Assistant Professor and Director of the Bioinformatics Core at the Loyola University Medical Center. The overall theme of his research is to develop and apply mathematical, statistical, and computational methods to help answer questions in Molecular Biology and Medical Genetics.

## EDUCATION

**Bachelor of Science in Mathematics** 1993

*University of Winnipeg, Canada*

Coursework also fulfilled Statistics major Requirement

Student of Highest Distinction (1991, 1992)

University Gold Medal in Statistics (1993) and University Silver Medal in Science (1993)

**Master of Science in Statistics** 1995

*University of Manitoba, Canada*

**Doctorate of Philosophy in Statistics** 2002

*University of Manitoba, Canada*

University of Manitoba Graduate Fellowship (1995-1999)

Manitoba Health Research Council Graduate Studentship, Manitoba Health Research Council (1999-2001)

## HONOR AND AWARDS

Henry Edmison Duckworth Entrance Scholarship, University of Winnipeg (UW) 1989

Lawson Scholarship in Mathematics, UW 1991-1992

University of Winnipeg Honor Society, UW 1991-1992

Academic Proficiency Scholarship (BOARD OF REGENTS), UW 1991-1992

Academic Proficiency Scholarship (HERBERT L. DRAPER FUND), UW 1992-1993

Gunter Weiss Memorial Scholarship in Statistics, UW 1992-1993

University Gold Medal in Statistics 1993

University Silver Medal in Science 1993

University of Manitoba Graduate Fellowship 1995-1999

Scholarship for the Summer Program in Statistical Genetics, North Carolina State University 1997

Scholarship for the Program in Mathematics and Molecular Biology, Burroughs-Wellcome Fund 1998

Full Travel Award for Workshop on Understanding the Genome: Technological and Mathematical Challenges, Mathematical Sciences Research Institute 1998

Manitoba Health Research Council Graduate Studentship, Manitoba Health Research Council 1999-2001

Graduate Student Conference Travel Award, University of Manitoba 2001

One of the Top Ten Best Posters at the 9<sup>th</sup> International Conference on Intelligent Systems for Molecular Biology (ISMB) in Copenhagen, Denmark (From over 350 posters) 2001

Full Scholarship for Mathematical Approaches to the Analysis of Complex Phenotypes, Jackson Laboratory 2001

Full Travel Award for the 2<sup>nd</sup> Bioinformatics Industrialization Workshop, Wellcome Trust Genome Campus, Hinxton, U.K. 2002

University Research Council Faculty Travel Award, University of Hawaii 2003

Scholarship for the Advances in Genome Technology and Bioinformatics, Marine Biological Laboratory (MBL) & The Institute for Genomic Research (TIGR) 2004

## RECENT PUBLICATIONS

**Cheung, Leo W.-K.** 2004. Use of Runs Statistics for Pattern Recognition in Genomic DNA Sequences. *Journal of Computational Biology* 11(1): 107-124.

Kakazu, Kerry K.; **Cheung, Leo W.-K.** & Wilkens, Lynne R. 2004. The Cancer Biomedical Informatics Grid (caBIG): Pioneering an Expansive Network of Information and Tools for Collaborative Cancer Research. *Hawaii Medical Journal* 63: 273-275.

**Cheung, Leo W.-K.**; Goodman, Marc; Hernandez, Brenda; McDuffie, Katharine; Seifried, Ann; Ferrell, Robert & Wilkens, Lynne. 2004. Polymorphisms in Cytokines Involved with Mucosal Immunity may Enhance Persistence of Type-Specific Human Papillomavirus Infection of the Uterine Cervix. *International Papillomavirus Conference Proceedings*. Mexico City, Mexico.

**Cheung, Leo W.-K.** 2004. Computational Pattern Recognition through Parallelized Finite Markov Chain Imbedding. *Technical Report # 120104, Informatics Shared Resource, Cancer Research Center of Hawaii, University of Hawaii.*

Wang, Junbai; **Cheung, Leo W.-K.** & Delabie, Jan. 2005. New Probabilistic Graphical Models for Genetic Regulatory Networks Studies. *Journal of Biomedical Informatics* 38: 443-455.

Wang, Junbai; **Cheung, Leo W.-K.** & Delabie, Jan. 2005. Supplementary Materials of New Probabilistic Graphical Models for Genetic Regulatory Networks Studies: GNET MATLAB Toolbox (Programming Source Code and Demo Data) and the Predicted Results on 4 MAPK Pathways in Yeast & Results from Computer Simulations. [www.columbia.edu/~jw2256/gnet/](http://www.columbia.edu/~jw2256/gnet/)

**Cheung, Leo W.-K.**; Murphy, Suzanne; Au, Donna; Jung, Yun-Oh & Wilkens, Lynne R. 2005. Vocabularies and Common Data Elements Workspace: Nutrition Database Developer Project. *National Cancer Institute Cancer Biomedical Informatics Grid (caBIG) Annual Meeting Proceedings.*

Keen, Kevin J. & **Cheung, Leo W.-K.** 2005. A Robust Normalizing Transformation for Interrater Reliability in the Case of Continuous and Dichotomous Measures. *Technical Report # 050805, Informatics Shared Resource, Cancer Research Center of Hawaii, University of Hawaii.*

Noh, Jilae; Maskarinec, Gertraud; Pagano, Ian; **Cheung, Leo W.-K.** & Stanczyk, Frank Z. 2006. Mammographic Densities and Circulating Hormones: A Cross-Sectional Study in Premenopausal Women. *The Breast* 15: 20-28.

**Cheung, Leo W.-K.** & Zhao, Xin. 2006. A Novel Class of Machine Learners: Kernel-Imbedded Gaussian Processes for Expression Data Analysis. *Proceedings of International Conference on Intelligent Systems for Molecular Biology.* Fortaleza, Brazil.

Wenceslao, Stella M.; Gotay, Carolyn; **Cheung, Leo W.-K.** & White, Kami. 2006. Patterns of Childhood Cancers in Hawaii Between 1975 and 2000. *Hawaii Medical Journal* 65: 221-225.

**Cheung, Leo W.-K.** & Zhao, Xin. 2007. Kernel-Induced Bayesian Learning for Gene Expression and Beyond. *Proceedings of International Conference on Intelligent Systems for Molecular Biology.* Vienna, Austria.

Zhao, Xin & **Cheung, Leo W.-K.** 2007. Kernel-Imbedded Gaussian Processes for Disease Classification Using Microarray Gene Expression Data. *BMC Bioinformatics* 8:67 1-26.

#### RECENT EMPLOYMENT HISTORY

Assistant Professor in Biostatistics and Bioinformatics Director of Informatics Shared Resource <i>Cancer Research Center of Hawaii, University of Hawaii</i>	2002-2006
Adjunct Assistant Professor in Information & Computer Sciences <i>Department of Information &amp; Computer Sciences, University of Hawaii</i>	2004-2006
Assistant Professor in Bioinformatics & Computational Biology Director of Bioinformatics Core <i>Department of Preventive Medicine &amp; Epidemiology, Loyola University Medical Center</i>	2006-present