CURRICULUM VITAE FOR ANDREI BADESCU
July 2022

A.   **BIOGRAPHICAL INFORMATION**

PERSONAL

University Address:

Department of Statistical Sciences
University of Toronto
700 University Avenue
Toronto.

EDUCATION

2004 – 2006   Post Doctoral Studies in Actuarial Science, University of Waterloo, Faculty of Mathematics and Computer Science, Department of Statistics and Actuarial Science, Waterloo, Ontario.

2000 – 2004   Ph.D. in Statistics and Actuarial Science, University of Western Ontario, Department of Statistics and Actuarial Science, London, Ontario.

1998 – 1999   M.Sc. in Quantitative Economics, Academy of Economics Studies, Faculty of Cybernetics, Department of Quantitative Economics, Bucharest, Romania.

1993 – 1998   B.Sc. Hons., Major in Mathematics and Economics, Academy of Economics Studies, Faculty of Cybernetics, Bucharest, Romania.

EMPLOYMENT

2022 -   Director of the Financial Insurance Master Program at University
                of Toronto

2020 - 2021   Director of the Data Science Master Program at University of
                Toronto

2020   Full Professor, Department of Statistics, University of Toronto.

2011 – 2020   Associate Professor, Department of Statistics, University of Toronto.

2008 – present   Full member of the Graduate School, University of Toronto**.**

2006 – 2011   Assistant Professor, Department of Statistics, University of Toronto.

2004 – 2006   Instructor, Department of Statistics and Actuarial Science, University of Waterloo.

2000 – 2004   Teaching and Research Assistant, Department of Statistics and Actuarial Science, University of Western Ontario.

1998 – 2000   Actuary, Omniasig, Bucharest, Romania.

HONOURS

2003   Best Student Paper Award, South-Western Ontario Operations Research Day, University of Western Ontario, London.

1998   Special Award at the Research Symposium in Microeconomics, Academy of Economic Studies, Bucharest, Romania.

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

A. Associate Editor: Insurance: Mathematics and Economics, 2018 -

B. President of the Actuarial Science Section of the Statistical Society of Canada (2022).

C. Member of the NSERC Mathematics and Statistics Evaluation group. (2021- 2024)

D. Member in the Editorial Board of the Economic Computation and Economic Studies and Research.

E. Conference organizer:

   - Chair of the graduate student section on Actuarial Science at the SSC conference, June 2016, St. Catherines, Canada.
   - International Workshop on Actuarial Science, Academy of Economic Studies, June 2015, Bucharest, Romania.
   - Chair of the Scientific Committee at the Actuarial Research Conference, University of Toronto, August 2015.
   - Organizer of the 3rd Quebec – Ontario Workshop on Insurance Mathematics, January 2014, Quebec City.
   - Organizer of the 2nd Quebec – Ontario Workshop on Insurance Mathematics, February 2012, Toronto.
   - Organizer of the 1st Quebec – Ontario Workshop on Insurance Mathematics, January 2011, Montreal.
   - Organizer of the Insurance: Mathematics and Economics Congress, 2010, Toronto.
   - Organizer of a Section in Ruin Theory at the Canadian Operational Research Society Conference, 2008, Montreal.
   - Session chair at several conferences such as Insurance: Mathematics and Economics (2010), Toronto; SSC (2010), Quebec City.

F. Referee for Insurance: Mathematics and Economics, Scandinavian Actuarial Journal, Astin Bulletin, North American Actuarial Journal, European Actuarial Journal, Applied Stochastic Models in Business and Industry, Economic Computation and Economic Studies and Research.

G. Member of Institute for Operations Research and the Management Sciences, Applied Probability Society, Canadian Operational Research Society, Statistical Society of Canada.

B. **ACADEMIC HISTORY**

RESEARCH ENDEAVOURS

Predictive Modelling in Insurance, Claim Reserving and Ratemaking, Telematics, Mathematical Risk Theory, Modelling Dependence in Insurance, Matrix Analytic Methods in Stochastic Modelling.

RESEARCH AWARDS

- 2020 – Canadian Institute of Actuaries Research Grant, Development of ECM algorithms in R for Mixture of Experts Regression Model, 20,000 CAD; *Co-investigators: Sheldon Lin, Chau Tseung.*

- 2020 - CKER and CAS Grant, Extended ECM Algorithm for Fitting Mixture of Experts Models to Censored and Truncated Regression Data with Applications in Ratemaking and Reserving, 14,000 USD; *Co-investigators: Samson Tsz Fung, Sheldon Lin.*

- 2019 – 2024 National Science and Engineering Research Council of Canada, NSERC Individual Discovery Grant, $25,000/year.

- 2018 NSERC Engage, 25,000 CAD; *Co-investigators: Tianle Chen.*

- 2017 April, Research Grant from the Society of Actuaries, $15,000 USD; *Co-investigators: Tianle Chen, Sheldon Lin.*

- 2015 June, Research Grant from the Casualty Actuarial Society, $13,000 USD; *Co-investigators: Sheldon Lin.*

- 2014 – 2019 National Science and Engineering Research Council of Canada, NSERC Individual Discovery Grant, $14,000/year.

- 2009 – 2014 National Science and Engineering Research Council of Canada, NSERC Individual Discovery Grant, $19,000/year.

- 2006 – 2009   National Science and Engineering Research Council of Canada, NSERC Individual Discovery Grant, $13,000/year.

- 2008 – 2010 University of Toronto Connaught Matching Grant Competition, $15,000 year.

- 2006 – 2008   University of Toronto Connaught Start-up Grant.

- 2006   University of Toronto, Start-up Grant, $15,000.

- 2004 – 2006   National Science and Engineering Research Council of Canada, Post Doctoral Fellowship, $40,000/year.

C.   **SCHOLARLY AND PROFESSIONAL WORK**

Peer Reviewed Journal Publications Accepted:

1. Fung, T.C., Badescu, A. and Lin, X.S. "Fitting censored and truncated regression data using the Mixture of Experts models, 2022, " North American Actuarial Journal, in press.

2. Tseung, S.C, Badescu, A., Fung, T.C. and Lin, X.S., "LRMoE.jl: a software package for flexible actuarial loss modelling using mixture of experts regression model, 2021, " Annals of Actuarial 5 Science, 15(2), 419-440.

3. Fung, T.C., Badescu, A. and Lin, X.S., "A new class of severity regression models with an application to IBNR prediction," North American Actuarial Journal, 2020, 25(2), 206-231.

4. Tsz C.F., Badescu A.L, Lin S., A Class of Mixture of Experts Models for General Insurance: Theoretical Developments, 2019, Insurance: Mathematics and Economics, 89, 111-127.

5. Tsz C.F., Badescu A.L, Lin S., A Class of Mixture of Experts Models for General Insurance: Application to Correlated Claim Frequencies, Astin Bulletin, 2019, 49 (3), 647-688.

6. Badescu A.L., Chen T., Lin S., Tang D., A marked Cox model for the number of IBNR claims: estimation and application, Astin Bulletin, 2019, 49 (3), 709-739.

7. Tsz, F.C., Badescu A.L., Lin X.S., Multivariate Cox Hidden Markov Models with an Application to Operational Risk. Scandinavian Actuarial Journal, 2019, (8), 686-710.

8. Ahn S., Badescu A.L., Cheung E., Kim Y., An IBNR-RBNS insurance risk model with marked Poisson arrivals, Insurance: Mathematics and Economics, 2018, 79, 26-42.

9. Avram F., Badescu A.L., Pistorius M., Rabehasaina L., On a class of dependent Sparre Andersen risk models and a bailout application, Insurance: Mathematics and Economics, 2016, 71, 27 – 39.

10. Badescu A.L., Lin S., Tang D., A marked Cox model for the number of IBNR claims: Theory, Insurance: Mathematics and Economics, 2016, 69, 29 - 37.

11. Antonio K., Badescu A.L., Gong L., Lin X.S., Verbelen R. Fitting mixtures of Erlangs to censored and truncated data using the EM algorithm, Astin Bulletin, 2015, 45(03), 729 - 758.

12. Badescu A.L., Gong L., Lin X.S., Tang D. Modeling correlated frequencies with application in operational risk management, Journal of Operational Risk, 2015, Vol 10(1), 1-45.

13. Breuer L., Badescu A.L., A generalised Gerber-Shiu measure for Markov-additive risk processes with phase-type claims and capital injections, *Scandinavian Actuarial Journal*, 2014, Issue 2, 93-115.

14. Gong L., Badescu A.L., Cheung E., Recursive Methods for a Two-Dimensional Risk Process with Common Shocks, *Insurance: Mathematics and Economics,* 2012, 50, 109-120.

15. Mitric I.R., Badescu A.L., Stanford D., On the absolute ruin in a Sparre Andersen risk model with constant interest, *Insurance: Mathematics and Economics*, 2012, 50, 167-178.

16. Badescu A.L., Cheung E., Rabehasaina L. - A Two Dimensional Risk Model with Proportional Reinsurance, *Journal of Applied Probability*, 2011, 48(3), 749 - 765.

17. Cheung E., Landriault D., Badescu A.L. – On a Generalization of the Risk Model with Markovian Claim Arrivals, *Stochastic Models,* 2011, 27(3), 407 - 430.

18. Asimit A.V., Badescu A.L. - Extremes on the Discounted Aggregate Claims in a Time Dependent Risk Model, *Scandinavian Actuarial Journal*, 2010, 2, 93 – 104.

19. Badescu A.L., Cheung E., Landriault D. - Dependent Risk Models with Bivariate Phase-Type Distributions, *Journal of Applied Probability*, 2009, 46(1), 113-131.

20. Badescu A.L., Landriault D., - Applications of Fluid Flow Matrix Analytic Methods in Ruin Theory - a Review, Serie A: *Matemáticas de la Revista de la Real Academia de Ciencias Exactas*, Físicas y Naturales, 2009, 103(2), 353 – 372.

21. Badescu A.L. - Discussion of The Discounted Joint Distribution of the Surplus Prior to Ruin in a Sparre Andersen Model, *North American Actuarial Journal*, 2008, 12(2), 210-212.

22. Albrecher H., Badescu A.L., Landriault D. - On the Dual Risk Model with Taxation, *Insurance: Mathematics and Economics*, 2008, 42(3), 1086-1094.

23. Badescu A.L., Breuer L. - The Use of Vector-Valued Martingales in Risk Theory, *Blatter der DGVFM*, 29, 2008, 1-12.

24. Badescu A.L., Landriault D. - Recursive Calculation of the Dividend Moments in a Multi-Threshold Risk Model, *North American Actuarial Journal*, 12(1), 2008, 74-88.

25. Badescu A.L., Drekic S., Landriault D. - On the Analysis of a Multi-Threshold Markovian Risk Model, *Scandinavian Actuarial Journal*, 2007, 4, 248-260.

26. Badescu A.L., Drekic S., Landriault D. - Analysis of a Threshold Dividend Strategy for a MAP Risk Model, *Scandinavian Actuarial Journal*, 2007, 4, 227-247.

27. Badescu A.L., Landriault D. - Moments of the Discounted Dividends in a Threshold-Type Markovian Risk Process, *Brazilian Journal of Probability and Statistics*, 2007, 21, 13-25.

28. Ahn S., Badescu A.L., Ramaswami V. - Time Dependent Analysis of Finite Buffer Fluid Flows and Risk Models with a Dividend Barrier, *Queueing Systems: Theory and Applications*, 2007, 55(4), 207-222.

29. Ahn S., Badescu A.L. - On the Analysis of the Gerber-Shiu Discounted Penalty Function for Risk Processes with Markovian Arrivals, *Insurance: Mathematics and Economics*, 2007, 41(2), 234-249.

30. Badescu A.L., Stanford D.A. - A Generalization of the De Vylder Approximation for the Probability of Ruin, *Economic Computation and Economic Cybernetics Studies and Research*, 2006, (40)3-4, 245-265.

31. Badescu A.L., Breuer L., Drekic S., Latouche G., Stanford D.A. -The Surplus prior to Ruin and the Deficit at Ruin for a Correlated Risk Process, *Scandinavian Actuarial Journal*, 2005, 6, 433-446.

32. Badescu A.L., Breuer L., Da Silva Soares A., Latouche G., Remiche M-A., Stanford D.A. - Risk Processes Analyzed as Fluid Queues, *Scandinavian Actuarial Journal*, 2005, 2, 127-141.

33. Stanford D.A., Avram F., Badescu A.L., Breuer L., Da Silva Soares A., Latouche G. - Phase-Type Approximations to Finite-Time Ruin Probabilities in the Sparre Andersen and Stationary Renewal Risk Models, *Astin Bulletin*, 2005, 35, 131-144.

Peer Reviewed Conference Proceedings

1. Badescu A.L., Cheung E., Landriault D. - The Laplace Transform of the Time to Ruin in a Bivariate Phase-type Risk Process, *Proceedings of the Fourth Brazilian Conference on Statistical Modeling in Insurance and Finance*, 2009.
2. Badescu A.L., Landriault D. - On the Dividend Moments in a Markovian Risk Model, *Proceedings of the Third Brazilian Conference on Statistical Modeling in Insurance and Finance*, 2007, 92-97.

PRESENTATIONS

Invited Conference and Workshop Presentations

- Using Mixture of Experts for ratemaking and claim reserving, ICAS Predictive Analytics Community of Practice Events, online event, March 2021.
- A New and Flexible Regression Model for Ratemaking and Reserving, Invited speaker at the CAS general annual Meeting, "November 2019, Honolulu, Hawaii
- Invited speaker at the General Annual Meeting of the Casualty Actuarial Society, "A New and Flexible Regression Model for Ratemaking and Reserving, November 2019, Honolulu, Hawaii.
- Keynote speaker at "Perspective on Actuarial Risks in Talks of Young Researchers", April 2019, Sibiu, Romania.

- Insurance risk models with Marked Poisson arrivals, October 2015, Oaxaca, Mexico, Invited speaker at the workshop "Recent Advances in Actuarial Science"

- Stochastic claim reserving with applications, June 2015, International Conference in Insurance, Bucharest, Romania.

- A risk model with reporting delays - INFORMS-APS, Costa Rica 2013.

- On some ruin problems for multidimensional risk process – Invited Speaker for the "Workshop an Queues and Risk", 4-7 March 2013, Eindhoven.

- Two dimensional risk processes with proportional reinsurance, The third workshop on Gerber-Shiu discounted penalty functions, University of Waterloo, Canada, 2010.

- Dependent risk models with bivariate phase-type distributions, The second workshop on Gerber-Shiu discounted penalty functions, Austrian Academy of Science, University of Linz, Linz, Austria, 2008.

- On the analysis of the Gerber-Shiu discounted penalty function, The first Gerber-Shiu workshop Montreal, Toronto, 2006, (also presented at EURO Reykjavik, Iceland).

- Risk models with constant dividend barrier, CORS conference Montreal, Canada, 2006.

- Risk models with constant dividend barrier, SSC London, 2006.

- Computational issues for risk processes analyzed as fluid queues, CORS/INFORMS Joint Meeting, Banff, Canada, 2004

- Using the Gaver-Stehfest inversion for long-tailed service time distributions, CORS/INFORMS Joint Meeting, Banff, Canada, 2004.

- A generalization of the DeVylder approximation for the probability of ruin, Actuarial Research Conference, Waterloo, Canada, 2003.

- Saddle point approximations for the evaluation of finite time ruin probabilities, CORS National Conference, Vancouver, Canada, 2003.

- A generalization of the DeVylder approximation with applications in queuing theory, CanQueue, Saskatoon, Canada, 2002.

- Simple approximations for the probability of ruin, INFORMS Annual Meeting, San Jose, U.S., 2002.

Contributed Conference Presentations

- Simple Estimations of IBNR reserves with Logit-weighted Reduced Mixture of Experts. Risk conference, Barcelona 2022.

- On the Logit-weighted Reduced Mixture of Experts models with insurance applications, SSC 2022, online

- On the Logit-weighted Reduced Mixture of Experts models with insurance applications, Insurance Data Science conference, New England Statistics Symposium, 2022, online.

- On the Logit-weighted Reduced Mixture of Experts models with insurance applications, Insurance Data Science conference, Milano 2022.

- Risk models with delays, "Relax" Conference, University of Liverpool, 2018

- An IBNR-RBNS insurance risk model, European Actuarial Conference, Lyon, France 2016.

- On a class of dependent Sparre Andersen risk models and a bailout application, Insurance: Mathematics and Economics, Atlanta, US, 2016

- Risk processes with delays, Actuarial Research Conference, Santa Barbara, US, 2014.

- Recursive Methods for a Two-Dimensional Risk Process with Common Shocks, Insurance: Mathematics and Economics, Italy, 2011.

- A two-dimensional risk model with proportional reinsurance, Astin Colloquia, Madrid, 2011.

- The use of vector valued martingales in risk theory, Insurance: Mathematics and Economics, Istanbul, Turkey, 2009.

- The Laplace transform of the time to ruin in a bivariate phase-type risk process, the Fourth Brazilian Conference on Statistical Modeling in Insurance and Finance, Maresias, Brazil, 2009.

- Risk processes with taxation, Insurance: Mathematics and Economics, China, 2008.

- Recursive calculation of the dividend moments in a multiple threshold risk model, Insurance: Mathematics and Economics, Athens, Greece, 2007.

- On the dividend moments in a Markovian risk process, Third Brazilian Conference on Statistical Modeling in Insurance and Finance, Maresias, Brazil, 2007.

- A two level dividend strategy in a ruin process with Markovian arrivals, Insurance: Mathematics and Economics, Leuven, Belgium, 2006.

- The joint density of the surplus prior to ruin and the deficit at ruin, Insurance: Mathematics and Economics, Quebec, Canada, 2005.

- Risk processes analyzed as fluid queues, Insurance: Mathematics and Economics, Rome, Italy, 2004.

- A generalization of the DeVylder approximation for the probability of ruin, Insurance: Mathematics and Economics, Lyon, France, 2003.

- Finite time ruin probabilities, South West Ontario Operations Research Day, London, Canada, 2003.

Invited Colloquium Presentations

- An IBNR-RBNS insurance risk model, Hong Kong University, Hong Kong, 2017.

- An IBNR-RBNS insurance risk model, CASS Business School, London, University of Liverpool, Liverpool, 2017.

- An IBNR-RBNS insurance risk model, University of Copenhagen, Denmark, 2016.

- Some results for bi-dimensional ruin problems, City University, University of Amsterdam, University Franche Compte, KU Leuven, departmental seminar, 2013.

- The classical ruin problem for multivariate risk processes, University of Connecticut, University of Liverpool, department seminar, 2012.

- Recursive Methods for a Two-Dimensional Risk Process with Common Shocks, Academy of Economic Studies, Romania, department seminar, 2011.

- A two-dimensional risk model with proportional reinsurance, University of Piraues, Greece, Actuarial Science Day, 2011.

- Bivariate dependent risk processes, University of Montreal, Canada, 2010.

- On the analysis of the Gerber Shiu discounted penalty function in MAP risk model, Sungkyunkwan University, Korea, 2008.

- Stochastic fluid flows and their risk applications, University of Seoul, Korea, 2008.

- o Return probabilities for stochastic fluid flows and their use in collective risk theory, University of Waterloo, Canada, 2008.

- o Return probabilities for stochastic fluid flows and their use in collective risk theory, University of Calgary, Canada, 2008.

- o Return probabilities for stochastic fluid flows and their use in collective risk theory, University of Toronto, Canada, 2008.

- o A two Level Dividend Strategy in a Ruin Process with Markovian Arrivals, University of Western Ontario, Canada, 2006.

- o Risk processes analyzed as fluid queues, University of Waterloo, Canada, 2005.

- o Risk processes analyzed as fluid queues, University of Calgary, Canada, 2004.

D. **LIST OF COURSES** (in the last 5 years)

Please refer to the Teaching Statement for more details about the course material.

Undergraduate courses

- - ACT230 Mathematics of Finance for Non-Actuaries

- - ACT240 Mathematics of Investment and Credit

- - ACT348 Advanced Life Contingencies

- - ACT455 Advanced Topics in Actuarial Science

- - ACT452 Loss Models 2

- - ACT466 Credibility and Simulation

Graduate courses

- - STA4509 Insurance Risk Models 1
- - STA2505 Credibility and Simulation

Supervision

Postdoctoral Fellows:

- - 2009 – 2010   Alexandru Valentin Asimit, A time dependent risk model, primary supervisor; secondary supervisor - Professor Sheldon Lin.

Doctoral Students:

- - 2021 – Hassan Abdelrahman, TBD.

- - 2020 – Sophia Ian Wen Chan, Insurance Telematics.

- 2019 – Sebastian Felipe Calcetero Vanegas, Credibility models with LRMoEs.

- 2018 – Chau Tseung, LRMoE and their applications in ratemaking and stochastic claim reserving

- 2017 - 2019, Tianle Chen, Micro Level Stochastic Reserving

- 2017 – 2020, Fung Tsz Chai, Predictive Modelling with HMM mixture models, co-supervised with Professor Sheldon Lin

- 2013 – 2016, Dameng Tang, Applications of Pascal Mixture Models to Insurance and Risk Management, co-supervised with Professor Sheldon Lin

- 2008 – 2014, Lan Gong, Applications of Erlang mixtures in insurance, co-supervised with Professor Sheldon Lin

- 2016 – present , Ph. D. Committee for Alex Yang, Department of Statistical Sciences, University of Toronto

- 2013 – 2015 , Ph. D. Committee for Yuxian Chong, Department of Statistical Sciences, University of Toronto.

- 2012 – 2014 , Ph. D. Committee for Pan Pan Wu, Department of Statistical Sciences, University of Toronto.

- 2012 – 2013 , Ph. D. Committee for Ryan Donnelly, Department of Statistical Sciences, University of Toronto.

- 2009 – 2014 , Ph. D. Committee for Yuxiang Chong, Department of Statistical Sciences, University of Toronto.

- 2006 – 2009, Ph. D. Committee for Simon Lee, Department of Statistical Sceinces, University of Toronto.

Master Students:

- 2022 - Yifeng Ge, - Identifying Risk Factors for Hazardous Driving and Accident Propensity

- 2022 – Kaihua Sun - Credit Scoring Using Alternate Data

- 2021 – 2022 Jiawei Yu - Assessing Risk for Hazardous Driving and Accident Propensity

- 2021 – 2022 Jack Ellis - Collision Detection with High-Rate Telematics Data

- 2021 – 2022 Malikeh Ehghangi - Data-driven Approach to Defining Symptoms of Mental and Cognitive Disorders from Noisy Data.

- 2019 – 2020 Sophia, Ian Wen Chan – Research Assistant, non thesis master.

- 2020 – 2021 Jianda Chen - Hand Pose Reconstruction with Advanced Sensor And Deep Learning

- 2017 – 2018 Tian Huan Guan – E Exploring different modelling techniques in operational risk capital calculation

- 2016 - 2017 Tianle Chen – Estimating the IBNR reserve for a marked Cox process

- 2015 - 2016 Di Wang – Stochastic Claim Reserving

- 2014 - 2015 Nasser Barjesteh, Markov arrival processes and their applications in insurance.

- 2012 – 2013 Adam Ng, Ruin Models with dividend barriers.

- 2012 – 2013 Lina Lin, Estimating IBNR losses – a practical application (joint supervision with Sheldon Lin).

- 2011 – 2012 Joshuah Touyz, Debit and Credit Interest Risk Models.

Undergraduate Students:

- 2019 (summer) Yujie Yang, NSERC USRA

- 2016 (summer) Chen Tianle, NSERC USRA

- 2015 (summer) Chen Tianle, NSERC USRA

- 2015 (summer) Fan Wang, NSERC UTEA

- 2012 (spring) Shining Tang, Fitting mixture of exponentials for property insurance.

- 2011 (fall) Li Li Lin, On De Vylder's approximation for ruin probabilities.

- 2011 (summer) Joshuah Touyz, Debit and Credit Interest Risk Models, USRA NSERC student.

- 2009 (summer) Mirabelle Hyunh, Risk Processes with Interest, USRA NSERC student.

- 2008 (summer) Jason Ricci, Dependence in Ruin Theory, USRA NSERC student.

E. **ADMINISTRATIVE POSITIONS**

DEPARTMENTAL AND UNIVERSITY SERVICE

o 2022-   Director of the Master of Financial Insurance, University of Toronto

o 2021-2022   Math Finance and Actuarial Science Hiring Committee, Department of Statistical Sciences, University of Toronto

o 2021 – 2022   Graduate Committee, Department of Statistical Sciences, University of Toronto

o 2020 – 2021   Graduate Committee, Master of Financial Insurance University of Toronto

o 2020-2021   SGS Connaught Award Committee, University of Toronto

o 2020-2021   Math Finance and Actuarial Science Hiring Committee, Department of Statistical Sciences, University of Toronto

o 2020-2021   Director, Data Science Programs for Statistical Sciences, University   of Toronto

o 2020 – 2021   Graduate Committee, Department of Statistical Sciences, University of Toronto

o 2020 – 2021   Executive Committee, Department of Statistical Sciences, University of Toronto

o 2019-2020   Undergraduate Committee Act Sci, Department of Statistical Sciences, University of Toronto

o 2019-2020   Graduate Committee, Department of Statistical Sciences, University of Toronto

o 2019-2020   Undergraduate Committee Act Sci, Department of Statistical Sciences, University of Toronto

o 2018-2019   Graduate Committee, Department of Statistical Sciences, University of Toronto.

o 2018 – 2019   Undergraduate Chair of Actuarial Science, Department

of Statistical Sciences, University of Toronto.

- o 2018 – 2019   Dean's representative in two hiring committees for Computer Science Department, University of Toronto.

- o 2017-2018   Undergraduate Committee, Department of Statistical Sciences, University of Toronto.

- o 2016-2017   Graduate Committee, Department of Statistical Sciences, University of Toronto.

- o 2017 -2018   Dean's representative in two hiring committees for Computer Science Department, University of Toronto.

- o 2016 - 2017   Member of the NSERC Post Graduate School committee of Math, Physics and Chemistry, University of Toronto.

- o 2015-2016   Undergraduate Committee, Department of Statistical Sciences, University of Toronto

- o 2010– 2015   Graduate Committee, Department of Statistical Sciences, University of Toronto.

- o 2015   Scientific Committee Chair for the ARC 2015, University of Toronto.

- o 2011 – 2012   Chair of a Panel Section in the Ontario Graduate Scholarship Committee, Ontario.

- o 2010 – 2011   Chair of the Seminar Committee, Department of Statistics, University of Toronto.

- o 2010 – 2011   Member of the Ontario Graduate Scholarship Selection Committee, Ontario

- o 2008 – present   Member of the Faculty of Arts and Science Council, University of Toronto.

- o 2008 – 2009   Member of the NSERC Post Graduate School committee of Math, Physics and Chemistry, University of Toronto.

- o 2008 – 2009   Graduate Committee, Department of Statistics, University of Toronto.

- o 2007 – 2008   Graduate Committee, Department of Statistics, University of Toronto.

- o 2006 – 2007   Undergraduate Committee, Department of Statistics, University of Toronto.

F.   **EXTERNAL PROFESIONAL SERVICES**

- External PhD examiner for Zyed Ben Salah, University of Montreal (2012)
- External PhD examiner for Emmanuel Thomson, University of Calgary (2013)
- External PhD examiner for Li Zhou, Western University (2014)