
Curriculum Vitae of Grace S. Chiu

Personal Information

Citizenship: Canadian

Affiliations: *Senior Research Scientist*

CSIRO Mathematics, Informatics, and Statistics (CMIS)
Commonwealth Scientific and Industrial Research Organisation (CSIRO)
CMIS Acton, GPO Box 664, ACT 2601, Australia

Adjunct Assistant Professor

Department of Statistics and Actuarial Science, University of Waterloo
Waterloo, Ontario, N2L 3G1, Canada

Affiliate Assistant Professor

Department of Statistics, University of Washington
Seattle, WA 98195, USA

Visiting Research Scholar

Graduate Inter-Disciplinary Program in Statistics, University of Arizona
Tucson, AZ 85721, USA

Founding Member (1 of 35)

Interdisciplinary Centre on Climate Change (IC³), University of Waterloo

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Profile: <http://www.researcherid.com/rid/D-1408-2009>

Education

- **Ph. D.** in Statistics, June 2002. SIMON FRASER UNIVERSITY.
- **M. Sc.** in Statistics, June 1996. UNIVERSITY OF BRITISH COLUMBIA.
- **B. Sc.** in Mathematics and Statistics, May 1994. UNIVERSITY OF BRITISH COLUMBIA.

Publications

Computer Software

- bentcableAR package, distributed by *The R Project for Statistical Computing*.
<http://cran.r-project.org/web/packages/bentcableAR/index.html>

Peer Reviewed Articles

- Chiu, G.S., Lehmann, E.A. (2011). “Bayesian hierarchical modelling: incorporating spatial information in water resources assessment and accounting.” In Chan, F., Marinova, D. and Anderssen, R.S. (eds), *MODSIM2011, 19th International Congress on Modelling and Simulation*. Modelling and Simulation Society of Australia and New Zealand, December 2011, pp. 3349–3355. ISBN: 978-0-9872143-1-7. www.mssanz.org.au/modsim2011
- Chiu, G.S., Westveld, A.H. (2011). “A unifying approach for food webs, phylogeny, social networks, and statistics.” *Proceedings of the National Academy of Sciences of the USA* **108**, 15881–15886. DOI: [10.1073/pnas.1015359108](https://doi.org/10.1073/pnas.1015359108)
<http://faculty.washington.edu/gchiu/Articles/foodweb-pnas.html>
- Chiu, G.S., Guttorp, P., Westveld, A.H., Khan, S.A., Liang, J. (2011). “Latent health factor index: a statistical modeling approach for ecological health assessment,” *Environmetrics* **22**, 243–255. DOI: [10.1002/env.1055](https://doi.org/10.1002/env.1055)
<http://faculty.washington.edu/gchiu/Articles/LHFI-environmetrics.pdf>
- Chiu, G.S., Gould, J.M. (2010). “Statistical inference for food webs with emphasis on ecological networks via Bayesian melding,” *Environmetrics* **21**, 728–740. DOI: [10.1002/env.1035](https://doi.org/10.1002/env.1035)
<http://faculty.washington.edu/gchiu/Articles/ENA-environmetrics.pdf>
- Chiu, G.S., Lockhart, R.A. (2010). “Bent-cable regression with autoregressive noise,” *Canadian Journal of Statistics* **38**, 386–407. DOI: [10.1002/cjs.10070](https://doi.org/10.1002/cjs.10070)
<http://faculty.washington.edu/gchiu/Articles/bentcable-cjs.pdf>
- Khan, S.A., Chiu, G., Dubin, J.A. (2009a). “Flexible bent-cable models for mixture longitudinal data,” Distinguished Student Paper Awards 2010, ENAR.
http://enar.org/meetings/ENAR.2010_Meeting_finalProgram.pdf
- Khan, S.A., Chiu, G., Dubin, J.A. (2009b). “Atmospheric concentration of chlorofluorocarbons: addressing the global concern with the longitudinal bent-cable model,” *Chance* **22**, Issue 3, 8–17.
<http://www.amstat.org/PUBLICATIONS/chance/2009/22.3Web/index.cfm>
- Chiu, G., Lockhart, R., Routledge, R. (2006). “Bent-cable regression theory and applications,” *Journal of the American Statistical Association* **101**, 542–553. DOI: [10.1198/016214505000001177](https://doi.org/10.1198/016214505000001177)
(NOTE: *Erratum* in published version — see manuscript for details.)
manuscript: <http://faculty.washington.edu/gchiu/Articles/bentcable-jasa.pdf>
- Chiu, G., Guttorp, P. (2006). “Stream health index for the Puget Sound Lowland,” *Environmetrics* **17**, 285–307. DOI: [10.1002/env.744](https://doi.org/10.1002/env.744)
<http://faculty.washington.edu/gchiu/Articles/shipl.pdf>
- Chiu, G., Lockhart, R., Routledge, R. (2005). “Asymptotic theory for bent-cable regression — the basic case,” *Journal of Statistical Planning and Inference* **127**, 143–156. DOI: [10.1016/j.jspi.2003.09.007](https://doi.org/10.1016/j.jspi.2003.09.007)
<http://faculty.washington.edu/gchiu/Articles/basic.pdf>
- Chiu, G., Lockhart, R., Routledge, R. (2002). “Bent-cable asymptotics when the bend is missing,” *Statistics and Probability Letters* **59**, 9–16. DOI: [10.1016/S0167-7152\(02\)00138-4](https://doi.org/10.1016/S0167-7152(02)00138-4)
<http://faculty.washington.edu/gchiu/Articles/cube-root.pdf>
- Chiu, G., Routledge, R., Lockhart, R. (2002). “Using the bent cable to assess an abrupt change in species abundance and other phenomena,” Winning Paper. Student Paper Competition 2002, WNAR.
<http://faculty.washington.edu/gchiu/Articles/wnar2002.pdf>
- Chiu, G.S. (2002). “Bent-cable regression for assessing abruptness of change,” *Pierre Robillard Award Winning Ph. D. Thesis*. Department of Statistics and Actuarial Science, Simon Fraser University.
<http://www.stat.sfu.ca/alumni/Theses/Chiu.pdf>

- Chiu, G.S. (1996). “Effects of misspecified response correlation in regression analysis,” M. Sc. Thesis. Department of Statistics, University of British Columbia.

Submitted for Peer Review

- Chiu, G.S. (submitted). “Food web modeling.” *Encyclopedia of Environmetrics* (2nd ed).
- Chiu, G.S. (submitted). “Species interaction networks.” *Encyclopedia of Environmetrics* (2nd ed).

Technical Reports

- Chiu, G.S. (2011). “Statistical model-based alternatives to integrate and evaluate soil moisture products.” Technical Report No. CMIS2011-EP11722, CSIRO Mathematics, Informatics and Statistics.
- Henderson, B., Chiu, G., Jin, W., Lehmann, E., Barry, S. (2011). “AWRA model-data fusion: evaluation, error characterisation and blending.” Client Report, CSIRO Water for a Health Country Flagship.
- Henderson, B., Renzullo, L., van Dijk, A., Barry, S., Chiu, G., Gouweleeuw, B., Jin, W., Lehmann, E., Lerat, J., Paydar, Z., Stenson, M. (2011). “Road map for AWRA-L model-data fusion.” Client Report, CSIRO Water for a Health Country Flagship.
- Chiu, G.S., Westveld, A.H. (2010b). “A statistical social network model for consumption data in food webs.” arXiv:[1006.4432v2](https://arxiv.org/abs/1006.4432v2) / Technical Report No. CMIS2010-EP103049, CSIRO Mathematics, Informatics and Statistics.
- Reynolds, P.S., Chiu, G.S. (2010). “Understanding thermoregulatory transitions during haemorrhage by piecewise regression.” arXiv:[1006.5117v1](https://arxiv.org/abs/1006.5117v1) / CSIRO ePublish manuscript EP103334.
- Khan, S.A., Chiu, G., Dubin, J.A. (2009). “Atmospheric concentration of chlorofluorocarbons: addressing the global concern with the longitudinal bent-cable model.” Working Paper Series No. 2009-04, Department of Statistics and Actuarial Science, University of Waterloo. <http://preview.tinyurl.com/880jrvn>
- Chiu, G.S. (2008). “On identifiability of covariance components in hierarchical generalized analysis of covariance models,” Working Paper Series No. 2008-09, Department of Statistics and Actuarial Science, University of Waterloo. <http://preview.tinyurl.com/7x9e8w6>
- Chiu, G.S., Gould, J.M. (2008). “Statistical inference for food webs with emphasis on ecological networks via Bayesian melding,” Working Paper Series No. 2008-07, Department of Statistics and Actuarial Science, University of Waterloo. <http://preview.tinyurl.com/7seylcp>
- Chiu, G.S., Guttorp, P., Westveld, A.H., Khan, S.A., Liang, J. (2008). “A latent health factor index modelling approach via generalized linear mixed models, with application to ecological health assessment,” Working Paper Series No. 2008-08, Department of Statistics and Actuarial Science, University of Waterloo.
<http://preview.tinyurl.com/6qhzz3k>
- Chiu, G., Lockhart, R. (2008). “Some Mathematical and Algorithmic Details for Bent-Cable Regression with $AR(p)$ Noise,” Working Paper Series No. 2006-07, Department of Statistics and Actuarial Science, University of Waterloo. <http://preview.tinyurl.com/7koewet>
- Chiu, G.S., Guttorp, P., Khan, S.A., Liang, J., Westveld, A.H. (2007). “An ecological latent health factor index via a random-effects model for taxa richness and composition,” Working Paper Series No. 2006-02, Department of Statistics and Actuarial Science, University of Waterloo. <http://preview.tinyurl.com/7e6g72o>
- Chiu, G., Lockhart, R. (2006). “Bent-Cable Regression with $AR(p)$ Noise: Preliminary Theory and Applications,” 2006 Proceedings of the American Statistical Association, Statistical Computing Section [CD-ROM], Alexandria, VA: American Statistical Association: pp. 2027–2034.
<http://faculty.washington.edu/gchiu/Articles/jsmproceedings06.pdf>

- Chiu, G., Guttorp, P. (2004a). “New Developments involving the Stream Health Index for the Puget Sound Lowland,” Technical Report Series No. 79, National Research Center for Statistics and the Environment (NRCSE), University of Washington.
<http://www.nrcse.washington.edu/pdf/trs79.pdf>
- Chiu, G., Guttorp, P. (2004b). “Stream Health Index for the Puget Sound Lowland,” Technical Report Series No. 78, NRCSE, University of Washington.
<http://www.nrcse.washington.edu/pdf/trs78.pdf>

Articles In Progress

- Henderson, B., Renzullo, L., van Dijk, A., Chiu, G., Jin, W., Lehmann, E., Barry, S., Frost, A. “Balancing models and data: model data fusion for improved continental water resource assessment.” Proceedings of the Water Information Research and Development Alliance (WIRADA) Science Symposium 2011.
- Wu, M.A.C., Chiu, G.S. “Latent health factor index models for the estuarine ecosystem in Richibucto.”
- Zhou, L., Westveld, A.W., Chiu, G.S., Andrew, N.R. “Latent health modeling of Australian boreal ecosystems.”

Media Interviews

- “Making new food chain friends.” CSIROpod, November 11, 2011.
<http://www.csiro.au/multimedia/Making-new-food-chain-friends.html>
- In *2007 Report*, Office of the Dean, Faculty of Mathematics, University of Waterloo.
<http://www.math.uwaterloo.ca/navigation/Alumni/math2007report.pdf>

Presentations

Invited Talks

- Chiu, G.S., Westveld, A.H. (2011). “Food webs, phylogeny, social networks, and statistics: What is the common thread?” Statistics Graduate Interdisciplinary Program (GIDP) Colloquium, University of Arizona (February 1, 2012).
- School of Information: Science, Technology, and Arts (SISTA) Colloquium, University of Arizona (January 30, 2012).
- Chiu, G.S., Lehmann, E.A. (2012). “Making use of multiple soil moisture products through spatial modelling,” Session on Modern Spatiotemporal Tools for Environmental Data, The International Environmetrics Society (TIES) Conference 2012.
- Chiu, G.S., Lehmann, E.A. (2011). “A spatial model for soil moisture,” CMIS Acton Brown Bag Seminar (October 21, 2011).
- Chiu, G.S., Khan, S.A., Dubin, J.A. (2011). “Mixture longitudinal bent-cable regression for assessing the effects of shocks,” Statistical Society of Australia Inc. – Canberra Branch Meeting (August 30, 2011).
- Biostatistics Seminar, College of Public Health, University of Arizona (June 1, 2011).

- Chiu, G. (2011). “Hybridizing physics and statistics for mass balance using Bayesian melding,” Bayesian Working Group (June 7, 2011), Center for Applied Mathematics and Statistics, University of Nevada Las Vegas.
- Chiu, G. (2011). “Twitter, Facebook, CSIRO, and fish: beyond just friends,” CSIRO Public Seminars in Canberra (May 18, 2011). <http://preview.tinyurl.com/7ckeqlja>
- Chiu, G., Westveld, A. (2011). “Understanding predator-prey relations in food webs using statistical social-network models,” CSIRO-CMIS Divisional Conference 2011.
- Chiu, G., Gould, J., Westveld, A. (2010). “Statistical inference for food webs,” The American Statistical Association Joint Statistical Meetings (JSM) 2010.
- Chiu, G., Westveld, A. (2010c). “Statistical social network modelling of trophic relations in food webs,” Workshop on CMAR (CSIRO Marine and Atmospheric Research) Trophicdynamics — Questions, Methods and Collaborations (April 14, 2010).
- Chiu, G. (2008). “Food web modeling: why consider longitudinal social networks and Bayesian melding?” <http://faculty.washington.edu/gchiu/Talks/ties08.pdf>
 - Marine Ecology Session (June 12, 2008), TIES Conference 2008.
 - University of Guelph Biomathematics and Biostatistics Seminar / Statistics Colloquium (April 1, 2008).
- Chiu, G. (2008). “Environmetrics: integrating statistical research with environmental sciences,” Interdisciplinary Centre on Climate Change Scoping Workshop (April 30, 2008), University of Waterloo.
 - <http://faculty.washington.edu/gchiu/Talks/ic3-08.pdf>
- Chiu, G. (2007). “Where’s the statistician? A collage of high profile environmental issues” (multimedia presentation with commentaries), Fields Institute Summer Workshop on Environmetrics 2007.
- Chiu, G. (2007). “Bringing statistical sophistication to structurally simple problems in the biological sciences,” University of Waterloo Statistics Club Lecture (March 22, 2007).
 - <http://faculty.washington.edu/gchiu/Talks/uwstatsclub07.pdf>
- Chiu, G., Gould, J. (2008). “Statistical Inference for Food Webs, Part I: Bayesian Melding.”
 - <http://faculty.washington.edu/gchiu/Talks/bio08.pdf>
 - Department of Statistical and Actuarial Sciences Colloquium, University of Western Ontario (May 7, 2009).
 - Statistics Seminar (April 16, 2009), University of Waterloo.
 - CSIRO Marine and Atmospheric Research Science Seminar (March 6, 2009), Hobart, Tasmania, Australia.
 - Statistics Seminar (January 23, 2009), University of Victoria.
 - Statistics Seminar (December 11, 2008), Dalhousie University.
 - Harvest Fisheries Seminar (December 3, 2008), Bedford Institute of Oceanography.
- Chiu, G., Guttorp, P. (2004). “SHIPSL: A new health index for Puget Sound Lowland streams.”
 - <http://faculty.washington.edu/gchiu/Talks/corvallis.pdf>
 - Seminar (April 13, 2004), US Environmental Protection Agency (USEPA) Western Ecology Division.
 - Statistics Seminar (February 24, 2004), University of British Columbia.
- Chiu, G., Guttorp, P. (2003). “A Statistician’s take on the benthic index of biotic integrity,” Statistics Seminar (September 22, 2003), Simon Fraser University.
- Chiu, G., Guttorp, P., Westveld, A. (2008). “Gauging Ecosystem Health with Latent Health Factor Models.” <http://faculty.washington.edu/gchiu/Talks/unlv2009.pdf>

- Zoology / Centre for Physiological and Behavioural Ecology Seminar (March 10, 2009), University of New England, NSW, Australia.
- Seminar (February 26, 2009), Commonwealth Scientific and Industrial Research Organisation (CSIRO) Mathematical and Information Sciences, Indooroopilly, Queensland, Australia.
- Statistics Seminar (February 6, 2009), University of Nevada Las Vegas.
- Environmental Statistics Session (May 28, 2008), Statistical Society of Canada 2008 Conference.
- Chiu, G.S., Khan, S.A., Dubin, J.A. (2009). “Understanding hemorrhagic shock in a rat model using flexible longitudinal bent-cable regression,” Center for Devices and Radiological Health, Division of Biostatistics, US Food and Drug Administration.
- Chiu, G., Lockhart, R. (2006). “Bent-cable regression with autoregressive noise.”
<http://faculty.washington.edu/gchiu/Talks/bentAR-talk.pdf>
- Canberra Applied Statistics Workshop (February 20, 2009), CSIRO / Australian National University.
- Statistics Seminar (February 14, 2008), Department of Statistics, University of California Riverside.
- Statistics Seminar (December 3, 2007), Department of Statistics, University of Idaho.
- Applied Statistics and Computation Seminar (March 9, 2007), Washington University in St. Louis.
- Statistics Seminar (April 7, 2006), York University.
- Statistics Seminar (March 21, 2006), McMaster University.
- Seminar (March 8, 2006), Women in Mathematics Committee, University of Waterloo.
<http://faculty.washington.edu/gchiu/Talks/wim06.pdf>
- Chiu, G., Routledge, R., Lockhart, R. (2003). “Bent-cable regression for assessing abruptness of change.”
<http://faculty.washington.edu/gchiu/Talks/robillard.pdf>
- Seminar (June 3, 2004), Groupe d’études et de recherche en analyse des décisions (GERAD), Montréal.
- Statistics Seminar (December 1, 2003), University of Washington.
- Statistics Seminar (September 25, 2003), University of Waterloo.
- Pierre Robillard Award Winner Presentation (June 11, 2003), Statistical Society of Canada Meeting.
- Chiu, G., Routledge, R., Lockhart, R. (2002). “Bent-cable regression — Why fish don’t like kinks.”
- Statistics Seminar (February 28, 2003), University of Toronto.
- Biostatistics Research Group (BRG) Seminar (October 10, 2002), University of British Columbia.

Invited Discussions

- “Life as a non-academic statistician,” November 16, 2011. Statistics 688 (Statistical Consulting course), University of Arizona.
- Panel on “Training for a Career in Environmetrics.” TIES Conference 2008.
- Panel on “Implementing Graduate Programs in Environmetrics.” Fields Institute Summer Workshop on Environmetrics 2007.
- Panel on “How to find a Ph.D. Advisor?,” February 11, 2004. Vertical Integration of Research and Education in the Mathematical Sciences (VIGRE), University of Washington.

Contributed Talks / Posters

- Chiu, G.S., Lehmann, E.A. (2011). “Bayesian hierarchical modelling: incorporating spatial information in water resources assessment and accounting,” MODSIM 2011.
- Chiu, G.S., Lehmann, E.A. (2011). “Bayesian hierarchical modelling: incorporating spatial information in the AWRA framework,” WIRADA Symposium 2011.
- Chiu, G. (2011). “Hybridizing physics and statistics for mass balance using Bayesian melding,” Catchment-to-Coast Community of Practice 2011 Workshop: integrating C2C models with observations, including data assimilation. <http://preview.tinyurl.com/7le7pld>
- Chiu, G., Westveld, A. (2010d). “Understanding predator-prey relations in food webs using statistical social-network models,” Australian Statistical Conference 2010.
- Chiu, G., Westveld, A. (2010e). “Statistical social network modelling of trophic relations in food webs: current state and beyond,” CSIRO-CMIS Canberra Science Day 2010.
- Chiu, G., Westveld, A. (2010f). “Statistical social network modelling of trophic relations in food webs,” Techfest 2010.
- Chiu, G.S., Westveld, A.H., Gould, J.M. (2010). “Inference for Food Webs via Statistical Models,” Statistical Modelling and Inference Conference to celebrate Murry Aitkin’s 70th birthday.
- Chiu, G., Gould, J. (2009). “Statistical Inference for Food Webs / Ecological Networks via Bayesian Melding,” JSM 2009. <http://faculty.washington.edu/gchiu/Talks/jsm09.pdf>
- Khan, S.A., Chiu, G., Dubin, J.A. (2009). “Monitoring Atmospheric Chlorofluorocarbons by the Longitudinal Bent-Cable Model,” TIES Conference 2009.
<http://www2.stat.unibo.it/ties2009/slides/Chiu.ppt>
- Chiu, G., Guttorp, P. (2005). “Beyond SHIPSL: Some New Directions for Gauging Ecological Health.”
<http://faculty.washington.edu/gchiu/Talks/ties2005.pdf>
 - TIES Conference 2005.¹
 - The National Program on Complex Data Structures (NPCDS) Workshop 2005.
 - WNAR / IMS Conference 2005.
- Chiu, G., Guttorp, P. (2004). “Why SHIPSL? — Issues on How Stream Health is Gauged,” WNAR / IMS Conference 2004. <http://faculty.washington.edu/gchiu/Talks/wnar2004.pdf>
- Chiu, G., Guttorp, P. (2003). “A Statistician’s take on the benthic index of biotic integrity,” TIES Conference 2003. <http://faculty.washington.edu/gchiu/Talks/ties2003.pdf>
- Chiu, G.S., Guttorp, G., Westveld, A.H. (2007). “Latent Health Factor Modeling for Monitoring Ecosystem Health,” TIES Conference 2007.
<http://faculty.washington.edu/gchiu/Talks/ties07.pdf>
- Chiu, G., Guttorp, P., Westveld, A. (2006). “A Latent Health Factor Index from a Hierarchical Model of Aquatic Species and Abundance,” TIES Conference 2006.
<http://faculty.washington.edu/gchiu/Talks/ties06.pdf>
- Chiu, G., Lockhart, R. (2006). “Bent-Cable Regression with AR(p) Noise,” JSM 2006.
<http://faculty.washington.edu/gchiu/Talks/jsm06.pdf>

¹Delivered by Dr. Bronwyn Harch of CSIRO.

- Chiu, G., Lockhart, R., Routledge, R. (2002). “Using the bent cable to assess an abrupt change in species abundance and other phenomena,” Winning Paper. Student Paper Competition 2002, WNAR.
- Chiu, G., Routledge, R., Lockhart, R. (2001). “Abrupt change or not? — From the broken stick to the bent cable,” SSC Conference 2001.

Professional Employment and Service History

Employment

- **Senior Research Scientist**, October 19, 2009 to present.
CSIRO Mathematics, Informatics and Statistics, Acton, ACT, Australia.
- **Adjunct Assistant Professor**, October 1, 2009 to present.
Department of Statistics and Actuarial Science, UNIVERSITY OF WATERLOO, Waterloo, ON, Canada.
- **Affiliate Assistant Professor**, September 16, 2006 to present.
Department of Statistics, UNIVERSITY OF WASHINGTON, Seattle, WA, USA.
- **Assistant Professor** (tenure-track), July 1, 2005 to September 30, 2009.
Department of Statistics and Actuarial Science, UNIVERSITY OF WATERLOO.
Courses taught: **Statistics 231** and **Statistics 371** (September to December, 2006 & 2007); **Statistics 202/204** and **Statistics 430/830** (September to December, 2005).
- **Postdoctoral Fellow and Lecturer**, January 1, 2004 to June 30, 2005.
Department of Statistics, UNIVERSITY OF WASHINGTON, Seattle.
Courses taught: **Statistics 220** (June to August, 2004), **Statistics 311** (September to December, 2004; April to June, 2005).
- **Postdoctoral Fellow**, January 1 to December 31, 2003.
Pacific Institute for the Mathematical Sciences (PIMS) and Department of Statistics and Actuarial Science, SIMON FRASER UNIVERSITY, Burnaby, B.C., Canada.
- **Visiting Scholar**, January 1 to December 31, 2003.
Department of Statistics, UNIVERSITY OF WASHINGTON, Seattle.
- **Sessional Instructor**, May to August 2003 (**Statistics 201**); September to December 2000 (**Statistics 330**); January to April 1997 (**Statistics 280**).
Department of Statistics and Actuarial Science, SIMON FRASER UNIVERSITY.
- **Research Assistant**, September 2001 to December 2002.
Department of Statistics and Actuarial Science, SIMON FRASER UNIVERSITY.
- **Statistics Instructor**, September 1996 to April 2000.
Department of Mathematics and Statistics, COQUITLAM COLLEGE, Coquitlam, B.C., Canada. Courses taught: **Statistics 101** (September 1996 to April 2000), **Business Statistics 200** (May 1997 to July 1998), and **Statistics 270** (May to July 1998).
- **Department Head**, September 1997 to August 1998.
Department of Mathematics, Statistics, and Computer Science, COQUITLAM COLLEGE.
- **Statistics 200 Course Instructor**, May to July 1997; July to August 1996.
Department of Statistics, UNIVERSITY OF BRITISH COLUMBIA, Vancouver,

- **Instructional Support Person**, September to December 1996.
Department of Statistics, UNIVERSITY OF BRITISH COLUMBIA, Vancouver. Responsibilities included **Statistics 203 Head TA** duties; compiling information about online interactive statistical resources on the World Wide Web; designing and implementing such resources for the UBC Statistics Department; assisting in the application of the **Teaching and Learning Enhancement Fund** for the department.
- **Graduate Teaching Assistant**, September 1994 to April 1996.
Department of Statistics, UNIVERSITY OF BRITISH COLUMBIA, Vancouver.
- **Student Consultant**, January to April 1995.
Statistics Consulting and Research Laboratory (SCARL), Department of Statistics, UNIVERSITY OF BRITISH COLUMBIA, Vancouver.
- **Research Assistant**, May to September 1994.
Department of Statistics, UNIVERSITY OF BRITISH COLUMBIA, Vancouver.
- **Student Researcher/Consultant**, May to August 1993.
BRITISH COLUMBIA CANCER AGENCY, Vancouver, B.C.
- **Undergraduate Teaching Assistant**, January to April 1993.
Department of Statistics, UNIVERSITY OF BRITISH COLUMBIA, Vancouver.

Short-term Positions

- **Visiting Research Scholar**, November 2011 to present.
Graduate Inter-Disciplinary Program in Statistics, University of Arizona, Tucson, AZ.
- **Visiting Research Scientist**, February to March, 2009.
CSIRO Mathematical and Information Sciences (various locations), Australia.
- **Visiting Professor of Statistics**, October to December, 2008.
Department of Mathematics and Statistics, DALHOUSIE UNIVERSITY, Halifax, NS.

Service within University of Waterloo

- **Statistics Seminars Committee** 2008–9.
- **Statistics and Actuarial Science Department Webpage Committee** 2008–9.
- **Statistics and Actuarial Science Programs Committee** 2006–8.
- **Faculty of Mathematics Library Committee** 2006–8.
- **Statistics Comprehensive Examination Committee** 2005–6.

Service within CSIRO

- **Organizing Committee**, Bayesian workshops by Dr. Sujit Sahu, November 2011, Canberra.
<ftp://ftp.csiro.au/Sahu-workshops-ACT2011/index.html>
- **CMIS Environmental Informatics Program Hiring Committee** 2011.
- **CMIS Internal Referee** [*various articles per year*].

Statistical Community Service

- **Australian Representative for the American Statistical Association Friends of Australasia.** December 2010 to present.
- **Associate Editor, *Environmetrics*.** January 2009 to present.
- **TIES Webmaster** (September 2006 to present) <http://www.environmetrics.org/> and **TIES Representative for the Webpage Committee of the International Statistical Institute** (September 2009 to May 2010).
- **Referee** [*Journal titles withheld for confidentiality*].
- **Organizer of Invited Session “What’s the Buzz on Hierarchical Modeling in Environmetrics?”** TIES 2010.
- **Leading Organizer of 2007 Summer Workshop on Environmetrics,** Fields Institute.
<http://www.fields.utoronto.ca/programs/scientific/07-08/environmetrics/>
- **Organizer and Chair of Environmetrics Session,** SSC 2006.
- **Reviewer,** November 2004.
Duxbury Press.
- **Regional Advisory Board Member,** July 2002 to July 2004.
Western North American Region (WNAR) of the International Biometric Society.
- **Pierre Robillard Award Committee Member,** July 2003 to June 2004.
Statistical Society of Canada (SSC).

Supervisory Responsibilities

Graduate

- Co-supervisor for **Shahedul A. Khan**, U Waterloo Ph.D. program, October 2009 to June 2010.
- Primary Supervisor of **Shahedul A. Khan**, U Waterloo Ph.D. program (co-supervised by Joel Dubin), April 2006 to September 2009 (primary supervisor status ended due to resignation from U Waterloo).
- Secondary Supervisor of **Sheena Y. Zhang**, U Waterloo Ph.D. program (co-supervised by Christopher Small), September 2007 to September 2009 (supervision ended due to resignation from U Waterloo).
- Ph.D. Committee member for **Ryan Browne**, October 2007 to August 2009. U Waterloo Ph.D. Thesis title: *Leveraged Plans for Measurement System Assessment*.
- Supervisor of **Margaret Wu**, May 2008 to May 2009. U Waterloo M.Math. Research Thesis title: *A Latent Health Factor Model for Estimating Estuarine Ecosystem Health*.
<http://faculty.washington.edu/gchiu/Articles/wu-mmath-thesis.pdf>
- Supervisor of **Joshua Gould**, September 2007 to October 2008. U Waterloo M.Math. Research Essay title: *An Application of Bayesian Melding to Ecological Networks*.
<http://faculty.washington.edu/gchiu/Articles/gould-mmath-essay.pdf>
- Second Reader for M.Math. essay by **Fei Yuan**, March to May 2006. U Waterloo M.Math. Research Essay title: *The Comparison of Three Machine-Learning Algorithms for the Screening of Chemical Compounds*.

Undergraduate

- Supervisor of **Joslin Goh**, U Waterloo Undergraduate Research Internship, January to April 2007; U Waterloo International Work Study Program, May to August 2007.

Current and Recent Research Grants

- *CSIRO Water for a Health Country Flagship – Healthy Water Ecosystems Theme – Strategic Projects*, 2011–2012.
- *Natural Sciences and Engineering Research Council of Canada (NSERC) Strategic Network Grant*, 2008–2013.²
- *NSERC Strategic Grant*, 2008–2010.
- *NSERC Discovery Grant*, 2005–2008, 2008–2010.
- *University of Waterloo Faculty of Mathematics Start-up Grant*, 2005–2007.

Professional Awards and Achievements

- *CSIRO Office of the Chief Executive (OCE) Cutting Edge Science Symposium Competition* 2011.
- *Elected Membership* November 2011. International Statistical Institute.
- *Theo Murphy High Flyers Think Tank Award* 2011. Australian Academy of Science.
<http://www.science.org.au/events/thinktank/thinktank2011/>
- *Pierre Robillard Award* 2003 (for best Statistics Ph.D. thesis from 2002). Statistical Society of Canada (SSC).
- *NSERC Postdoctoral Fellowship Competition* 2002.
- *Postdoctoral Fellowship Competition* 2002. Pacific Institute for the Mathematical Sciences (PIMS).
- *First Prize Winner — Student Paper Competition* June 2002. Western North American Region (WNAR) of the International Biometric Society.
- *President's Ph. D. Research Stipend* Summer 2001. Simon Fraser University (SFU).
- *Graduate Fellowship* Summer 2000. SFU.
- *NSERC Postgraduate Scholarship — PGS B* 1999 - 2001.
- *Bert Henry Memorial Scholarship* for graduate studies 1998 - 1999. SFU.
- *NSERC — PGS B* 1996 - 1998. (Declined.)
- One of two *Gertrude M. Cox Scholarships in Statistics* 1995. American Statistical Association Committee on Women in Statistics and the Caucus for Women in Statistics.
- *NSERC — PGS A* 1994 - 1996.
- *Stanley W. Nash Medal* for excellence in undergraduate statistics 1994. Department of Statistics, University of British Columbia (UBC).
- *British Columbia Cancer Foundation Studentship* 1993. British Columbia Cancer Foundation.

²Terminated in 2010 due to resignation from U of Waterloo.

- *Charles and Jane Banks Scholarship* 1993 - 1994. UBC.
- *Science Scholar* 1991 - 1992, 1992 - 1993, 1993 - 1994. Faculty of Science, UBC.
- *University of British Columbia Scholarship* 1991 - 1992, 1992 - 1993, 1993 - 1994.