Ivor Cribben

Contact Information

Department of Accounting and Business Analytics
Alberta School of Business
4-30G Business Building
University of Alberta
Edmonton, AB, Canada T6G 2R6
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Academic Experience

Alberta School of Business, University of Alberta

Associate Professor (with tenure), Department of Accounting and Business Analytics	2019 –
Xerox Faculty Fellow	2019 – 2020
Associate Professor (with tenure), Department of Finance and Statistical Analysis	2018 – 2019
Assistant Professor, Department of Finance and Statistical Analysis	2012 – 2017
Canadian Utilities Faculty Fellow	2016 – 2017
Pearson Faculty Fellow	2015 – 2016
Xerox Faculty Fellow	2013 – 2014

University of Alberta

Adjunct Professor, Department of Mathematical and Statistical Sciences	2013 –

University of Alberta

Member, Neuroscience and Mental Health Institute	2014 –

Visiting Positions

Centre of Mathematics of the University of Porto (CMUP), Portugal

Visiting Researcher	Sept, 2018

Department of Statistics, Ludwig Maximilian University of Munich, Germany

European Union Erasmus+ Visiting Scholar	Jun, 2016

Statistical and Applied Mathematical Sciences Institute (SAMSI), Research Triangle Park, North Carolina, USA

New Research Fellow	Jan – May, 2016

Department of Statistics, Macquarie University, Sydney, Australia

Endeavour Fellow	Mar – Jun, 2015

Department of Statistics, University of California, Irvine, USA

Visiting Scholar	Apr, 2014

Isaac Newton Institute for Mathematical Sciences, University of Cambridge, UK

Visiting Fellow	Jan – Feb, 2014

Haas School of Business, University of California, Berkeley, USA

Visiting Scholar, Neuroeconomics Laboratory	Apr – Jun, 2013

Education

Columbia University

Ph.D. in Statistics, 2012
M.Phil. in Statistics, 2010
M.A. in Statistics, 2008
Advisor: Martin A. Lindquist

University College Dublin

M.Sc. in Applied Statistics, First Class Honours
Thesis: Parties, Politics and Democracy using Multivariate Cointegration
Advisor: Patrick Murphy

University of Dublin, Trinity College

B.A. in Mathematics, First Class Honours

Research Grants

"High-dimensional time series"   2019–2020
Alberta School of Business Xerox Faculty Fellowship CAD$ 15,000
Role: Principal Investigator

"Networks for Multivariate Time Series"   2018–2023
Natural Sciences and Engineering Research Council (NSERC) Discovery Grant (DG) CAD$ 90,000
Role: Principal Investigator

"Time Series Analysis"   2018
Centre of Mathematics of the University of Porto (CMUP) Fellowship EUR 2,650
Role: Principal Investigator

"Role of Information Control and Propaganda in China"   2018
China Institute Faculty Research Grant CAD$ 4,700
Role: Principal Investigator

"Extremal Dependence in Electricity Markets and Climate"   2016–2017
Alberta School of Business Canadian Utilities Faculty Fellowship CAD$ 15,000
Role: Principal Investigator

"Stress Testing in the Alberta Business Environment"   2015–2016
Mitacs Accelerate Fellowship CAD$ 60,000
Role: Co-Principal Investigator with Valentina Galvani

"Challenges in Computational Neuroscience"   2016
SAMSI New Research Fellowship USD$ 16,700
Role: Principal Investigator

"Financial Networks"   2015–2016
Alberta School of Business Pearson Faculty Fellowship CAD$ 15,000
Role: Principal Investigator

"Estimating Time Varying Networks"   2015
Endeavour Executive Fellowship AUD$ 18,500 Role: Principal Investigator

"Anomaly Detection in Time Series Data"   2014–2015
HeadCount Grant CAD$ 20,000 Role: Co-Principal Investigator with Michele Samorani

"Addiction and Mental Health Strategic Clinical Network"   2014–2016
Alberta Health Services (AHS) Grant CAD$ 30,000
Role: Principal Investigator

"Statistics, Genetics and Preferences"   2013–2014
Alberta School of Business Xerox Faculty Fellowship CAD$ 12,000
Role: Principal Investigator

Honors

Best Paper Award Finalist, 16th International Business and Economy Conference	2017
Yeh Family Fellowship, Columbia University	2011–2012
Faculty Fellowship, Columbia University	2006–2011
Howard Levene Outstanding Teaching Award, Columbia University	2008
Research Demonstratorship Scholarship, University College Dublin	2004–2005
Entrance Exhibition Award, Trinity College Dublin	1999–2001
Gallaher Scholarship, Gallaher Group	1997–2003

Travel Awards

Killam Research Fund Travel Award, University of Alberta	2019
Killam Research Fund Travel Award, University of Alberta	2017
Eastern North American Region/International Biometric Society Travel Award	2017
European Union Erasmus+ Mobility Programme, Ludwig Maximilian University of Munich	2016
Pacific Institute for the Mathematical Sciences (PIMS) Travel Award	2015
Institute of Mathematical Statistics (IMS) New Researchers Conference Travel Award	2015
Pacific Institute for the Mathematical Sciences (PIMS) Travel Award	2014
Institute of Mathematical Statistics (IMS) New Researchers Conference Travel Award	2014
Isaac Newton Institute for Mathematical Sciences Travel Award, University of Cambridge	2014
SAMSI Low-dimensional Structure in High-dimensional Systems Workshop Travel Award, National Science Foundation (NSF)	2013
Killam Research Fund Travel Award, University of Alberta	2013
Institute Mathematical Statistics (IMS) New Researchers Conference Travel Award	2013
Developing Statistical Methods for NeuroImaging Workshop Travel Award, NSF	2012

Publications

[29] Anastasiou, A., Cribben, I., Fryzlewicz, P. (2020) Cross correlation isolate detection: a new change-point method for estimating dynamic functional connectivity (Under review).

[28] Xiong, X., Cribben, I. (2020) A Vine Copula Model for Functional Connectivity Networks Using fMRI data (Under review).

[27] Hrybouski, S., Cribben, I., McGonigle, J., Olsen, F., Carter, R., Seres, P., Madan, C.R., Malykhin, N.V. (2020) Investigating effects of healthy cognitive aging on brain functional connectivity using 4.7 T resting-state functional Magnetic Resonance Imaging (Under review).

[26] Ofori-Boateng, D., Cribben, I., Gel Y.R. (2019) Nonparametric anomaly detection on time series of graphs (Under review).

[25] Alizad-Rahvar, A.R., Ardakani, M., Cribben, I. (2018) Distributional causality: a new method for investigating causal relations in time series (Under review).

[24] Xu, M., Reiss, P., Cribben, I. (2020) Generalized reliability based on distances. *Biometrics* (Forthcoming).

[23] Pietrasik, W., Cribben, I., Olsen, F., Huang, Y., Malykhin, N.V. (2020) Diffusion Tensor Imaging of the Corpus Callosum in Healthy Aging: Investigating Higher Order Polynomial Regression Modelling. *NeuroImage* **213**, 116675.

[22] Brown, M.R.G., Agyapong, V., Omeje, J., Cribben, I., et al. (2019) Significant PTSD and other mental health effects present 18 months after the Fort McMurray Wildfire: Findings from 3,070 Grade 7-12 Students. *Frontiers in Psychiatry* **8**, 81.

[21] Brown, M.R.G., Agyapong, V., Greenshaw, A.J., Cribben, I., et al. (2019) After the Fort Mc-Murray wildfire there are significant increases in mental health symptoms in Grade 7-12 students compared to controls. *BMC Psychiatry* **19(1)**, 18.

[20] Cribben, I. (2019) Change points in heavy tailed multivariate time series: methods using precision matrices. *Applied Stochastic Models in Business and Industry* **35(2)**, 299–320.

[19] Hart, B., Cribben, I., Fiecas, M. (2018) A longitudinal model for functional connectivity using resting-state fMRI. *NeuroImage* **178**, 687–701.

[18] Hamza, D.M., Bercov, M., Suen, V.Y.M., Allen, A., Cribben, I., et al. (2018) School-Based Screening, Brief Interventions and Referral to Treatment (SBIRT) Significantly Decreases Long-Term Substance Abuse in 6,227 Students Aged 11-18. *Journal of Addictive Behaviors and Therapy* **2:6**.

[17] Rezaei, M., Cribben, I., Samorani, M. (2018) A clustering-based feature selection method for automatically generated relational attributes. *Annals of Operation Research* (forthcoming).

[16] Zhu, Y., Cribben, I. (2018) Sparse graphical models for functional connectivity networks: best methods and the autocorrelation issue. *Brain Connectivity* **8**, 139–165.

[15] Chouinard, B., Volden, V., Cribben, I., Cummine, J. (2017) Neurological evaluation of the selection stage of metaphor comprehension in individuals with and without autism spectrum disorder. *Neuroscience* **361**, 19–33.

[14] Bakhtiari, R., Cummine, J., Reed, A., Fox, C.M., Chouinard, B., Cribben, I., Boliek, C.A. (2017) Changes in brain activity following intensive voice treatment in children with cerebral palsy. *Human Brain Mapping* **38(9)**, 4413–4429.

[13] Silverstone, P.H., Bercov, M., Suen, V.Y.M., Allen, A., Cribben, I., et al. (2017) Long-term results from the empowering a multimodal pathway toward healthy youth program, a multimodal school-based approach, show marked reductions in suicidality, depression, and anxiety in 6,227 students in Grades 6-12 (aged 11-18). *Frontiers in Psychiatry* **8**, 81.

[12] Suen, V., Brown, M. R., Morck, R. K., Cribben, I., Silverstone, P. H. (2017). Risk Tolerance, Impulsivity, and Self-esteem: Differences and Similarities between Gamblers and Non-Gamblers in a Pilot Study. *Advances in Social Sciences Research Journal*, 4(4), 173–186.

[11] Silverstone, P.H., Rittenbach, K., Suen, V.Y.M., Moretzsohn, A., Cribben, I., et al. (2017) Depression outcomes in Adults attending Family Practice were not improved by screening, Stepped-care,

or on-line CBT during a 12-week study when compared to controls in a randomized trial. *Frontiers in Psychiatry* **8**, 32.

[10] Cribben, I., Yu, Y. (2017) Estimating whole brain dynamics using spectral clustering. *Journal of the Royal Statistical Society, Series C* **66**, 607-–627.

[9] Fiecas, M., Cribben, I., Bahktiari, R., Cummine, J. (2017) A variance components model for statistical inference on functional connectivity networks. *NeuroImage* **149**, 256–266.

[8] Yu, Y., Cribben, I. (2017) Invited discussion of 'Should we sample a time series more frequently?: decision support via multirate spectrum estimation' by Nason et al. (2017). *Journal of the Royal Statistical Society, Series A* **180(2)**, 384–386.

[7] Suen, V. Y. M., Brown, M. R. G., Cribben, I., Morck, R. K., Silverstone, P. H. (2016) Frequent Sub-Threshold Gamblers Display Unique Pattern of Brain Activation during Investment Decision-Making Task. *Journal of Psychiatry and Mental Health* **1(1)**.

[6] Westbury, C.F., Cribben, I., Cummine, J. (2016) Imaging imageability: Behavioral effects and neural correlates of its interaction with affect and context. *Frontiers in Human Neuroscience* **10**, 346.

[5] Cummine, J., Cribben, I., Luu, C., Kim, E., Bahktiari, R., Georgiou, G., Boliek, C.A. (2016) Understanding the Role of Speech Production in Reading: Evidence for a Print-to-Speech Neural Network using Graphical Analysis. *Neuropsychology* **30(4)**, 385–397.

[4] Silverstone, P.H., Bercov, M., Suen, V.Y.M., Allen, A., Cribben, I., et al. (2015) Initial Findings from a Novel School-Based Program, EMPATHY, Which May Help Reduce Depression and Suicidality in Youth. *PLoS ONE* **10(5)**: e0125527.

[3] Cribben, I., Wager, T.D., Lindquist, M.A. (2013) Detecting functional connectivity change points for single-subject fMRI data. *Frontiers in Computational Neuroscience* **7:143**.

[2] Cribben, I., Haraldsdottir, R., Atlas, L., Wager, T.D., Lindquist, M.A. (2012) Dynamic Connectivity Regression: Determining state-related changes in brain connectivity. *NeuroImage* **61(4)**, 907–920.

[1] Davis, R.A., Mikosch, T., Cribben, I. (2012) Towards Estimating Extremal Serial Dependence via the Bootstrapped Extremogram. *Journal of Econometrics* **170(1)**, 142–152.

Technical Reports

[1] Davis, R.A., Mikosch, T., Cribben, I. (2012) Estimating Extremal Dependence in Univariate and Multivariate Time Series via the Extremogram. arXiv:1107.5592 [stat.ME]

Book Chapters

[1] Cribben, I., Fiecas, M. (2016) Functional Connectivity Analyses for fMRI Data. *Handbook of Statistical Methods for Brain Signals and Images* (eds. Ombao, H., Lindquist, M., Thompson W., and Aston, J.).

Working papers (in preparation)

[6] Ingolfsson, A., Cribben, I., Ding, L., Tran, M. Does the Hot Hand Theory hold for the NHL goaltenders?

[5] O'Reilly, B., Cribben, I. Forecasting Points Totals in the NHL.

[4] Diao, G., Vidyashankar, A., Cribben, I. High Dimensional Covariate-Adjusted Semiparametric Transformation Gaussian Graphical Models.

[3] Cribben, I., Zhu, Y. Estimating sparse graphical models for financial time series.

[2] Frolova, N., Cribben, I. Extremal Dependence in Australian Electricity Markets.

[1] Cribben, I., Dissanayake, R., Watanabe, A., Watanabe, M. The Speed of Investment Specific Technology Adoption and the Value Premium.

Software

NCPD, an R package for network change point detection using spectral clustering (2015).

extremogram, an R package for estimating extreme value dependence within and across time series (2015).

Conference Talks (* = Invited)

Eastern North American Region/International Biometric Society Annual Meeting, Nashville, USA	2020
* 12th International Conference of the ERCIM WG on Computational and Methodological Statistics, London, UK	2019
* 62nd ISI World Statistics Congress, Kuala Lumpur, Malaysia	2019
* Big Data Analysis of Neuroimaging & Genetics: Advanced Statistical & Machine Learning Methods for Human Brain Connectomics, Universiti Teknologi Malaysia, Kuala Lumpur, Malaysia	2019
Conference on current trends in survey statistics, Institute for Mathematical Sciences National University of Singapore, Singapore	2019
* Workshop Change Point Detection: Limit Theorems, Algorithms, and Applications in Life Sciences, Greifswald, Germany	2019
* AI, Ethics and Society Conference, University of Alberta, Edmonton, Canada	2019
Computationally-intensive methods for the robust analysis of non-standard data (CRoNoS) meetings, Limassol, Cyprus	2019
10th EMR-IBS and Italian Region conference, Jerusalem, Israel	2018
* Joint Statistical Meeting, Vancouver, Canada	2018
* XXIXth International Biometric Conference, Barcelona, Spain	2018
* Frontiers in Forecasting, Institute for Mathematics and its Applications (IMA) University of Minnesota, Minneapolis, USA	2018
* Health Care Analytics, Lunchalytics, Edmonton, Canada	2018
European Meeting of Statisticians, Helsinki, Finland	2017
* 7th International Workshop on Perspectives on High-dimensional Data Analysis (HDDA-VII), CIMAT, Guanajuato, Mexico	2017
* 9th EMR-IBS and Italian Region conference, Thessaloniki, Greece	2017
* International Business & Economy Conference (IBEC), Puerto Montt, Chile	2017
* 9th International Conference of the ERCIM WG on Computational and Methodological Statistics, Seville, Spain	2016
* Robustness Theory and Methodology: Recent Advances and Future Directions Conference, Banff, Canada	2016
* International Indian Statistical Association (IISA) Conference, Corvallis	2016
* Big Data and Models, Tinos, Greece	2016
Forum of Neuroscience (FENS), Copenhagen, Denmark	2016
Organization for Human Brain Mapping, 22nd Annual Meeting, Geneva, Switzerland	2016
* Novel Statistical Methods in Neuroscience, University of Magdeburg, Germany	2016
* Management International Conference (MiC), Pula, Croatia	2016
* 6th International Workshop on the Perspectives on High-Dimensional Data Analysis (HDDA-VI), Fields Institute, Toronto, Canada	2016
* New York R Conference, New York City, USA	2016

Eastern North American Region/International Biometric Society Annual Meeting, Austin, USA — 2016

* 3rd Caribbean Biomedical Research Days, Rodney Bay, St Lucia — 2016
* Mathematical and Statistical Challenges in Neuroimaging Data Analysis, Banff, Canada — 2016

* 8th International Conference of the ERCIM WG on Computational and Methodological Statistics, London, UK — 2015
Society for Neuroscience Annual Meeting, Chicago, USA — 2015
* Applied Topology and High-Dimensional Data Analysis Meeting, Victoria, Canada — 2015
* Joint Statistical Meeting, Seattle, USA — 2015
* 17th Institute for Mathematical Statistics New Researchers Conference, University of Washington, Seattle, USA — 2015
* International work-conference on Time Series Analysis (ITISE), Granada, Spain — 2015
* Morning Workshop, Organization for Human Brain Mapping, 21st Annual Meeting, Honolulu, USA — 2015
* Statistical Methods in Imaging Conference, Department of Biostatistics, University of Michigan, Ann Arbor, USA — 2015

* 7th International Conference of the ERCIM WG on Computational and Methodological Statistics, Pisa, Italy — 2014
Joint Statistical Meeting, Boston, USA — 2014
* 16th Institute for Mathematical Statistics New Researchers Conference, Harvard University, Boston, USA — 2014
Organization for Human Brain Mapping, 20th Annual Meeting, Hamburg, Germany — 2014
* Statistical Society of Canada Annual Meeting, Toronto, Canada — 2014
* SIAM Conference on Imaging Science, Hong Kong — 2014
* International Symposium on Business and Management, Nagoya, Japan — 2014
* New York Open Statistical Programming Meetup, New York, USA — 2014
* Eastern North American Region/International Biometric Society Annual Meeting, Baltimore, USA — 2014
* Inference for Change-Point and Related Processes: Isaac Newton Institute for Mathematical Sciences, University of Cambridge, UK — 2014

* 35th Annual Meeting of Alberta Statisticians, Calgary, Canada — 2013
* Statistics in Imaging Invited Session, Joint Statistical Meeting, Montreal, Canada — 2013
* 15th Institute for Mathematical Statistics New Researchers Conference, Montreal, Canada — 2013
Organization for Human Brain Mapping, 19th Annual Meeting, Seattle, USA — 2013
Cognitive Neuroscience Society Annual Meeting, San Francisco, USA — 2013

* 34th Annual Meeting of Alberta Statisticians, Edmonton, Canada — 2012
* Frontiers in Finance Conference, Banff, Canada — 2012

Joint Statistical Meetings, Miami, USA — 2011
Organization for Human Brain Mapping, Quebec City, Canada — 2011
Imaging, Communication and Finance: Stochastic Modeling of Real-World Problems, Columbia University, New York City, USA — 2011

Modeling Multivariate Dependence and Extremes in Finance, Oxford-Man Institute, Oxford, UK — 2008

25th Conference on Applied Statistics in Ireland, Enniskillen, Ireland — 2005

Department Seminars

School of Statistics and Management, Shanghai University of Finance and Economics, China	2019
Canada Health Solutions, Saint John, Canada	2019
Department of Mathematics, Aarhus University, Denmark	2019
Centre of Mathematics (CMUP), University of Porto, Portugal	2018
Department of Statistics, University of California, Irvine, USA	2018
Department of Statistical and Actuarial Sciences, Western University, Canada	2018
School of Mathematical and Computational Sciences, University of Prince Edward Island, Canada	2018
Brain and Mind Institute, Western University, Canada	2018
Department of Applied Mathematics and Computer Science, Technical University of Denmark (DTU), Denmark	2017
School of Mathematics and Statistics, University of Canterbury, New Zealand	2017
Statistical Shape Analysis & Modeling Group, Florida State University, USA	2017
Cognitive Neuroscience Seminar, University of Alberta, Canada	2017
School of Computer Science and Statistics, Trinity College Dublin, Ireland	2016
Department of Mathematics & Statistics, University of Otago, New Zealand	2016
School of Mathematics, University of Bristol, UK	2016
Department of Statistics, Ludwig Maximilian University of Munich, Germany	2016
Statistical and Applied Mathematical Sciences Institute (SAMSI), USA	2016
Department of Statistics, George Mason University, USA	2016
Department of Mathematics & Statistics, McMaster University, Canada	2015
Department of Decision Sciences, HEC Montréal, Canada	2015
Department of Economics, Macquarie University, Australia	2015
School of Mathematics and Applied Statistics, University of Wollongong, Australia	2015
Department of Statistics, Macquarie University, Australia	2015
School of Mathematical Sciences, Monash University, Australia	2015
Neuroscience and Mental Health Institute, University of Alberta, Canada	2015
Department of Mathematics and Statistics, University of Victoria, Canada	2015
Neuroimaging Statistics Research, University of Warwick, UK	2015
IISS Seminar, Haas School of Business, University of California, Berkeley, USA	2014
Department of Statistics, Chinese University of Hong Kong, Hong Kong	2014
Space–Time Group, Department of Statistics, University of California, Irvine, USA	2014
Department of Mathematical and Statistical Sciences, University of Alberta, Canada	2014
Neuroeconomics Laboratory, Haas School of Business, University of California, Berkeley, USA	2013
Department of Child and Adolescent Psychiatry, New York University, USA	2012
Division of Biostatistics and Epidemiology, Department of Public Health, Weill Medical College of Cornell University, USA	2012
Department of Statistics, Southern Methodist University, USA	2012
Department of Mathematics, San Jose State University, USA	2012
Department of Finance and Statistical Analysis, Alberta School of Business, University of Alberta, Canada	2012
Department of Decision Sciences, Lundquist College of Business, University of Oregon, USA	2012
Department of Mathematics, Bowdoin College, USA	2012

Centre for Research in Statistical Methodology (CRiSM), The University of Warwick, UK	2012
Department of Statistics, Virginia Polytechnic Institute and State University, USA	2012
Department of Information Systems, Statistics, and Management Science, Culverhouse College of Commerce, University of Alabama, USA	2012
Department of Mathematics and Statistics, Villanova University, USA	2012
Department of Mathematics and Statistics, Williams College, USA	2012
Department of Statistics and Probability, University of Queensland, Australia	2011

Conference Discussant (* = Invited)

* 62nd ISI World Statistics Congress, Kuala Lumpur, Malaysia	2019

Workshops

Junior Researchers Workshop, Eastern North American Region/International Biometric Society Annual Meeting, Washington D.C., USA	2017
Recent Advances in Survey Sampling Techniques, Banff International Research Station (BIRS), Banff, Canada	2014
PIMS Summer School on the Economics and Mathematics of System Risk and the Financial Networks, Sauder School of Business, University of British Columbia, Vancouver, Canada	2014
Inference for Change-Point and Related Processes: Isaac Newton Institute for Mathematical Sciences, University of Cambridge, UK	2014
Low-dimensional Structure in High-dimensional Systems (LDHD): Statistical and Applied Mathematical Sciences Institute (SAMSI), Research Triangle Park, North Carolina, USA	2013
Developing Novel Statistical Methods in NeuroImaging: University of California, San Diego, USA	2012
The UCLA Advanced Neuroimaging Summer program: Los Angeles, USA	2011
Applied Time Series Analysis in Scientific Computing: Oberwolfach, Germany	2008

Teaching

Instructor

Alberta School of Business, University of Alberta
Forecasting for Planners and Managers (Undergrad), Fall 2012 – Fall 2017, Fall 2019, Fall 2020
Multivariate Data Analysis I (PhD), Winter 2013, Fall 2014, Fall 2015, Fall 2017, Fall 2019, Fall 2020
Applied Business Analysis of Time Series and Panel Data (PhD), Fall 2014, Fall 2016, Fall 2017
Multivariate Data Analysis II (PhD), Fall 2013
Alberta School of Business, University of Alberta (Shenzhen, China)
Data Analysis and Decision Making (MBA), Fall 2018, Summer 2019
Alberta School of Business, University of Alberta (Shanghai, China)
Data Analysis and Decision Making (MBA)

Nominated for the 2017 and 2018 Provost's Award for Early Achievement of Excellence in Undergraduate Teaching, University of Alberta

Ludwig Maximilian University of Munich
   High-dimensional methods for neuroimaging data, Summer 2016

Columbia University
   Introduction to Statistics, Spring 2008, Fall 2008, Fall 2009

Guest Instructor

Department of Biomedical Engineering, University of Alberta
   Neuroimaging in Neuroscience (BME 510), Fall 2014, 2016, 2017, 2019

Teaching Assistant

Columbia University
   Non-Parametric Statistics (MA/Undergraduate), Spring 2011
   Data Mining (MA/Undergraduate), Fall 2011
   Stochastic Methods in Finance (MA/PhD), Fall 2010
   Stochastic Processes for Finance (MA/PhD), Spring 2010
   Statistical Methods in Finance (MA), Spring 2009
   Introduction to Statistics (Undergraduate), Fall 2007
   Probability (MA/Undergraduate), Spring 2007
   Theory of Interest (MA), Fall 2006

Other Experience

Statistics without Borders, American Statistical Association

   Statistical Consultant   2018 –

Goldman Sachs Group, Inc., New York City

   Summer Associate, Investment Strategy Group, Tactical   Summer 2009
   Summer Associate, Investment Strategy Group, Strategic   Summer 2008

Department of Statistics, Columbia University

   Statistical Consultant   2007 – 08

Computer skills

   Proficient in MS Office, R, Matlab, S-Plus, Minitab, SAS, Stata, C, LaTeX
   Operating Systems: Unix/Linux, Windows

Professional Activities

Grant Reviewer

Fonds Wetenschappelijk Onderzoek – Vlaanderen (FWO), Research Foundation - Flanders, Belgium

Journal Referee

Annals of Applied Statistics

Applied Stochastic Models in Business and Industry

Bayesian Analysis

Biometrics

Biostatistics

Brain Imaging and Behavior

Communications for Statistical Applications and Methods

Computational Statistics and Data Analysis

Digital Signal Processing

Human Brain Mapping

IEEE Journal of Biomedical and Health Informatics

IEEE Transactions on Biomedical Engineering

Journal of Quantitative Analysis in Sports

Journal of the American Statistical Association

Journal of the Royal Statistical Society, Series B

Journal of the Royal Statistical Society, Series C

Mathematical Sciences

Medical Image Analysis

Metron

NeuroImage

PLOS Computational Biology

PLOS One

Statistics and Probability Letters

Statistical Papers

Statistics Surveys

Technometrics

WIREs Computational Staistics

Book Referee

Routledge

Book Volume Referee

Springer

Taylor & Francis Group

Abstract Reviewer

Organization for Human Brain Mapping, 25th Annual Meeting, Rome (2019)

Organization for Human Brain Mapping, 24th Annual Meeting, Singapore (2018)

Organization for Human Brain Mapping, 23th Annual Meeting, Vancouver (2017)

Organization for Human Brain Mapping, 22th Annual Meeting, Geneva, Switzerland (2016)

Organization for Human Brain Mapping, 21th Annual Meeting, Honolulu (2015)

Organization for Human Brain Mapping, 20th Annual Meeting, Hamburg, Germany (2014)

Organization for Human Brain Mapping, 19th Annual Meeting, Seattle (2013)

Student Supervision

University of Alberta

Graduate

Samantha Perreault (MSc), Department of Psychiatry (Winter 2020 –)

Elnaz Nabiyi (PhD), Department of Accounting, Operations and Information Systems (Fall 2018 – 2020)

Alex Lewandowski (MSc), Department of Mathematical and Statistical Sciences (2016 – 2018)

Nadezda Frolova (MSc), Department of Mathematical and Statistical Sciences (2014 – 2016)

Yunan Zhu (MSc), Department of Mathematical and Statistical Sciences (2014 – 2015)

Undergraduate

Martin Ondrus, Alberta School of Business (Winter and Summer 2020)

Filip Sadurski, Jagiellonian University (Summer 2020)

Emily Olds, Alberta School of Business (Winter 2020)

Hanlin Zhang (Visiting student, China Council Scholarship), Department of Computer Science, South China University of Technology (Summer 2019)

Xin Xiong (Visiting student, China Council Scholarship), Department of Statistics, Beijing Normal University (Summer 2019)

Shiying Yang, Neuroscience and Mental Health Institute (Fall 2018 –)

Tianwei She (Visiting student, China Council Scholarship), Department of Computer Science, Renmin University of China (Fall 2017)

Matthew Krill, Neuroscience and Mental Health Institute (Fall 2016 – Winter 2017)

Joel Voss, Alberta School of Business (Winter 2017)

Kristin Langeste, Alberta School of Business (Fall 2016)

Braedan O'Reilly, Alberta School of Business (Fall 2015)

Xiaotong Lin (Visiting student), Tsinghua University (2014)

Scott Stone (UARE Summer Intern), University of Lethbridge (Summer 2014)

External Examiner

Master's thesis, College of Science and Engineering, Flinders University (2018)

PhD thesis, Department of Mathematics and Statistics, The University of Western Australia (2020)

PhD Committees

University of Alberta

Arash Asgari, Department of Accounting and Business Analytics (2020–)

Likang Ding, Department of Accounting and Business Analytics (2018–)

Mostafa Rezaei, Department of Accounting, Operations and Information Systems (2017–2019)

PhD Exam Committees

University of Alberta

Amir Reza Alizad-Rahvar, Department of Electrical and Computer Engineering (2014)

Victoria Suen, Department of Psychiatry (2014)

PhD Candidacy Exam Committees

University of Alberta

Xiaowen Zhang, Department of Finance and Statistical Analysis (2019)

Bordin Bordeerath, Department of Finance and Statistical Analysis (2017)

Mostafa Rezaei, Department of Accounting, Operations and Information Systems (2017)

James Benoit, Department of Psychiatry (2016)

Chenxing Shou, Department of Finance and Statistical Analysis (2016)

Violeta Kovacev-Nikolic, Department of Mathematical and Statistical Sciences (2016)

Victoria Suen, Department of Psychiatry (2013)

MSc Exam Committees

University of Alberta

Yi Zhou, Department of Mathematical and Statistical Sciences (2016)

Farhood Mohammadi, Department of Mathematical and Statistical Sciences (2014)

Imran Hasan, Department of Mathematical and Statistical Sciences (2014)

Qian Shi, Department of Mathematical and Statistical Sciences (2014)

Julia Esch, Department of Speech Pathology and Audiology (2013)

Conference Organizer

'2021 Canadian Computational Neuroscience Symposium', University of Lethbridge, Lethbridge, Canada (2021)

Conference Session Organizer

'Statistics methods for sports' – Organized Session, 12th International Conference of the ERCIM WG on Computational and Methodological Statistics, London, UK (2019)

'High dimensional methods for complex data', Computationally-intensive methods for the robust analysis of non-standard data (CRoNoS) meetings, Limassol, Cyprus (2019)

'Statistics in sports: Some recent developments' – Organized Session, 11th International Conference of the ERCIM WG on Computational and Methodological Statistics, Pisa, Italy (2018)

'Statistics in sports: some new insights' – Topic Contributed Session, Joint Statistical Meetings, Vancouver (2018)

'High dimensional time series analysis and its applications' – Invited Session, Joint Statistical Meetings, Vancouver (2018)

'Statistics: real life decisions' – Topic Contributed Session, Joint Statistical Meetings, Seattle (2015)

'Estimating time varying connectivity' – Morning Workshop, Organization for Human Brain Mapping Annual Meeting, Honolulu (2015)

'The Graphical Modeling and Longitudinal Analysis of fMRI data' – Topic Contributed Session, Joint Statistical Meetings, Boston (2014)

'Recent Developments in Statistical Modeling of Brain Imaging Data' – Invited Session, International Biometric Conference, Florence, Italy (2014)

'New Methods for Analyzing Brain Imaging data' – Invited Session, Statistical Society of Canada Annual Meeting, Toronto (2014)

'Recent Developments in the Statistical Modeling of Brain Imaging Data' – Invited Session, SIAM Conference on Imaging Science, Hong Kong (2014)

'Advanced Methods in Brain Imaging Research' – Invited Session, Joint Statistical Meetings, Montreal (2013)

Conference Session Chair

'Statistical methods in cancer research', Eastern North American Region/International Biometric Society Annual Meeting, Nashville, USA (2020)

'Statistics methods for sports' – Organized Session, 12th International Conference of the ERCIM WG on Computational and Methodological Statistics, London, UK (2019)

'High dimensional methods for complex data', Computationally-intensive methods for the robust analysis of non-standard data (CRoNoS) meetings, Limassol, Cyprus (2019)

'Machine Learning and Brain Science', 10th EMR-IBS and Italian Region conference, Jerusalem, Israel (2018)

'Statistics in sports: some new insights', Joint Statistical Meetings, Vancouver, Canada (2018)

'Economics', International Business & Economy Conference (IBEC), Puerto Montt, Chile (2017)

'Energy Markets', Management International Conference, Pula, Croatia (2016)

'Graphical Models', Eastern North American Region/International Biometric Society Annual Meeting, Austin, USA (2016)

'Institutions', Northern Finance Association Conference, Lake Louise, Canada (2015)

'Statistics: real life decisions', Joint Statistical Meetings, Seattle, USA (2015)

'Application in Time Series Analysis/Forecasting', International work-conference on Time Series Analysis (ITISE), Granada, Spain (2015)

'High Dimension and Complex/Big Data', International work-conference on Time Series Analysis (ITISE), Granada, Spain (2015)

'Statistical Analysis of MRI/fMRI data', Joint Statistical Meetings, Boston, USA (2014)

'Recent Advances in Image Analysis', Joint Statistical Meetings, Montreal, Canada (2013)

Other service

University of Alberta

Provost's Representative on Department Chair Selection/Review Committees 2020–2023

Alberta School of Business, University of Alberta

School of Business Representative on the Faculty of Science Council, University of Alberta (2020 –)

PhD Policy Committee Member, Alberta School of Business (2020 –)

Judge for Three Minute Thesis (3MT) presentations, Alberta School of Business (2018)

Judge for Student Conference on Operations (S.C.O.P.E), Alberta School of Business (2017)

Department of Accounting, Operations and Information Systems Faculty Search Committee, Alberta School of Business (2015/2016, 2016/2017, 2019/2020)

Panel member of "Job Market Process", PhD student research conference, Alberta School of Business (2016)

Department of Finance and Statistical Analysis Faculty Search Committee, Alberta School of Business (2015/2016)

External

Joint Statistical Meeting (JSM) Docent Program, Vancouver, Canada (2018)

Joint Statistical Meeting (JSM) Docent Program, Seattle, USA (2015)

Program Committee member for Machine Learning Track, International Joint Conference on Artificial Intelligence (IJCAI), Buenos Aires, Argentina (2015)

Panel member for the ASA Section on Statistical Learning and Data Mining (SLDM) Student Award (2014)

The Statistical Society of Canada (SSC) New Investigators Committee (2013 – 2016)

Professional Societies

Member, Eastern North American Region/International Biometric Society (ENAR)
Member, The Statistical Society of Canada (SSC)
Member, Organization for Human Brain Mapping (OHBM)

Governance and Advisory Experience

Hospitals & Community Day Care, Board Member   2019–