Professor Richard Lockhart

 $Curriculum \ Vitae$

Updated: 2019 February 16 Born: 1954 July 13 Citizenship: Canadian

PERSONAL HISTORY

Educational Background

Ph.D.	1979	Statistics, University of California, Berkeley, USA Thesis title: The Programming Operation on σ -fields Supervisor: David Blackwell
M.A.	1976	Statistics, University of California, Berkeley, USA
		Awarded for passing the qualifying examinations.
B.Sc.	1975	Mathematics, University of British Columbia, Canada

Employment History at Academic Institutions

2015 - 2020	University Professor, Statistics & Actuarial Science, Simon Fraser University
2001 – Current	Professor, Statistics & Actuarial Science, Simon Fraser University
2008 - 2014	Professor and Chair, Statistics & Actuarial Science, Simon Fraser University
2007 - 2008	Supernumerary Member of Senior Common Room, Jesus College, Oxford
1993 - 2001	Professor, Department of Mathematics & Statistics, Simon Fraser University
1994 - 1995	Senior Research Fellow (Visiting), Jesus College, Oxford
1987 - 1993	Associate Professor, Mathematics & Statistics, Simon Fraser University
1987 - 1988	Associate Professor, Department of Statistics, University of Toronto
1986 - 1987	Assistant Professor (Visiting), Statistics & Actuarial Science,
	University of Waterloo
1979 - 1987	Assistant Professor, Statistics, Mathematics, Simon Fraser University
1979 Feb – Aug	NSERC Post-doctoral Fellow, Centre de Recherche Mathématiques,
Ŭ	Université de Montréal

Other Academic and Research Employment History

- 1978 Research Assistant, Lawrence Berkeley Laboratories, Analysis of Energy Forecasting Models
- 1975 NSERC Undergraduate Research Award. Jim Zidek and Donald Ludwig supervisors. Lions Gate Bridge load forecasting; applied mathematics conference notetaker. I suspect this was not NSERC funding in the same way these USRAs work now.

Awards, Honours and Scholarships

Fellow of the Royal Society of Canada, 2018.

Beaufort Visiting Fellowship, St. John's College, Cambridge. 2017.

BC Sugar Achievement Award, SFU, 2016.

Gold Medal. Statistical Society of Canada. 2015.

Fellow of the Institute of Mathematical Statistics. 2014.

Fellow of the American Statistical Association. 2013.

Statistical Society of Canada Service Award. 2002.

Visiting Senior Research Fellowship, Jesus College, Oxford, 1994–1995.

Elected member, International Statistical Institute, 1991.

R. D. James Gold Medal in Mathematics, University of British Columbia, 1975.

RESEARCH

PUBLICATIONS

Refereed Journals

- Contreras, A., Lockhart, R. A., Stephens, M. A. & Sun, Zheng. (2019). On the use of priors in goodness-of-fit tests. *The Canadian Journal of Statistics*, accepted Feb 2019.
- Sun, Zheng & Lockhart, R. A. (2019). Bayesian optimality for Beran's class of tests of uniformity around the circle. *Journal of Statistical Planning and Inference*, **198**, 79–90.
- Peijun Sang, Jiguo Cao, & Richard Lockhart (2018). Sparse estimation for functional semiparametric additive models. *Journal of Multivariate Analysis*, 168, 105–118.
- Golchi, Shirin & Lockhart R. A. (2018). A frequency-calibrated Bayesian search for new particles, Annals of Applied Statistics, 12, 1939–1968.
- Ryan J. Tibshirani, Jonathan Taylor, Richard Lockhart, & Robert Tibshirani. (2016). Exact Post-Selection Inference for Sequential Regression Procedures, *Journal of the American Statistical Association*, **111**, 600–628.
- Béliveau, Audrey, Lockhart, Richard A., Schwarz, Carl J., & Arndt, Steven K. (2015). Aerial-Access Creel Surveys with Incomplete Matching of Aerial and Access Components, *Biometrics*, 71, 1050–1059.
- Lockhart, R. A., Taylor, J., Tibshirani, R. J. & Tibshirani, R. (2014). A significance test for the lasso. With discussion. Annals of Statistics, 42, 413–531 (article 413–468, discussion 469–517, rejoinder 518–531).
- del Castillo, J., Daoudi, J., & Lockhart R. A. (2014). Methods to Distinguish Between Polynomial and Exponential Tails. Scandinavian Journal of Statistics, 41, 382–393.
- Heckman, N, Lockhart, R. A. & Nielsen, J. D. (2013). Penalized Regression, Mixed Effects Models and Appropriate Modelling. *Electronic Journal of Statistics*, 7, 1517–1552.
- 10. Lockhart, R. A. (2012). Conditional Limit Laws for Goodness-of-Fit Tests. Bernoulli, 18, 857–882.
- Linkletter, C. D., Ranjan, P., Lin, C. D., Bingham, D. R., Brenneman, W. A., Lockhart, R. A. & Loughin, T. M. (2012). Compliance testing for random effects models with joint acceptance criteria. *Technometrics*, 54, 243–255.

- M. Dylan Tisdal, Richard A. Lockhart & M. Stella Atkins. (2011). The bias / variance trade-off in estimators for MR signal magnitude. *Magnetic Resonance in Medicine*, 66, 1456–1467. DOI: 10.1002/mrm.22910.
- Chiu, G. & Lockhart, R. A. (2010). Bent-cable regression with autoregressive noise. The Canadian Journal of Statistics, 38, 386–407.
- 14. Lockhart, R. A. & Spinelli, J. J. (2009). The life and work of Michael A. Stephens: a conversation with Richard A. Lockhart and John J. Spinelli. *Journal of Statistical Theory and Practice*, **3**, 751–762.
- 15. Lockhart, R. A., O'Reilly, F. J. & Stephens, M. A. (2009). Exact conditional tests and approximate bootstrap tests for the von Mises distribution. *Journal of Statistical Theory and Practice*, **3**, 543–554.
- Hu, X. J., Lagakos, S. & Lockhart, R. A. (2009). Marginal analysis of panel counts through estimating functions. *Biometrika*, 96, 445–456.
- Hu, X. J., Lagakos, S. & Lockhart, R. A. (2009). Generalized least squares estimation with panel counts. *Statistica Sinica*, 19, 561–580.
- Borwein, P., Erdelyi, T., Ferguson, R., & Lockhart, R. A. (2008). On the zeros of cosine polynomials: solution to a problem of Littlewood. Annals of Mathematics, 167, 1109–1117.
- Jeske, D., Lockhart, R. A., Stephens, M. A., & Zhang, Q. (2008). Cramer-von Mises tests for the Compatibility of Two Software Environments. *Technometrics*, 50, 53–60.
- 20. Tisdall, M. D., Atkins, M. S., and Lockhart, R. A. (2007). Maximum Likelihood Estimators in Magnetic Resonance Imaging. Presented at the International conference Information Processing in Medical Imaging (IPMI) 2007, Springer-Verlag Lecture notes in Computer Science, LNCS 4584, 434-445. [NOTE: I only realized this was different than the 2011 paper above in 2019.]
- Lockhart, R. A., Spinelli, J. J., & Stephens, M. A. (2007). Cramér-von Mises statistics for discrete distributions with unknown parameters. *The Canadian Journal of Statistics*, 35, 125–133.
- Lockhart, R. A., O'Reilly, F. J., & Stephens, M. A. (2007). Use of the Gibbs Sampler to obtain conditional tests, with applications. *Biometrika*, 94, 992–998.
- Lockhart, R. A. & Perera, C. W. (2006). Testing normality in designs with many parameters. *Technometrics*, 48, 436–444.
- Chiu, Grace, Lockhart, R. A., & Routledge, R. R. (2006). Bent-Cable Regression Theory and Applications. Journal of the American Statistical Association, 101, 542–553.
- 25. Chiu, Grace, Lockhart, R. A., & Routledge, R. D. (2005). Asymptotic theory for bent cable regression—the basic case. *Journal of Statistical Planning and Inference*, **127**,143–156.
- Lockhart, R. A. & O'Reilly, F. J. (2005). A note on Moore's Conjecture. Statistics & Probability Letters, 74, 212–220.
- Anderson, T. W., Lockhart, R. A., & Stephens, M. A. (2004). An Omnibus Test for the Time Series Model AR(1). Journal of Econometrics, 118, 111–127.
- Chiu, Grace, Lockhart, R. A., & Routledge, R. R. (2002). Bent-cable Asymptotics when the Bend is Missing. Statistics and Probability Letters, 59, 9–16.
- Genest, Christian, Lockhart, R. A., & Stephens, M. A. (2002). Chi-square and the lottery. Journal of the Royal Statistical Society, Series D, 51, 243–257.

- Chen, Gemai, Lockhart, R. A., & Stephens, M. A. (2002). Large Sample Theory for Box-Cox Transformations in Linear Models (With discussion. Read March 22, 2002, in the read paper series of The Canadian Journal of Statistics). The Canadian Journal of Statistics, 30, 177–234.
- Chen, Gemai & Lockhart, R. A. (2001). Weak convergence of the empirical process of residuals in linear models with many parameters. Annals of Statistics, 29, 748–762.
- Spinelli, J. J., Lockhart, R. A., & Stephens, M. A. (2002). Tests for the response distribution in a Poisson regression model. *Journal of Statistical Planning and Inference*, 108, 137–154.
- 33. Borwein, Peter & Lockhart, R. A. (2001). The Expected L_p Norm of Random Polynomials. Proceedings of the American Mathematics Society, **129**, 1463–1472.
- Kulperger, R. J. & Lockhart, R. A. (1998). Tests of Independence in Time Series. Journal of Time Series Analysis. 19, 165–185.
- Chen, Gemai & Lockhart, Richard A. (1997). Box-Cox transformed linear models: A parameter-based asymptotic approach. *The Canadian Journal of Statistics*, 25, 531–543.
- Lockhart, R. A. & Stephens, M. A. (1994). Goodness-of-fit for the three parameter Weibull. Journal of the Royal Statistical Society, Series B, 56, 491–500.
- Choulakian, V., Lockhart, R. A., & Stephens, M. A. (1994). Cramér-von Mises Statistics for discrete distributions. *The Canadian Journal of Statistics*, 22, 125–137.
- Lockhart, R. A. & Swartz, T. B. (1992). Computing Asymptotic P-values for EDF tests. Statistics and Computing, 2, 137–141.
- 39. Lockhart, R. A. (1991). Overweight Tails are Inefficient. Annals of Statistics, 19, 2254–2258.
- Guttorp, P. & Lockhart, R. A. (1989). Estimation in sparsely sampled random walks. Stochastic Processes and their Applications, 31, 315–320.
- Guttorp, P. & Lockhart, R. A. (1989). On the asymptotic distribution of high order spacings statistics. The Canadian Journal of Statistics, 17, 419–426.
- Guttorp, Peter & Lockhart, Richard A. (1988). Finding the location of a signal: a Bayesian Analysis. Journal of the American Statistical Association, 83, 322–330.
- Guttorp, P. & Lockhart, R. A. (1988). On the asymptotic distribution of quadratic forms in uniform order statistics. Annals of Statistics, 16, 433–449.
- Meester, S. G. & Lockhart, R. A. (1988). Testing for normal errors in designs with many blocks. Biometrika, 75, 569–575.
- 45. Berger, G. W., Kuo, J. & Lockhart, R. A. (1987). Regression and error analysis applied to the doseresponse curves in thermoluminescence dating. *Int. J. Radiat. Appl. Instrum.*, Part D, **13**, 177–184.
- McLaren, C. G. & Lockhart, R. A. (1987). On the asymptotic efficiency of certain correlation tests of fit. The Canadian Journal of Statistics, 15, 159–168.
- Lockhart, R. A., O'Reilly, F. J., & Stephens, M. A. (1986). Tests for the extreme value and Weibull distributions based on normalized spacings. *Naval Research Logistics Quarterly*, 33, 413–421.
- Lockhart, R. A., O'Reilly, F. J. & Stephens, M. A. (1986). Tests of fit based on normalized spacings. Journal of the Royal Statistical Society, Series B, 48, 344–352.
- Guttorp, P., Kulperger, R., & Lockhart, R. A. (1985). Coupling Proofs of Weak Convergence. Journal of Applied Probability, 22, 447–453.

- Lockhart, R. A. & McLaren, G. C. (1985). Asymptotic Points for a Test of Symmetry about a Specified Median. *Biometrika*. 72, 208–210.
- Lockhart, R. A. & Stephens, M. A. (1985). Tests of Fit for the von-Mises Distribution. *Biometrika*, 72, 647–652.
- 52. Lockhart, R. A. (1985). The Asymptotic Distribution of the Correlation Coefficient in Testing Fit to the Exponential Distribution. *The Canadian Journal of Statistics*, **13**, 253–256.
- Burgess, John P. & Lockhart, R. A. (1983). Classical hierarchies from a modern viewpoint. Fundamenta Mathematicae, 115, 107–118.
- Lockhart, R. A. (1982). On the non-existence of consistent estimates in Galton-Watson processes. Journal of Applied Probability, 19, 842–846.
- Zidek, James V., Navin, Francis, P. D., & Lockhart, R. A. (1979). Statistics of extremes: An alternate method with application to bridge design codes. *Technometrics*, 21, 185–191.

Refereed Book Chapters

- Summers, A., Swartz, T., & Lockhart, R. A. (2007). Optimal Drafting in Hockey Pools. In Statistical Thinking in Sports, Eds: J. Albert & R. H. Koning.
- Lockhart, R. A. & Stephens, M. A. (1998). The Probability Plot: Tests of Fit Based on the Correlation Coefficient. Chapter 16 in Handbook of statistics, vol. 17. Order Statistics: Applications, Eds: N. Balakrishnan & C. R. Rao. Elsevier: Amsterdam.

Refereed Letter to Editors

Lockhart, R. A. & Spinelli, J. J. (1990). Comments on Kinnison (1989). Refereed letter to the editor of The American Statistician, 44, 259–260.

Discussions

- Lockhart, Richard A. & Samworth, Richard J. (2017). Comments on: High-dimensional simultaneous inference with the bootstrap by Ruben Dezeure, Peter Bühlmann, & Cun-Hui Zhang. TEST, 26,4, 734-739, DOI 10.1007/s11749-017-0555-1.
- Lockhart, R. A. (2000). Discussion for Contributions of empirical and quantile processes to the asymptotic theory of goodness-of-fit tests by E. del Barrio, J. A. Cuesta-Albertos & C. Matrán in Test, 9, 81–84.

Corrections

Lockhart, R. A., Taylor, J., Tibshirani, R. J. & Tibshirani, R. (2014). Correction to Rejoinder to "Lockhart, R. A., Taylor, J., Tibshirani, R. J. & Tibshirani, R. (2014). A significance test for the lasso. With discussion. Annals of Statistics, 42, 413–531." Annals of Statistics, 42, 2138–2139.

Submitted Papers

Béliveau, Audrey; Schwarz, Carl; Lockhart, Richard; Schaub, Michael; Arlettaz, Raphaël; & Pradel, Roger. (2018) Integrated Population Modeling: Escaping The Conventional Assumption of Independence.

Unrefereed Guff, Unmitigated Crap, and Utter Nonsense

Guest-Editor's Introduction to Special Issue on Big Data and the Statistical Sciences. (2016) The Canadian Journal of Statistics.

Editor's Reports and such (2000–2002). The Canadian Journal of Statistics.

Presentations

Invited Talks

- July 2017, BIRS workshop:hallenges in the Statistical Modeling of Stochastic Processes for the Natural Sciences, Random Rambling Room-mate Research Reminiscences: 3 ± 1 Rs.
- July 2017, University of Waterloo 50th Anniversary for Department of Statistics and Actuarial Science, High dimensional regression: competing approaches.
- January to March 2017, 8 lecture series on Inference in High Dimensional Linear Models, Cambridge University.
- November 2016, Simposio de Inferencia y Modelación Estadística, CIMAT, Guanajuato, Mexico. Contiguity in High Dimensions.
- September 2016, Phystat-Nu workshop, Fermilab, Chicago. A statistician's summary.
- June 2016, International Society for Nonparametric Statistics, III, Avignon, France. Contiguity in High Dimensions
- May 2016, Statistical Society of Canada, Brock University, St. Catharines, Ontario. Gold Medal Address. Big Data, High Dimensions, Goodness-of-fit: something of this nature.
- April 2016, University of Victoria, Department of Mathematics and Statistics. Inference after model selection in high dimensional linear regression.
- September 2015, Goodness-of-fit Days; University of Athens; Athens Greece. Bayes Optimality for Goodness of Fit.
- January 2015, Theme Period in Big Data: Opening Conference; Fields Institute; Toronto. Inference after LASSO limits and limitations.
- May 2014, Advances in Directional Statistics; Université Libre de Bruxelles; Brussels Belgium. Bayes assisted goodness-of-fit for von Mises regression.
- March 2014, UBC SFU Graduate Student Workshop. Some statisticians I knew and some I didn't.
- February 2014, CMS (Compact Muon Spectrometer) Statistics Group (Large Hadron Collider at CERN). Calibrated Bayes for Detection and Exclusion in Searches. Video Link Presentation.
- September 2012, Simon Fraser University, Department of Mathematics. David Blackwell: the man and the math.
- September 2012, Simon Fraser University, Department of Statistics and Actuarial Science. David Blackwell: the man and the math.
- August 2012, Joint Statistical Meetings, San Diego. David Blackwell: Games and Measure.
- August 2012, Carleton University, Department of Mathematics and Statistics. Particle discovery in high energy physics: the role of statistics.

June 2012, SLAC, Progress on Statistical Issues in Searches. Response from a Statistician.

- February 2012, University of Virginia, Department of Statistics. Discovery: Bayes, bumps, goodness-of-fit.
- June 2010, Autonomous University of Barcelona. The Large Hadron Collider and Goodness-of-Fit.
- May 2010, DASF (Data Analysis and Statistical Foundations) III. The Large Hadron Collider and Goodness of Fit.
- November 2009, El compleanos 64 del Dr. Federico O'Reilly Togno. Conditional tests of goodness-of-fit.
- June 2009, Statistical Society of Canada. Randy Sitter: his career, his humour and his many accomplishments.
- May 2009, University of Washington. Bayes Assisted Goodness of Fit.
- April 2008, Universitat Autonoma de Barcelona. Bayes assisted goodness of fit.
- April 2008, Oxford University. Bayes assisted goodness of fit.
- April 2008, Bristol University. Bayes assisted goodness of fit.
- May 2007, UBC SFU Graduate Student Workshop. Some statisticians I knew and some I didn't.
- April 2007, Statistical Distributions and Models: Assessment and Applications: a conference to celebrate Michael Stephens' 80th Birthday. Michael (and me).
- April 2003, UBC seminar series. Bayes assisted goodness-of-fit.
- March 2002, Read Paper Series of The Canadian Journal of Statistics. Box-Cox transformations in linear models: Large sample theory and tests of normality.
- June 2000, Goodness-of-Fit 2000. Tests of normality in Box-Cox transformations.
- Spring 1995, Birmingham University. Uniform Asymptotic Approximations and Goodness-of-fit.
- Spring 1995, Heriot Watt University. Goodness-of-fit and the Box-Cox Transformation.
- April 1995, 31st Annual Gregynog Conference. Goodness-of-fit and the Box-Cox Transformation.
- February 1995, Oxford University (Fall 1994). Goodness-of-fit and the Box-Cox Transformation.
- April 1994, Discover the Possibilities, SFU. Mandatory testing: do you have CCCC?
- September 1993, Université du Québec à Montréal. Statistical Consulting at SFU.
- November 1992, Frontiers in Science: SFU. Mandatory Testing do you have CCCC?
- June 1992, Statistical Society of Canada Annual Meetings. When the ARE of ANOVA is 0.
- Spring 1990, University of British Columbia, title forgotten.
- Spring 1989, University of British Columbia, title forgotten.
- 1989, Alberta Statistics Day, title forgotten.
- November 1987, Pacific Northwest Statistics Group meeting at Simon Fraser. Shapiro-Wilk and related statistics.
- April 1987, 23rd Annual Gregynog Conference, Wales. Goodness-of-fit, quadratic forms and invariance principles.

March 1987, University of Washington. Quadratic Forms in Uniform Order Statistics.

February 1987, University of Western Ontario. Q-Q plots, goodness-of-fit and invariance principles.

February 1987 York University. Q-Q plots, goodness-of-fit and invariance principles.

November 1986, McMaster University. Quadratic forms in uniform order statistics.

October 1986, University of Western Ontario. Quadratic forms in uniform order statistics.

October 1986, University of Toronto. Quadratic forms in uniform order statistics.

September 1986, University of Waterloo. Quadratic forms in uniform order statistics.

- June 1985, Annual meeting of Stat. Soc. of Canada, University of Manitoba. Quadratic forms in goodnessof-fit testing.
- August 1984, Annual western regional meeting of Inst. of Math. Stat., Lake Tahoe, Cal. Goodness-of-fit tests based on normalized spacings.
- August 1983, Annual joint meetings of Institute of Mathematical Statistics, American Statistical Association, Statistical Society of Canada and Biometric Society, Toronto. Goodness of fit statistics with estimated shape parameters.

January 1983, University of British Columbia. Weak convergence results (coupling?).

- May 1982, Annual meeting of Stat. Soc. of Canada, University of B.C. Coupling proofs of weak convergence.
- June 1981, Western Regional Meetings: Institute of Mathematical Statistics, University of Victoria. Large Sample Theory for the Cox Model.

Funding

Research Grants

- NSERC Discovery Grant, PI. (2014 2021). "Bayes assisted frequentist model assessment and statistical inference". Awarded \$27,000 per year for 5 years; increased to \$28,000 per year in 2015; extended for 2 years due to membership on NSERC Evaluation Group.
- NSERC Accelerator Supplement, PI. (2014 2017). "Bayes assisted frequentist model assessment and statistical inference". \$40,000 per year for 3 years.
- NSERC Discovery Grant, PI. (2008 2013). "Bayes assisted goodness-of-fit". \$34,000 per year for 5 years.
- NSERC Discovery Grant, PI. (2003 2008). "Uniform asymptotic approximations". \$29,000 per year for 5 years.
- NSERC Discovery Grant, PI. (1999 2003). "Goodness-of-fit". \$21,000 per year for 4 years.
- NSERC Discovery Grant, PI. (1995 1999). "Goodness-of-fit". \$18,000 per year for 4 years.
- NSERC Discovery Grant, PI. (1992 1995). "Goodness-of-fit, many parameter problems, inference in stochastic processes". \$20,000 per year for 3 years.
- NSERC Discovery Grant, PI. (1989 1992). "Goodness-of-fit, many parameter problems, inference in stochastic processes". \$17,300 per year for 3 years.
- NSERC Discovery Grant, PI. (1986 1989). "Goodness-of-fit in survival analysis". \$12,238 per year for 3 years.

- NSERC Discovery Grant, PI. (1983 1986). "Goodness-of-fit in survival analysis". \$4,357 per year for 3 years.
- NSERC Discovery Grant, PI. (1980 1983). "Programmable set operations; estimation in pulsed nuclear magnetic resonance models, estimation of reporting rates". \$2,800 per year for 3 years.
- SFU President's Research Fund, PI. (1979 1980). \$2000.

Conference Grants

- PIMS Workshop Grant \$16,000; CANSSI Grant \$2,000; SFU Conference Fund Grant \$3,500. "Statistical Inference for Large Scale Data", Simon Fraser University, April 20–24, 2015.
- PIMS Workshop Grant \$16,000; CANSSI Grant \$2,000; SFU Conference Fund Grant \$3,500. "Big Data for Environmental Science", University of British Columbia, May 11–15, 2015.
- NSERC Conference Grant \$40,000, PI (1995). "Joint SSC/IMS Annual meetings in Montreal, June 1995. Collaboration: I wrote this grant application for the SSC in my role as program co-chair. It is only in this sense that I list myself as PI in this or other joint grants.

Equipment Grants

In the grants below the PI does almost all the work to get the grant which generally paid for upgrades to the departmental computing infrastructure.

- NSERC Equipment Grant, Co-investigator. (2007 2008). "Computer network enhancement". \$57,097. PI: McNeney, WB; Collaboration: Altman, Bingham, Dean, Graham, Lu, Parker, Routledge, Schwarz, Sitter.
- NSERC Equipment Grant, PI. (2005 2006). "Computing network enhancement". \$8,000. Collaboration: with most of the rest of the department.
- NSERC Equipment Grant, PI. (2003 2004). "Computing network enhancement". \$10,696. Collaboration: with most of the rest of the department.
- NSERC Equipment Grant, PI. (2002 2003). "Computing network enhancement". \$34,346. Collaboration: Dean, Graham, McNeney, Routledge, Schwarz, Sitter, Stephens, Swartz, Weldon.
- NSERC Equipment Grant, PI. (2001 2002). "Computing network enhancement". \$53,290. Collaboration: Dean, Graham, McNeney, Routledge, Schwarz, Sitter, Stephens, Swartz, Weldon, Wirch.
- NSERC Equipment Grant, PI. (2000 2001). "Computing network enhancement". \$51,616. Collaboration: Dean, Graham, McNeney, Routledge, Schwarz, Sitter, Stephens, Swartz, Wirch.
- NSERC Equipment Grant, PI. (1999 2000). "Computing network upgrade". \$35,277. Collaboration: Dean, Schwarz, Sitter and Swartz.
- NSERC Equipment Grant, PI. (1997 1998). "Computing network upgrade". \$42,160. Collaboration: Routledge, Swartz, Schwarz, Dean, and Sitter.
- NSERC Equipment Grant, PI. (1995 1996). "Computing network upgrade". \$32,645. Collaboration: Dean, Eaves, Parker, Routledge, Schwarz, Sitter and Swartz.
- NSERC Equipment Grant, PI. (1993 1994). "Computing network upgrade". \$47,140. Collaboration: Dean, Eaves, Routledge, Stephens, Swartz, and Weldon.
- NSERC Equipment Grant, PI. (1991 1992). "Computing network upgrade". \$33,430. Collaboration: Dean, Eaves, Routledge, Stephens, Swartz, and Weldon.

- NSERC Equipment Grant, PI. (1990 1991). "Computing network upgrade". \$17,300. Collaboration: T. Swartz.
- NSERC Equipment Grant, PI. (1989 1990). "Computing network upgrade". \$12,150. Collaboration: T. Swartz.

Infrastructure Grants

- NSERC Infrastructure Grant, (1994 1995). Larry Weldon, PI. Statistical Consulting Service, \$30,000. Co-investigators: Dean, Eaves, Routledge, Stephens, Swartz.
- NSERC Infrastructure Grant, (1993 1994). Larry Weldon, PI. Statistical Consulting Service, \$30,000. Co-investigators: Dean, Eaves, Routledge, Stephens, Swartz.
- NSERC Infrastructure Grant, (1992 1993) Robert Russell, PI. Computing Infrastructure, \$30,000. Coinvestigators: Dean, Lachlan, Lardner, Mekler, Stephens, Swartz, Trummer.
- NSERC Infrastructure Grant, (1992 1993) Larry Weldon, PI. Statistical Consulting Service, \$30,000. Co-investigators: Dean, Eaves, Routledge, Stephens, Swartz.
- NSERC Infrastructure Grant, PI, (1991 1992). Statistical Consulting Service, \$30,000. Co-investigators: Dean, Eaves, Routledge, Stephens, Swartz.
- NSERC Infrastructure Grant, (1990 1991). Larry Weldon, PI. Statistical Consulting Service, \$30,000. Co-investigators: Eaves, Routledge, Stephens, Swartz.
- NSERC Infrastructure Grant, (1989 1990). Larry Weldon, PI. Statistical Consulting Service, \$30,000. Co-investigators: Eaves, Routledge, Stephens, Swartz.
- NSERC Infrastructure Grant, (1988 1989). Larry Weldon, PI. Statistical Consulting Service, \$14,236. Co-investigators: Eaves, Routledge, Stephens.
- NSERC Infrastructure Grant, (1987 1988). Larry Weldon, PI. Statistical Consulting Service, \$14,236. Co-investigators: Eaves, Routledge, Stephens.
- NSERC Infrastructure Grant, (1986 1987). Larry Weldon, PI. Statistical Consulting Service, \$17,338. Co-investigators: Eaves, Routledge, Stephens.

Other funding

NSERC Travel Grant, 1986. Sabbatical funding for travel to the University of Waterloo, \$974.

SERVICE TO THE ACADEMIC COMMUNITY

Editorial work

- Executive Editor, Journal of Multivariate Analysis, August 2016 December 2018. This means screening editor. I read and screened about 1200 papers over this time period; I recommended about half go for review, wrote rejection letters for the Editor-in-Chief, Christian Genest, for about one quarter, and rejected the rest on my own.
- Guest Editor, special issue on Big Data and the Statistical Sciences, *The Canadian Journal of Statistics*, 2016–2017.

- Associate Editor, Journal of Statistical Theory and Practice, 2009 2018.
- Executive Editor for the Statistical Society of Canada, Statistics Surveys, 2007 2020.
- Associate Editor, The Canadian Journal of Statistics, 2004 Current.
- Associate Editor, Technometrics, 2002 2007.
- Editor, The Canadian Journal of Statistics, 2001 2003.
- Associate Editor, The Canadian Journal of Statistics, 1989 2000.
- Editor, Liaison, (Newsletter of the Statistical Society of Canada), 1988 1991.

Refereeing

- 2018: Annals of Statistics (x2), Annals of Applied Statistics, International Journal of Forecasting, Scandinavian Journal of Statistics, Computer Physics Communications, Statistical Methods and Applications
- 2017: Biometrics, Biometrika, Computer Physics Communications, Journal of the American Statistical Association, Journal of Multivariate Analysis, Statistical Science
- 2016: Annals of Statistics, Applied Stochastic Models in Business and Industry, Bernoulli, Journal of the American Statistical Association, Journal of the Royal Statistical Society (Series B), Statistical Science
- 2015: Advances in Data Analysis and Classification, Annals of Statistics (x2), Australia and New Zealand Journal of Statistics, Austrian Science Fund grant, Computational Statistics and Data Analysis, Journal of the American Statistical Association, Metrika, SORT, Statistical Science, Stochastic Processes and Applications
- 2014: Bernoulli, Biometrika, Computational Statistics and Data Analysis, International Statistical Review (x2), Journal of the American Statistical Association, Journal of Multivariate Analysis, NSERC grant (x2), Swiss National Science Foundation Grant, Statistical Science, Statistical Methodology, Statistical Papers
- 2013: Annals of Statistics (x2), Bernoulli, Biometrika, Biostatistics, Computer Physics Communications, Journal of Multivariate Analysis, Journal of Quantitative Analysis in Sports, Statistical Inference for Stochastic Processes
- 2012: Communications in Statistics (x2), NSERC grant, Research Synthesis Methods
- 2011: Journal of the American Oil Chemists' Society, Journal of the American Statistical Association, NSERC grant, R Journal
- 2010: American Statistician, Communications in Statistics Simulation and Computation
- 2009: Environmetrics, Journal of Statistical Planning and Inference, MITACS grant, Statistica Sinica, TEST
- 2008: American Journal of Mathematical and Management Sciences, Communications in Statistics: Theory and Methods, Computational Statistics and Data Analysis, FQNTR grant, Journal of Multivariate Analysis, Metrika, Statistical Methodology,
- 2007: NSERC grant, Journal of the American Statistical Association, Communications in Statistics (x2), Statistics and Probability Letters, Insurance: Mathematics and Economics.
- 2006: NSERC, Annals of the Institute of Statistical Mathematics, Biometrika

- 2005: Statistics, The Canadian Journal of Statistics, Annals of Statistics, Statistics and Computing, NSERC, Journal of Discrete Algorithms, TEST.
- 2004: Journal of Multivariate Analysis, Statistics and Computation, IEEE Transactions on Signal Processing, Journal of Econometrics, Insurance: Mathematics and Economics, NSERC
- 2003: Journal of the American Statistical Association, Journal of Statistical Computation and Simulation, Statistics in Medicine, Computational Statistics and Data Analysis
- 2002: Journal of Statistical Planning and Inference, Statistics and Probability Letters, Technometrics
- 2001: Journal of Statistical Computation and Simulation, NSERC
- 2000: Bernoulli, Technometrics, Statistics and Probability Letters, Journal of Statistical Planning and Inference, NSERC
- 1999: Communications in Statistics, Journal of Statistical Computing and Graphics, Journal of the Royal Statistical Society, Technometrics
- 1998: NSERC, FCAR, Journal of the Royal Statistical Society (Series B), Annals of Statistics
- 1997: Annals of Statistics, Computational Statistics and Data Analysis, Journal of the Royal Statistical Society (Series B), Journal of Statistical Planning and Inference, Journal of Multivariate Analysis, FCAR, NSERC
- 1996: Linear Algebra and its Applications, Publicationes Mathematicae Debrecen, Journal of Statistical Planning and Inference, Annals of Statistics, Technometrics, The American Statistician, NSERC (4 reports Dec 1996)
- 1995: Annals of Statistics, Technometrics, Canadian Journal of Statistics, Journal of Econometrics, Australian Journal of Statistics, NSERC (2 reports Dec 1995)
- 1992: Journal of the Royal Statistic Society, Journal of Statistical Computation, ACM Transactions on Modelling & Computer Simulation, American Statistician, Technometrics (x2)
- 1991: Communications in Statistics
- 1979 1990: Some forgotten but: American Statistician, Annals of Statistics, Biometrics, Biometrika, Canadian Journal of Statistics, Communications in Statistics, Journal of the American Statistical Association, Journal of Multivariate Analysis, Journal of Statistical Computation and Simulation, Journal of the Royal Statistical Society, Technometrics

Promotion and Tenure Reviews

- 2018, Promotion and Tenure, Canadian university.
- 2017, Reviewer, Promotion to Professor, Canadian University.
- 2016, Reviewer, Promotion to Professor, Canadian University.
- 2016, Reviewer, Tenure, French Research Institute.
- 2014, Reviewer, Promotion to Professor, Canadian University.
- 2014, Reviewer, Appointment as Chair and Professor, Canadian University.
- 2013, Reviewer, Promotion to Professor, Canadian University.
- 2013, Reviewer, Promotion to Professor, US University.

- 2011, Reviewer, Promotion to Professor, Australian University.
- 2010, Reviewer, Tenure, Canadian University.
- 2010, Reviewer, Promotion to Professor, Canadian university.
- 2010, Reviewer, Promotion and Tenure, Canadian university.
- 2010, Reviewer, Promotion and Tenure, Canadian university.
- 2009, Reviewer, Promotion to Professor, Canadian university.
- 2007, Reviewer, Promotion, Canadian University.
- 2007, Reviewer, Promotion, Canadian University.
- 2006, Reviewer, Promotion and Tenure, Canadian University.
- 2006, Reviewer, Promotion, University of California.
- 2006, Reviewer, Promotion, Washington State University.
- 2005, Reviewer, Tenure Promotion, Canadian University.
- 2005, Reviewer, Promotion, Middle Eastern University.
- 2004, Reviewer, Appointment to Research Chair, Canadian University.
- 2003, Reviewer, Tier 1 CRC, Canadian University.
- 1999, Reviewer, Promotion and Tenure, Canadian University.
- 1999, Reviewer, Promotion to Professor, Canadian university.
- 1998, Reviewer, Research Award, Canadian University.
- 1995, Reviewer, Promotion and Tenure, Canadian University.

Program and Department Reviews

- 2019, Member of External Review Committee, Department of Computing, Mathematics, Physics, and Statistics, University of British Columbia Okanagan.
- 2018, Member of Committee conducting Cyclical Program Review, Department of Mathematics and Statistics, Queen's University.
- 2014, Member of External Review Committee, Programs in the département de mathématiques et de statistique at l'Université de Montréal.
- 2011, Committee Member, Review of Baccalauréat programme in Département de mathématiques et statistiques, Université Laval.
- 2011, Member of Committee Reviewing Department of Mathematics and Statistics, University of Victoria.

Advisory Committees

 Member, Natural Sciences and Engineering Research Council of Canada Evaluation Group # 1508 (Mathematical Sciences), 2017 – 2020.

- Member, Advisory Committee on Statistical Methodology to Statistics Canada, July 1998 2012.
- Member, Scientific Advisory Panel to the Centre de Recherches Mathématiques, 2003 2006.
- College of Reviewers for the Canada Research Chairs Program, Government of Canada, 2000 2002.
- Member, ASA Advisory Committee to the Energy Information Agency, 1991 1996.
- Served on committee to select a new editor for the IMS bulletin, Committee of the Institute of Mathematical Statistics, 1995 1995.
- Chair, Natural Sciences and Engineering Research Council of Canada Grant Selection Committee # 338 (Mathematics and Statistical Sciences Equipment), 1993 – 1994.
- Member, Natural Sciences and Engineering Research Council of Canada Grant Selection Committee # 14 (Statistical Sciences), 1991 – 1994.

Conference organization

- Co-organizer (with Peter Craigmile, Ohio State; Wendy Meiring, UC Santa Barbara; Vladimir Minin, University of Washington; Debashis Mondal, Oregon State; Paul Sampson, University of Washington): Banff International Research Station Workshop on "Challenges in the statistical modeling of stochastic processes for the natural sciences." July 10 to 14, 2017.
- Organizer (with C. B. Dean, Western; P. Guttorp, U Washington; Will Kleiber, U Colorado; Bo Li, U Illinois; S. Sain, The Climate Corp; and J. V. Zidek, UBC): Workshop on Big Data in Environmental Science; University of British Columbia. May 11 to 15, 2015.
- Organizer (with Nicolai Meinshausen, ETH Zurich): Workshop on Statistical Inference for Large Scale Data; Simon Fraser University. April 20 to 24, 2015.
- Member, organizing committee for "Fields Institute Thematic Program Statistical Inference, Learning, and Models for Big Data". Nancy Reid, chair. 2014-2015.
- Co-organizer (with Louis Lyons, Oxford, and Jim Linnemann, Michigan State University): Banff International Research Station Workshop on "Statistical issues relevant to significance of discovery claims". July 11 to July 16, 2010.
- Program Chair, Statistical Society of Canada Annual Meeting 2006; June 2004 June 2006.
- Moderator, Young Researchers Panel Discussion, WNAR/IMS western regional meetings; Seattle WA; June 28, 1999.
- Workshop organizer: Organizing workshop on applications of spatial statistics in the earth, environmental and health sciences for a Centre de Recherches Mathématiques theme year in statistics, Centre de Recherches Mathématiques, 1996 1998.
- Local Arrangements Chair: 7th International Meeting on Statistical Climatology, 1996 1998.
- Program Sub Chair for the SSC, SSC / IMS joint meetings in Montreal in June 1995, 1994 1995.
- Member, Program Committee for Special SSC Workshop on Likelihood Methods in Applications, 1989.

Session Organizer

May 2010. Annual General Meetings of Statistical Society of Canada. Panel Discussion, National Institute in Statistics, co-organizer with Charmaine Dean May 2008. SSC-SSdF: SSC annual meetings. Session on "Model assessment and goodness of fit". June 1989. SSC Annual Meetings. Organized workshop on Generalized Additive Models

Statistical Society of Canada activities

Executive

Chair Joint Meetings Advisory Committee, SSC / ASA / IMS / WNAR / ENAR, 1999.

Member, Joint Meetings Advisory Committee: a joint committee of the ASA, IMS, WNAR, ENAR and SSC to manage the Joint Meetings agreement of those societies, 1997 – 1999.

Past President, Statistical Society of Canada 1997 - 1998.

President, Statistical Society of Canada, 1996 – 1997.

Member, Committee of Presidents of Statistical Societies, 1995 – 1998.

President Elect, Statistical Society of Canada, 1995 – 1996.

Committee Work

President-Elect, President, Past-President, Probability Section, July 2016 – June 2019.

Chair, CJS Prize Committee, July 2014 – June 2017.

Convenor, Committee of Chairs, Directors and Heads of Statistics at Canadian Universities and Colleges – informal group meeting annually at the SSC meetings. 2010–2012.

Secretary, Probability Section, 2007 – 2010.

Member of ad hoc committee to find publisher for The Canadian Journal of Statistics, 2007 – 2008.

Member, Awards Committee, 2004 – 2008.

Member, CRM-SSC Prize Committee, 2004 – 2008.

Member, Program Committee, July, 2007.

Member, Electronic Publications Committee, 2005 – 2006.

Chair, Pierre Robillard Award Committee, 2004 – 2005.

Member: Publications Committee, 2000 - 2004.

Chair, Editorial Search Committee for *Liaison*, 1999 – 2000.

Member, Pierre Robillard Award Committee, 1999 – 2000.

Chair, Awards Committee, 1998 – 1999.

Chair, Elections Committee, 1997 – 1998.

Chair, ad hoc committee on the editorship of Liaison, 1995 – 1995.

Member, Bilingualism Committee, 1991 – 1993.

Member, Publications Committee, 1991 – 1993.

Chair, Statistical Education Committee, 1989 – 1990.

Service to Other Statistical Societies

2018-2021, Elected member, Council of the Institute of Mathematical Statistics.

TEACHING AND SUPERVISION

Senior Supervisory Duties of a Thesis/Dissertation/or Major Project

Name	Degree	Project/Thesis Title	Date		
Ruth, Will	Ph.D.	TBD	In prog		
Yang, Yuping	Ph.D.	D. TBD			
	Note: Co-supervisor with Jiguo Cao.				
Zhou, Zhiyang	Ph.D.	TBD	In prog		
Qiu, Derek	M.Sc.	An Applied Analysis of High-Dimensional	2017		
		Logistic Regression			
Béliveau, Audrey	Ph.D.	Contributions to Wildlife Population Surveys	2015		
	No	ote: Co-supervisor with Carl Schwarz.			
Golchi, Shirin	Ph.D.	Bayesian Computational Methods and	2014		
		Applications			
	Note: Co-si	pervisor with Derek Bingham, Dave Campbell,			
	and Hug	h Chipman. Moving to McGill, Biostatistics,			
	Epidem	niology and Occupational Health, Fall 2019			
Sun, Zheng	Ph.D.	Model assessment: Bayes assisted tests and tests	2014		
		for discrete data			
	Note: Co-	supervisor with Michael Stephens. Faculty at			
		University of the Fraser Valley			
Sayre, Eric	Ph.D.	Variable weighted ultrametric optimization for	2009		
		mixed-type data: continuous, ordinal, nominal,			
		binary symmetric and binary asymmetric			
		Note: Statistical Consultant			
Qian, Wei	M.Sc.	Goodness-of-fit: a comparison of parametric	2009		
		bootstrap and exact conditional tests			
Bentley, John	M.Sc.	Modelling circular data using a mixture of von	2006		
		Mises and uniform distributions			
Lo, Shiu	M.Sc.	Generalized autoregressive conditional	2003		
		heteroscedastic (GARCH) time series models.			
		Note: Faculty at Langara College.			
Chiu, Grace	Ph.D.	Bent-Cable Regression for Assessing Abruptness	2002-2		
		of Change			
	Note: Co	-supervisor with Rick Routledge. Grace Chiu			
	won the Pierre Robillard Award for the best PhD thesis in				
	the Sta	atistical Sciences in 2002. Now at CSIRO.			
Yin, Ruihua	M.Sc.	Computer Network Traffic Analysis	2000		
Chan, Eva	M.Sc.	Regression and Quantile Regression Modelling of	2000		
		Census Data	4005		
Butler, Kenneth	Ph.D.	Some problems in paired comparisons and	1997		
		goodness-of-fit for logistic regression			
Note: Faculty at University of Toronto Scarborough					

Perera, Chandanie	Ph.D.	Statistical Analysis of Thermoluminescence 19		
		Experiments for Sedimentary Dating		
	Note: Faculty at the Open University in Sri Lanka.			
Hu, Karen	M.Sc.	Machine Recognition of Handwritten Characters	1994	
Waweru, J	M.Sc.	A Statistical Analysis of the African Armyworm	1993	
		Moth (Spodoptera Exempta)		
Perera, Chandanie	M.Sc.	Estimation and Tests of Fit for Two Component	1992	
		Weibull Mixtures		
	Note: Fa	aculty at the Open University in Sri Lanka.		
Wu, J	M.Sc.	Proportional Logistic Regression Analysis of a	1992	
		Forestry Data Set		
Chen, G	Ph.D.	Empirical Processes of Residuals: Theory and	1991	
		Applications		
	No	ow Professor at University of Calgary		
MacNab, Ying	M.Sc.	An Analysis of Some Anthropometric Data	1991	
Kuo, J	M.Sc.	Statistical Analysis of the Partial Bleaching	1986	
		Method of Thermoluminescence Dating of		
		Sedimentary Rock		
Meester, S	M.Sc.	Testing for Normally Distributed Errors in Block	1986	
		Design Experiments		
Ng, S	M.Sc.	Statistical Analysis of Bluegill Sunfish Data	1986	
		Using Linear Logistic Regression		
Hutchinson, Dora	M.Sc.	Modern Developments in Chi-Square	1983	
		Goodness-of-Fit Testing		
Janicot, Luc	M.Sc.	Large sample properties of the Cox technique in	1981	
		survival analysis		
· · · · · · · · · · · · · · · · · · ·				

Thesis examination in my department: those I can remember as of 2019.

- Ran Wang, M.Sc. Examiner. Understanding Multicollineariy in Bayesian Model Averaging with BIC Approximation. Simon Fraser University, 2018.
- Michael Grosskopf, Ph.D. Internal-External examiner. Bayesian methodology for latent function modeling in applied physics and engineering, 2017.
- Oksana Chkrebtii, Ph.D. Internal-External examiner. Probabilistic solution of differential equations for Bayesian uncertainty quantification and inference. Simon Fraser University, 2013.
- Lu Wang, M.Sc. Examiner. Analysis of Clustered Event Times with Right-Censoring, Simon Fraser University, 2013.
- Kasra Yousefi, M.Sc. Examiner. A Bayesian Spatial Hierarchical Model for Putting in Golf, Simon Fraser University, 2013.
- Henry Yuen, M.Sc. Examiner. Stochastic Modeling of Economic Variables for Pension Plan Projections, Simon Fraser University, 2011.
- Elizabeth Juarez-Colunga, Ph.D. Internal-External examiner. Recurrent Event Studies: Efficient Panel Designs and Joint Modeling of Events and Severities. Simon Fraser University, 2011.
- Zhong Wan, M.Sc. Examiner. Modeling Investment Returns With A Multivariate OrnsteinUhlenbeck Process, Simon Fraser University, 2010.

Natalia Lysenko, M.Sc. Examiner Stochastic Analysis of Life Insurance Surplus, Simon Fraser University, 2006.

Jason Loeppky, M.Sc. Examiner. Ranking Non-Regular Designs, Simon Fraser University, 2004.

Thesis examination outside of department

- Navid Ghadermarzy, Ph.D. (Mathematics) External examiner. Near-optimal sample complexity for noisy and 1-bit tensor completion. University of British Columbia, 2018.
- Belshaw Adrian, Ph.D. (Mathematics) Internal-External examiner. Strong Normality, Modular Normality, and Flat Polynomials: Applications of Probability in Number Theory and Analysis. Simon Fraser University, 2013.
- Dylan Tisdall, Ph.D. Internal-External examiner. Development and validation of algorithms for MRI signal component estimation. Simon Fraser University, 2007.
- Richard Lenton, Ph.D. External Examiner. The power of categorical goodness-of-fit test statistics. Griffith University, 2007.
- Jean-François Quessy, Ph.D. External Examiner. Méthodologie et application des copules: tests d'adéquation, tests d'indépendance, et bornes pour la valeu-à-risque. Université Laval, 2005.
- Xuecheng Liu, Ph.D. External Examiner. Nonparametric Estimation with Censored Data: a Discrete Approach. McGill University, 2005.
- Michelle McDougall, M.Sc. External Examiner. A Quantile Distribution Approach to the One-sample Location Problem. Deakin University, 2004.
- Azmeri Khan, Ph.D. External Examiner. ANOVA Procedures with Quantile Error Distribution. Deakin University, 2003.
- Michael Steele, Ph.D. External Examiner. The power of categorical goodness-of-fit test statistics. Griffith University, 2002.

Wilfred Rosenbaum, Ph.D. Computing Science / Epidemiology. Simon Fraser University, 1997.

- Chunzhang Wu, Ph.D. External Examiner. First Passage Laws Derivation, Estimation and Applications. McGill University, 1996.
- Zhenlin Yang, Ph.D. External Examiner. Inference Following Box-Cox Transformation. University of Alberta, 1992.

Courses Given

Semester	Course	Number	Type	Enrolment
2019-1	Stochastic Processes	STAT 380	Lecture	28
2018-3	Statistical Theory I	STAT 830	Lecture	24
2018-3	Statistical Theory	STAT 450	Lecture	12
2018-1	Stochastic Processes	STAT 380	Lecture	20
2017-3	Statistical Theory	STAT 450	Lecture	9
2017-3	Applied Time Series Analysis	STAT	70	
		485/685		
2016-1	Stochastic Processes	STAT 380	Lecture	35
2015-3	Statistical Theory	STAT 450	Lecture	35
2015-3	Chance and Data Analysis	STAT 100	Lecture	180

2015-1	Introduction to Probability and Statistics	STAT 270	Lecture	20
			Looudio	30
2014-3	Chance and Data Analysis	STAT 100	Lecture	192
2014-3	Intermediate Probability and Statistics	STAT 285	Lecture	51
2013-3	Statistical Theory I	STAT 830	Lecture	16
2013-2	Applied Probability Models	STAT 870	Lecture	6
2012-3	Statistics	STAT 801	Lecture	11
2012-3	Statistics: Selected Topics	STAT 890	Lecture	1
2012-1	Introduction to Statistics	STAT 101	Lecture	96
2011-3	Statistics: Selected Topics	STAT 890	Lecture	17
2011-2	Applied Probability Models	STAT 870	Lecture	5
2009-3	Time Series Analysis	STAT 804	Lecture	17
2009-1	Reading	STAT 895	Directed Studies	1
2008-3	Reading	MATH 895	Directed Studies	1
2008-3	Applied Probability Models	STAT 870	Lecture	16
2008-2	Linear Models	STAT 350	Lecture	26
2006-3	Applied Probability Models	STAT 870	Lecture	20 16
2000-3	Statistics: Salactad	STAT 890	Lecture	10
2000-3	Time Series Analysis	STAT 804	Lecture	4
2000-1	Directed Studies	STAT 405	Directed Studies	י 1
2005-3	Directed Studies Probability and Statistics	STAT 495 STAT 405	Directed Studies	1
2005-3	Applied Probability Models	STAT 495 STAT 870	Directed Studies	1
2000-1	Applied Flobability Models	STAT 010 STAT 201	Locture	1 991
2004-3	Applied Drobability Medela	STAT 201 STAT 970	Lecture	10
2004-5	Applied Probability Models	SIAI 870	Lecture	12
2004-1		SIAI 801	Lecture	9
2004-1	Time Series Analysis	SIAI 804	Lecture	0 10
2002-3	Statistical Theory	STAT 450	Lecture	10
2002-3	Statistical I neory	SIAI 450	Lecture	(8
2002-3	Multivariate Analysis	STAT 802	Lecture	(05
2002-1	Stochastic Processes	STAT 380	Lecture	25
2002-1	Stochastic Processes	STAT 380	Tutorial	18
2002-1	Stochastic Processes	STAT 380	Tutorial	7
2001-3	Time Series Analysis	STAT 804	Lecture	7
2001-1	Statistics	STAT 801	Lecture	6
2001-1	Reading	STAT 894	Directed Studies	1
2000-3	Stochastic Processes	STAT 380	Lecture	18
2000-3	Stochastic Processes	STAT 380	Tutorial	18
2000-3	Applied Probability Models	STAT 870	Lecture	7
2000-1	Statistics	STAT 801	Lecture	11
1999-3	Statistical Theory	STAT 450	Lecture	24
1999-3	Statistical Theory	STAT 450	Tutorial	24
1999-3	Time Series Analysis	STAT 804	Lecture	9
1999-1	Linear Models	STAT 350	Lecture	15
1999-1	Linear Models	STAT 350	Tutorial	15
1998-3	Statistics	STAT 801	Lecture	9
1998-2	Reading	MATH 894	Directed Studies	1
1998-1	Applied Statistics I	STAT 330	Lecture	33
1998-1	Applied Statistics I	STAT 330	Tutorial	33
1998-1	Multivariate Anal.	STAT 802	Lecture	12
1997-3	Time Series Analysis	STAT 804	Lecture	10
1997 - 1	Linear Models	STAT 350	Tutorial	15

1997 - 1	Linear Models	STAT 350	Lecture	15
1996-3	Linear Models in Applied Statistics I	STAT 330	Lecture	30
1996-3	Linear Models in Applied Statistics I	STAT 330	Tutorial	19
1996-3	Linear Models in Applied Statistics I	STAT 330	Tutorial	11
1996-3	Statistical Theory	STAT 450	Lecture	19
1996-3	Statistical Theory	STAT 450	Tutorial	19
1996-3	Mathematical Statistics	STAT 801	Lecture	3
1996-2	Probability Models	STAT 280	Directed Studies	1
1996-2	Statistical Analysis of Sample Surveys	STAT 410	Lecture	25
1996-2	Statistical Analysis of Sample Surveys	STAT 410	Tutorial	25
1995-3	Linear Models in Applied Statistics I	STAT 330	Lecture	18
1995-3	Linear Models in Applied Statistics I	STAT 330	Tutorial	18
1995-3	Time Series Analysis	STAT 804	Lecture	9
1994-1	Mathematical Statistics	STAT 801	Lecture	3
1993-3	Time Series Analysis	STAT 804	Lecture	9
1993-1	Statistics	STAT 801	Lecture	13
1992-1	Applied Probability Models	MATH 871	Lecture	
1992-1	Multivariate Analysis	STAT 802	Lecture	3
1991-3	Time Series Analysis	STAT 804	Lecture	6
1991-2	Statistical Consulting I	STAT 811	Seminar	2
1991-1	Introduction to Stochastic Processes	STAT 380	Lecture	9
1991-1	Introduction to Stochastic Processes	STAT 380	Tutorial	g
1991-1	Probability Theory	STAT 480	Directed Studies	1
1991-1	Multivariate Analysis	STAT 802	Lecture	4
1990-3	Statistical Theory	STAT 450	Lecture	18
1990-3	Statistical Theory	STAT 450	Tutorial	18
1990-3	Statistics	STAT 801		3
1990-2	Introduction to Probability & Statistics	STAT 270	Lecture	51
1990-2	Linear Models in Applied Statistics	STAT 330	Lecture	11
1990-2	Statistical Consulting I	STAT 811	Lecture	9
1990-2	Statistical Consulting I	STAT 812	Lecture	2
1000-2	Probability I	MATH 872	Seminar	1
1000-1	Introduction to Statistics - B	STAT 102	Lecture	81
1000 1	Timo Sorios Analysis	STAT 804	Lecture	19
1080.2	Roading	MATH 805	Directed Studies	12
1989-2	Reading	MATH 895	Directed Studies	1
1080-2	Statistical Consulting I	STAT 811	Lecture	5
1080-1	Introduction to Probability & Statistics	STAT 270	Lecture	74
1080-1	Probability Theory	STAT 480	Lecture	3
1088 3	Applied Probability Models	STAT 280	Lecture	0
1086.0	Job Prostigum I	MATH 226	Dreatioum	9 1
1086.2	Job Practicum II	MATH 227	Prostigum	2
1086.2	Job Practicum IV	MATH 427	Prostigum	ວ ຈ
1980-2	Introduction to Statistics Λ	MATH 101	Distance Education	45
1086 1	Introduction to Statistics A	MATH 101	Locturo	108
1086 1	Job Practicum I	MATH 336	Procticum	100
1086 1	Job Practicum II	MATH 330 MATH 337	Practicum	2 1
1086 1	Job Practicum III	МДТН 1357 МДТН 136	Practicum	4
1086 1	Applied Probability Models	матн 950 Матн 971	Lecture	1
1085 2	Ioh Practicum I	МДТН 326	Practicum	9
1085 2	Forgotten	МАТН 407	Directed Studios	4
1909-9	rorgomen	WIALII 491	Differied Studies	1

1985-3	Forgotten	MATH 895	Directed Research	1
1985-3	Mathematical Statistics	STAT 801	Lecture	7
1985-2	Introduction to Statistics – A	MATH 101	Distance Education	77
1985-2	Introduction to Statistics B	MATH 102	Lecture	48
1985-2	Job Practicum I	MATH 336	Practicum	3
1985-2	Job Practicum II	MATH 337	Practicum	2
1985-2	Introduction to Probability and Statistics II	MATH 372	Lecture	22
1985-2	Introduction to Probability and Statistics II	MATH 372	Tutorial	22
1985-2	Job Practicum III	MATH 436	Practicum	2
1985-2	Job Practicum IV	MATH 437	Practicum	2
1985-2	Forgotten	MATH 895	Directed Research	1
1985-2	Forgotten	MATH 895	Directed Research	1
1985 - 1	Introduction to Statistics A	MATH 101	Distance Education	61
1985 - 1	Job Practicum I	MATH 336	Practicum	3
1985 - 1	Job Practicum II	MATH 337	Practicum	2
1984-3	Introduction to Statistics A	MATH 101	Lecture	21
1984-3	Introduction to Statistics A	MATH 101	Distance Education	41
1984-3	Statistics I	MATH 875	Lecture	8
1984-2	Introduction to Statistics A	MATH 101	Distance Education	NA
1984-1	Introduction to Statistics B	MATH 102	Lecture	138
1983-3	Statistical Analysis of Sample Surveys	MATH 304	Lecture	36
1983-3	Real Analysis	MATH 831	Directed Studies	2
1983-3	Statistics I	MATH 875	Lecture	4
1983-3	Introductory Seminar in Functional Analysis	MATH 896	Lecture	3
1983-2	Introduction to Statistics	MATH 101	Distance Education	64
1983-1	Introduction to Statistics	MATH 101	Distance Education	36
1983-1	Probability	MATH 487	Lecture	2
1982-3	Introduction to Statistics	MATH 101	Distance Education	NA
1982-3	Introduction to Probability and Statistics	MATH 101	Lecture	31
1982-3	Mathematical Statistics I	MATH 372	Lecture	8
1982-2	Introduction to Statistics	MATH 101	Distance Education	38
1982 - 1	Probability I	MATH 872	Lecture	NA
1981-3	Introduction to Probability and Statistics	MATH 272	Lecture	30
1981-3	Real Analysis I	MATH 831	Lecture	NA
1981-3	Statistics I	MATH 875	Lecture	NA
1981-2	Directed Studies	MATH 497	Directed Studies	1
1981 - 1	Introduction to Probability and Statistics	MATH 272	Lecture	31
1981 - 1	Statistical Design and Analysis of Experiments	MATH 404	Lecture	30
1980-3	Mathematical Statistics I	MATH 875	Lecture	NA
1980-3	Reading: Stochastic Processes	MATH 895	Directed Studies	1
1980-1	Linear Models in Mathematical Statistics	MATH 490	Lecture	21
1979-3	Introduction to Statistics	MATH 101	Lecture	341
1979-3	Statistics I	MATH 875	Lecture	NA

Teaching at Other Institutions

Dates	Institution	Approximate Title
1988-1	University of Toronto	Design and Analysis of Experiments
1987-3	University of Toronto	Statistical Theory
1986-3	University of Waterloo	Introduction to Statistics
1978-3	University of California at Berkeley	Introduction to Statistics

UNIVERSITY SERVICE

Departmental Committees

- 2018 2019. Member of Tenure and Promotions Committee
- 2018, Fall. Member of junior faculty hiring committee.
- 2018, Fall. Member of CANSSI / Tier 1 CRC hiring committee.
- 2018, Spring. Member of hiring committee.
- 2017, Fall. Seminar Co-ordinator.
- 2010 2016, 2017-2019. Academic Integrity Advisor.
- May 2017 April 2018. Member, Tenure and Promotion Committee, Department of Mathematics.
- May 2008 August 2014. Chair, Statistics and Actuarial Science
- May 2008 August 2014. Chair, Tenure and Promotions Committee
- 2004 2007. Chair, Graduate Studies Committee
- 1998 2003. Chair, Graduate Studies Committee
- 1998 1999. Member, Search Committee
- 1998 1999. Chair, Working group on Departmental Review Recommendation 7: computing.
- 1998 1999. Chair, Computer Users Committee
- 1998 1999. Chair, Working Group on Departmental Review Recommendation 2: graduate studies.
- 1997 1998. Member, Search Committee
- 1997 1998. Member, Graduate Studies Committee
- 1995 1998. Member, Departmental Tenure Committee
- 1997 1997. Examiner, Theoretical Statistics Comprehensive
- 1995 1997. Member, Computer Users' Committee
- 1979 1995. Examiner, Real Analysis Comprehensive Examinations, Theoretical Statistics, Applied Statistics
- 1994 1994. Member, Organizing Committee, Committee of Discover the Possibilities
- 1993 1994. Member, Search Committee
- 1993 1994. Member, Graduate Studies Committee
- 1993 1994. Member, Computer Users' Committee
- 1991 1994. Member, Appointments and Long Range Planning
- 1992 1993. Chair, Search Committee

- 1992 1993. Member, Graduate Admission Committee
- 1991 1992. Chair, Two Search Committees
- 1991 1992. Member, Actuarial Mathematics Search Committee
- 1991 1992. Representative, move of SCS to M.T.F.
- 1989 1992. Member, Undergraduate Studies Committee
- 1988 1992. Member, Departmental Tenure Committee
- 1991 1991. Faculty Coordinator (all work done by others), Math Enrichment Conference
- 1988 1989. Member, Appointments and Long Range Planning
- 1987 1988. Colloquium Organizer, University of Toronto
- 1985 1986. Member, Departmental Tenure Committee
- 1983 1984. Member, Open Labs Committee (Dates uncertain)
- 1982 1984. Member, Graduate Admission Committee
- 1980 1984. Member, Departmental Tenure Committee
- 1982 1983. Coordinator, Co-op
- 1981 1983. Member, Space Committee
- 1979 1980. Member, Open House Committee
- 1979 1980. Member, Graduate Admission Committee

Faculty Committees

- 2008 2014. Member, Dean's Advisory Committee
- 2011 2012. Member, Faculty of Science Teaching Committee (Malgorzata Dubiel, Chair)
- 2004 2007. Member, Faculty of Science Graduate Studies Committee
- 2005 2006. Chair, Faculty of Health Sciences Graduate Studies Committee
- 2001 2003. Chair, Faculty of Science Graduate Studies Committee
- 1998 2001. Member, Faculty of Science Graduate Studies Committee
- 1981 1983. Member, Faculty Space Committee

University Committees

- 2017 October Current. Member of Teaching Assessment Working Group (TAWG). Ad hoc committee stuck by Vice President Academic. Chaired by Barbara Frisken.
- 2014 January to March. Departmental Review, Internal member for the external review of Mathematics at SFU.
- 2004 2007. Member, Assessment Committee on New Graduate Programs

- 2007, April July. Member, Working Group 2 of the Phase II Task Force on Faculty Restructuring
- 2007, March July. Member, Working Group 1 of the Phase II Task Force on Faculty Restructuring
- 2005 2007. Member, Senate Graduate Studies Committee
- 2005 2006. Chair, Infectious Diseases Steering Committee
- 2005 2006. Member, Task Force on Student Supervision
- 2006, April. Member, External Review Committee for Mathematics Department
- 2003, January August. Member, Special Arrangements Graduate Program Committee (subcommittee of Senate Graduate Studies Committee)
- 2002 August 2003. Member, Assessment Committee for New Graduate Programs
- 1998 2003. Member, Senate Graduate Studies Committee
- 1999 2001. Member, review of MBA in Management of Technology, Assessment Committee for New Graduate Programs
- 1993 1994. Member, University Tenure Committee