

# Daniel J. Lizotte

*Curriculum Vitae*

Computer Science | Epidemiology & Biostatistics  
The University of Western Ontario  
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RESEARCH INTERESTS	<b>Machine Learning for Health Informatics</b> with a focus on predictive models and decision support. Methodological interests include reinforcement learning with multiple outcomes, predictive models for heterogeneous populations and health equity.
ACADEMIC APPOINTMENTS	<b>Assistant Professor at the University of Western Ontario</b> 2015-Present <i>Department of Computer Science, Faculty of Science</i> <i>Department of Epidemiology &amp; Biostatistics, Schulich School of Medicine &amp; Dentistry</i> Cross-appointments: <i>Department of Statistical and Actuarial Sciences</i> <i>Schulich Interfaculty Program in Public Health</i> <b>Assistant Professor at the University of Waterloo</b> 2011-2014 <i>David R. Cheriton School of Computer Science, Faculty of Mathematics</i> <b>Postdoctoral Fellow at the University of Michigan</b> 2008-2011 <i>Department of Statistics, College of Literature, Science, and the Arts</i> <i>Population Studies Center, Institute for Social Research</i>
AFFILIATE AND ADJUNCT APPOINTMENTS	<b>Vector Faculty Affiliate</b> 2019-2021 Vector Institute <b>Adjunct Assistant Professor at the University of Waterloo</b> 2019-2021 School of Public Health and Health Services
EDUCATION	<b>Ph.D.</b> in Computing Science, University of Alberta 2008 <b>M.Sc.</b> in Computing Science, University of Alberta 2003 <b>B.C.S.</b> University of New Brunswick 2001
RESEARCH GRANTS	<b>NSPIRE-PHC Applied Health Research Question (AHRQ)</b> 2020-2021 Co-Principal Investigator with J. Kueper, Dr. A. Terry <i>\$36,166 for Creating an Action Plan for the Use of Artificial Intelligence: COVID-19 Pandemic and Recovery in Primary Health Care in Ontario.</i> <b>CIFAR AI and COVID-19 Catalyst Grant</b> 2020-2021 Collaborator <i>\$15 000 over 1 year (extended) for "Tracking Mental Health During the Coronavirus Pandemic"</i> <b>Fields Institute Workshop Grant</b> 2020-2021 Co-Organizer <i>\$15 000 over 1 year (extended) for "The Second Summer Institute on AI and Society"</i> <b>Western Research Catalyst Grant</b> 2020-2021 Co-Investigator <i>\$50 000 over 1 year for "Ethical, legal, and policy dimensions of scaling back social distancing and restrictive public health measures for the COVID-19 pandemic"</i>

<b>CIHR Planning and Dissemination Grant</b>	2019-2020
Principal Investigator \$24 950 over 2 years for <i>"Beyond Supervised Learning: Artificial Intelligence Tools to Help Public Health Stakeholders Serve Marginalized Populations"</i>	
<b>NSERC Engage</b>	2019
Principal Investigator, industry collaboration with PointClickCare \$25 000 over 6 months for <i>"Predictive modelling methodology for longitudinal data in long-term care"</i>	
<b>CIAR AI &amp; Society Call for Workshops</b>	2018-2019
Co-Applicant with Drs. Alona Fyshe (P.I.) and Ted Parson \$50 000 over 1 year for <i>"The Summer Institute for the Societal Impacts of AI"</i>	
<b>NSERC Discovery Grant</b>	2018-2024
Principal Investigator \$28 000/year for <i>"Machine learning methodology for sequential decision support from large-scale longitudinal data"</i>	
<b>CIHR Planning and Dissemination Grant</b>	2018-2019
Co-Applicant with Principal Applicant Dr. Merrick Zwarenstein \$19 933 for <i>"Artificial Intelligence for Screening and Secondary Prevention of Chronic Kidney Disease in a Learning Health System in Ontario (LeHSOn-AI)"</i>	
<b>NSERC Engage</b>	2017
Principal Investigator, industry collaboration with RightBlue Labs \$25 000 over 6 months for <i>"Data-driven prediction of mental health risk"</i>	
<b>Western Strategic Support for CIHR Success</b>	2017
Principal Investigator \$23 000 over 2 years for <i>"Rapid analysis of social media data to augment surveillance of foodborne disease outbreaks"</i>	
<b>Ontario Research Fund - Research Excellence (Round 8)</b>	2016
Co-Investigator with Principal Investigator Dr. Richard Kim \$100 000 of \$1.45 million over 5 years for <i>"Pharmacogenomics Technologies and Patient-Centred Approaches for Enhancing Drug Safety and Effectiveness"</i>	
<b>CIHR Project Grant</b>	2017
Co-Applicant with Principal Investigator Dr. Kelly Anderson \$720 000 over 3 years for <i>"Understanding the Role of the Family Physician in Early Psychosis Intervention: A Mixed Methods Study"</i>	
<b>CIHR Project Grant</b>	2017
Co-Applicant with Principal Investigator Dr. Manuel Montero-Odasso \$967 725 over 5 years for <i>"Gait as a clinical marker to predict progression to dementia syndromes in mild cognitive impairment"</i>	
<b>UWO Interdisciplinary Development Initiatives</b>	2016
Participant with Dr. K. Shoemaker (Director) and others \$200 000 over 3 years for <i>"The Smart, Healthy Campus," a data-driven mental health initiative</i>	
<b>Canadian Frailty Network Catalyst Grant Program</b>	2016-2017
Co-investigator with Principal Investigator Dr. Cheryl Forchuk and others \$100 000 for <i>"TELEPROM-G: A Study Evaluating Access and Care Delivery of Telehealth Services Among Community-Based Seniors"</i>	
<b>NSERC Discovery Grant</b>	2012-2018

Principal Investigator  
\$22 000/year for “Machine learning for non-myopic decision support and knowledge discovery”

**GRAND National Centre of Excellence Project PLATFORM2:CONFIG** 2014-2015  
co-Investigator with Principal Investigators Drs. M. Müller (Alberta) , H. Hoos (UBC)  
\$8 648 for “Optimizing CPLEX for Medical Decision Making Problems”

**Canada Foundation for Innovation - Leaders Opportunity Fund** 2013  
co-Principal Investigator Drs. Jesse Hoey and Pascal Poupart (Waterloo)  
Total \$442 330 from all sources for “Computational Health Informatics Lab Infrastructure”

#### AWARDS

**Izaak Walton Killam Memorial Scholarship** 2005–2007  
This is the most prestigious graduate award administered by the University of Alberta.

**Ralph Steinhauer Award of Distinction** 2005  
This award recognizes academic achievement of students studying in Alberta.

**NSERC Post Graduate Scholarship B** 2003–2005

**NSERC Post Graduate Scholarship A** 2001–2003

**University of New Brunswick** 2001  
**Computer Science Prize for Best Undergraduate Honours Thesis**

**Lieutenant Governor of New Brunswick Silver Medal** 2001  
This award is for the highest cumulative grade point average in Computer Science.

#### PUBLICATIONS

##### Journal Articles

[1] Jason E. Black, Jacqueline K. Kueper, Amanda L. Terry, and Daniel J. Lizotte. Development of a prognostic prediction model to estimate the risk of multiple chronic diseases: Constructing a copula-based model using canadian primary care electronic medical record data. *International Journal of Population Data Science*, 2020. 26 pages (manuscript), Accepted.

[2] Greta Bauer and Daniel J. Lizotte. Artificial intelligence, intersectionality, and the future of public health. *American Journal of Public Health*, 2020. Accepted. Opinion Editorial (Peer reviewed), [Impact Factor: 6.464].

[3] Jacqueline K. Kueper, Daniel J. Lizotte, Manuel Montero-Odasso, and Mark Speechley. Cognition and motor function: The gait and cognition pooled index. *PLOS ONE*, 2020. Accepted, [Impact Factor: 2.740].

[4] Nicole Schoer, Rebecca Rodrigues, Jennifer Reid, Bridget L. Ryan, Daniel J. Lizotte, Richard Booth, Arlene G. MacDougall, Paul Kurdyak, and Kelly K. Anderson. Patterns of primary care use prior to a first diagnosis of non-affective psychotic disorder in ontario, canada. *Canadian Journal of Psychiatry*, 2020. Accepted, [Impact Factor: 4.080].

[5] Danica Facca, Maxwell Smith, Jacob Shelley, Daniel J. Lizotte, and Lorie Donelle. Exploring the ethical issues in research using digital data collection strategies with minors: A scoping review. *PLOS ONE*, 2020. Accepted, [Impact Factor: 2.740].

[6] Kathryn Nicholson, Tine de Burghgraeve, Martin Fortin, Lauren Griffith, Silvan Licher, Dan Lizotte, Frances Mair, Ruben Miozzo, Maede Sadat Nouri, Bridget Ryan, Eng Sing Lee, Susan Smith, Moira Stewart, Amanda Terry, Mayra Tisminetzky,

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\*Directly-supervised trainees are underlined.

Maria Ukhanova, Stephen Wetmore, and Saverio Stranges. Advancing cross-national planning and partnership: Proceedings from the international multimorbidity symposium 2019. *Journal of Comorbidity*, 2020. Accepted.

[7] Sheikh S. Abdullah, Neda Rostamzadeh, Kamran Sedig, Daniel J. Lizotte, Amit X. Garg, and Eric McArthur. Machine learning for identifying medication-associated acute kidney injury. *Informatics*, 7(2):18, May 2020.

[8] Jason Black, Amanda Terry, and Daniel Lizotte. Development and evaluation of an osteoarthritis risk model for integration into primary care health information technology. *International Journal of Medical Informatics*, 2020. 23 pages (manuscript), Accepted, [Impact Factor: 2.731].

[9] Jacqueline Kueper, Amanda Terry, Merrick Zwarenstein, and Daniel J. Lizotte. Artificial Intelligence and primary care research: A scoping review. *The Annals of Family Medicine*, 18:250–258, May 2020. [Impact Factor: 6.092].

[10] Lavanya Uruthiramoorthy, Daniel Lizotte, Monali Malvankar, Cindy Hutnik, and Kathy Speechley. Estimating patient-reported outcomes for glaucoma management: Cross-sectional study. *Journal of Evidence-Based Medicine*, 13:8–16, 2020. [Impact Factor: 1.00].

[11] Markus Gulilat, Denise Keller, Bradley Linton, Pananos, A. Demetri, Daniel Lizotte, George K. Dresser, Jeffrey Alfonsi, Rommel G. Tirona, Richard B. Kim, and Ute I. Schwarz. Drug interactions and pharmacogenetic factors contribute to variation in apixaban concentration in atrial fibrillation patients in routine care. *Journal of Thrombosis and Thrombolysis*, 49(2):294–303, Feb 2020. [Impact Factor: 2.941].

[12] Carter W. Lim, Vlad Diaconita, Eddie Liu, Nicholas Ault, Daniel Lizotte, Mary Nguyen, and Cindy M.L. Hutnik. Effect of 6-week washout period on intraocular pressure following chronic prostaglandin analogue treatment: a randomized controlled trial. *Canadian Journal of Ophthalmology*, 55(2):143 – 151, 2020. [Impact Factor: 1.305].

[13] Daniel J. Lizotte, Mayuri Mahendran, Siobhan M. Churchill, and Greta R. Bauer. Math versus meaning in MAIHDA: A commentary on multilevel statistical models for quantitative intersectionality. *Social Science & Medicine*, 245:112500, 2020. [Impact Factor: 3.087].

[14] Davis, Brent D., Kamran Sedig, and Daniel J. Lizotte. Archetype-based modeling and search of social media. *Big Data and Cognitive Computing*, 3(3), 2019.

[15] Emma Farago, Shrikant Chinchalkar, Daniel J. Lizotte, and Ana Luisa Trejos. Development of an EMG-based muscle health model for elbow trauma patients. *Sensors*, 19(15), 2019. [Impact Factor: 2.677].

[16] Eliseos J. Mucaki, Jonathan Z. L. Zhao, Daniel J. Lizotte, and Peter K. Rogan. Predicting response to platinum chemotherapy agents with biochemically-inspired machine learning. *Signal Transduction and Targeted Therapy*, 4(1):1–12, 2019. [Impact Factor: 5.873].

[17] Thomas Akdeniz, Daniel J. Lizotte, and Nasser Abukhdeir. A generalised shapelet-based method for analysis of nanostructured surface imaging. *Nanotechnology*, 30(7):1–9, 2018. [Impact Factor: 3.399].

[18] Kelly K. Anderson, Suzanne Archie, Richard G. Booth, Chiachen Cheng, Daniel Lizotte, Arlene G. MacDougall, Ross M. G. Norman, Bridget L. Ryan, Amanda L. Terry, Rebecca Rodrigues, and et al. Understanding the role of the family physician in early

psychosis intervention. *BJPsych Open*, 4(6):447–453, 2018.

[19] Laura E. Jansen, Wendy A. Teft, Rhiannon V. Rose, Daniel J. Lizotte, and Richard B. Kim. CYP2D6 genotype and endoxifen plasma concentration do not predict hot flash severity during tamoxifen therapy. *Breast Cancer Research and Treatment*, 171(3):701–708, Oct 2018. [Impact Factor: 3.471].

[20] Daniel J. Lizotte and Arezoo Tahmasebi. Prediction and tolerance intervals for Dynamic Treatment Regimes. *Statistical Methods in Medical Research*, 26(4):1611–1629, 2017. [Impact Factor: 2.388].

[21] Markus Gulilat, Anthony Tang, Steven E. Gryn, Peter Leong-Sit, Allan C. Skanes, Jeffrey E. Alfonsi, George K. Dresser, Sara L. Henderson, Rhiannon V. Rose, Daniel J. Lizotte, Wendy A. Teft, Ute I. Schwarz, Rommel G. Tirona, and Richard B. Kim. Interpatient variation in rivaroxaban and apixaban plasma concentrations in routine care. *Canadian Journal of Cardiology*, 33(8):1036–1043, 2017. [Impact Factor: 5.592].

[22] Daniel J. Lizotte and Eric B. Laber. Multi-objective Markov decision processes for data-driven decision support. *Journal of Machine Learning Research*, 17(211):1–28, 2016. [Impact Factor: 4.091].

[23] Suderman, Robert, Daniel J. Lizotte, and Nasser Mohieddin Abukhdeir. Theory and application of shapelets to the analysis of surface self-assembly imaging. *Phys. Rev. E*, 91:033307, Mar 2015. [Impact Factor: 2.353].

[24] E. B. Laber, D. J. Lizotte, M. Qian, W. E. Pelham, and S. A. Murphy. Dynamic treatment regimes: technical challenges and applications. *Electronic Journal of Statistics*, 8(1):1225–1272, 2014. [Impact Factor: 1.529].

[25] George Zhu, Daniel J. Lizotte, and Jesse Hoey. Scalable approximate policies for Markov decision process models of hospital elective admissions. *Artificial Intelligence in Medicine*, 61(1):21–34, May 2014. [Impact Factor: 3.574].

[26] Eric B. Laber, Daniel J. Lizotte, and Bradley Ferguson. Set-valued dynamic treatment regimes for competing outcomes. *Biometrics*, 70(1):53–61, March 2014. [Impact Factor: 1.755].

[27] Luiza Antonie, Kris Inwood, Daniel J. Lizotte, and J. Andrew Ross. Tracking people over time in 19th century Canada for longitudinal analysis. *Machine Learning*, 95:129–146, 2013. [Impact Factor: 2.809].

[28] Daniel J. Lizotte, Michael Bowling, and Susan A. Murphy. Linear fitted-Q iteration with multiple reward functions. *Journal of Machine Learning Research*, 13:3253–3295, Nov 2012. [Impact Factor: 4.091].

[29] Daniel Almirall, Daniel J. Lizotte, and Susan A. Murphy. Comment on “Evaluation of Viable Dynamic Treatment Regimes in a Sequentially Randomized Trial of Advanced Prostate Cancer” by L. Wang, A. Rotnitzky, X. Lin, R. E. Millikan and P. F. Thall. *Journal of the American Statistical Association, Applications and Case Studies*, 107(498):509–512, 2012.

[30] Daniel Lizotte, Russell Greiner, and Dale Schuurmans. An experimental methodology for response surface optimization methods. *The Journal of Global Optimization*, 53(4):699–736, 2012.

[31] Susan Shortreed, Eric Laber, Daniel Lizotte, T. Stroup, Joelle Pineau, and Susan Murphy. Informing sequential clinical decision-making through reinforcement learning: an empirical study. *Machine Learning*, 84:109–136, 2011. [Impact Factor: 2.809].

[32] Ruth E. Shaw, Lawrence E. Garey, and Daniel J. Lizotte. A parallel numerical algorithm for Fredholm integro-differential two-point boundary value problems. *The International Journal of Computer Mathematics*, 77:305–318, 2000. [Impact Factor: 1.196].

### Refereed Conferences - Full Papers

[33] A. Demetri Pananos and Daniel J. Lizotte. Comparisons between hamiltonian monte carlo and maximum a posteriori for a bayesian model for apixaban induction dose & dose personalization. In *Proceedings of Machine Learning for Healthcare*, pages 1–15, 2020. Accepted, [Acceptance Rate: 35%].

[34] Maria Jahja and Daniel J. Lizotte. Visualizing clinical significance with prediction and tolerance regions. In *Proceedings of the 2nd Machine Learning for Healthcare Conference*, JMLR Workshop and Conference Proceedings, 2017. 8 pages, [Acceptance Rate: 33%].

[35] Rhiannon V. Rose and Daniel J. Lizotte. gLOP: the global and Local penalty for capturing predictive heterogeneity. In *Finale Doshi-Velez, Jim Fackler, David Kale, Byron Wallace, and Jenna Wiens, editors, Proceedings of the 1st Machine Learning for Healthcare Conference*, volume 56 of *JMLR Workshop and Conference Proceedings*, 2016. 8 pages, [Acceptance Rate: 33%].

[36] Michael Cormier, Daniel J. Lizotte, and Richard Mann. Reconstruction of 3-D density functions from few projections: Structural assumptions for graceful degradation. In *12th Conference on Computer and Robot Vision*, pages 147–154, 2015. [Acceptance Rate: 27% (for oral presentations)].

[37] Adedamola Adepetu, Elnaz Rezaei, Daniel Lizotte, and Srinivasan Keshav. Critiquing time-of-use pricing in Ontario. In *IEEE SmartGridComm Symposium*, pages 223–228. IEEE Press, 2013. [Acceptance Rate: 40%].

[38] Tameem Adel, Ruth Urner, Benn Smith, Daniel Stashuk, and Daniel J. Lizotte. Generative multiple-instance learning models for quantitative electromyography. In *Ann Nicholson and Padhraic Smyth, editors, Proceedings of the 29th conference on Uncertainty in Artificial Intelligence (UAI)*, pages 2–11, Corvallis, Oregon, 2013. AUAI Press. Selected for oral oresentation, [Acceptance Rate: 31%].

[39] Rayman Preet Singh, Peter Xiang Gao, and Daniel J. Lizotte. On hourly home peak load prediction. In *IEEE SmartGridComm Symposium*, pages 163–168. IEEE Press, 2012. Best Paper Award, [Acceptance Rate: 44%].

[40] A. Khan, J.A. Doucette, R. Cohen, and D.J. Lizotte. Integrating machine learning into a medical decision support system to address the problem of missing patient data. In *11th International Conference on Machine Learning and Applications (ICMLA)*, volume 1, pages 454–457, Dec. 2012. [Acceptance Rate: 37%].

[41] Shehroz S. Khan, Jesse Hoey, and Daniel Lizotte. Bayesian multiple imputation approaches for one-class classification. In *Leila Kosseim and Diana Inkpen, editors, Advances in Artificial Intelligence*, volume 7310 of *Lecture Notes in Computer Science*, pages 331–336. Springer, 2012. [Acceptance Rate: 29%].

[42] Daniel J. Lizotte. Convergent fitted value iteration with linear function approximation. In *J. Shawe-Taylor, R.S. Zemel, P. Bartlett, F.C.N. Pereira, and K.Q. Weinberger, editors, Advances in Neural Information Processing Systems 24*, pages 2537–2545. NIPS Foundation, 2011. [Acceptance Rate: 22%].

[43] Daniel J. Lizotte, Michael Bowling, and Susan A. Murphy. Efficient reinforcement learning with multiple reward functions for randomized clinical trial analysis. In

*Proceedings of the 27th International Conference on Machine Learning (ICML)*, pages 695–702, 2010. [Acceptance Rate: 26%].

[44] Tao Wang, Daniel Lizotte, Michael Bowling, and Dale Schuurmans. Stable dual dynamic programming. In *Advances in Neural Information Processing Systems (NIPS)*, pages 713–720, 2007. [Acceptance Rate: 22%].

[45] Daniel Lizotte, Tao Wang, Michael Bowling, and Dale Schuurmans. Automatic gait optimization with Gaussian process regression. In *Proceedings of the 20th International Joint Conference on Artificial Intelligence (IJCAI)*, pages 944–949, 2007. [Acceptance Rate: 35%].

[46] Qin Wang, Colin Cherry, Daniel Lizotte, and Dale Schuurmans. Improved large margin dependency parsing via local constraints and Laplacian regularization. In *Proceedings of the Tenth Conference on Computational Natural Language Learning (CONLL-06)*, pages 21–28, 2006. [Acceptance Rate: 35%].

[47] Tao Wang, Daniel Lizotte, Michael Bowling, and Dale Schuurmans. Bayesian sparse sampling for on-line reward optimization. In *Proceedings of the 22nd International Conference on Machine Learning (ICML)*, pages 961–968, 2005. [Acceptance Rate: 27%].

[48] Omid Madani, Daniel Lizotte, and Russell Greiner. Active model selection. In *Proceedings of the 20th conference on Uncertainty in Artificial Intelligence (UAI)*, pages 357–365, 2004. [Acceptance Rate: 30%].

[49] Daniel Lizotte, Omid Madani, and Russell Greiner. Budgeted learning of naïve-Bayes classifiers. In *19th Conference on Uncertainty in Artificial Intelligence (UAI)*, pages 378–385, 2003. [Acceptance Rate: 33%].

[50] Daniel Lizotte and Hong Zhang. Trading confidence for communications. In *IEEE International Conference on Systems, Man and Cybernetics (SMC)*, volume 1, pages 935–940, 2004.

[51] Daniel Lizotte, Eric Aubanel, and Virendra Bhavsar. Chapter 12: Nonuniform DFT applications in MRI: Parallel algorithms and implementations on the IBM SP. In Robert D. Kent and Todd W. Sands, editors, *High Performance Computing Systems and Applications*, pages 41–54, Norwell, MA, 2003. Kluwer Academic Publishers.

[52] Daniel Lizotte, Lawrence Garey, and Ruth Shaw. A parallel numerical algorithm for boundary-value FIDEs on a PC cluster. In *Proceedings of the International Parallel and Distributed Processing Symposium (IPDPS)*, pages 397–402, 2002. [Acceptance Rate: 38%].

### **Refereed Conferences - Abstracts**

[53] Jacqueline K. Kueper, Amanda L. Terry, Merrick Zwarenstein, and Daniel J. Lizotte. A scoping review on artificial intelligence and primary care: Where is the research field now and where does it need to go? In *Proceedings of the 2019 North American Primary Care Research Group Annual Meeting*, 2019.

[54] Jacqueline K. Kueper, Jennifer Rayner, Amanda L. Terry, Amit Garg, Danielle M Nash, Erin Huner, Judy Belle Brown, Merrick Zwarenstein, Richard Booth, and Daniel J. Lizotte. Impact of social determinants of health information on predictive models for chronic kidney disease in primary health care. In *Proceedings of the 40th Annual North American Meeting of the Society for Medical Decision Making*, 2018.

[55] Jason Black, Daniel J. Lizotte, and Amanda L. Terry. Framr-emr: Framework for prognostic predictive model development using electronic medical record data with a

case study in osteoarthritis risk. In *Proceedings of the 2017 North American Primary Care Research Group Annual Meeting*, 2017.

[56] Maria Jahja and Daniel J. Lizotte. Prediction regions and tolerance regions for multi-objective markov decision processes. In *Proceedings of the 3rd Multidisciplinary Conference on Reinforcement Learning and Decision Making*, 2017. 4-page extended abstract.

[57] Kueper, J K, D J Lizotte, M Montero-Odasso, and M Speechley. Cognition and motor function: A novel outcome measure for studies of pre-dementia syndromes. In *Canadian Society of Epidemiology and Biostatistics 2017 Conference: From Molecules to Population*, 2017.

[58] Lavanya Uruthiramoorthy, Daniel J. Lizotte, Monali Malvankar, and Cindy Hutnik. Predicting important patient domains for glaucoma management. In *Canadian Society of Epidemiology and Biostatistics 2017 Conference: From Molecules to Population*, 2017.

[59] Cheryl Forchuk, Marnin Heisel, Tony O'Regan, Akshya Vasudev, Amer Burhan, Anne Skelton, Richard Booth, Wafa'a Ta'an, Jeffrey Hoch, Abraham Rudnick, Daniel Lizotte, and Jeffrey Reiss. Teleprom-g a study evaluating access and care delivery of telehealth services among community-based seniors. In *Future Technologies Conference*, 2017.

[60] Katherina Baranova, Eliseos Mucaki, Dimo Angelov, Daniel J. Lizotte, and Peter Rogan. Cisplatin response prediction in recurrent bladder cancer using biochemically-inspired machine learning. In *Great Lakes Bioinformatics and Canadian Computational Biology Conference*, 2016.

[61] Daniel J. Lizotte. Multi-objective markov decision processes for decision support. In *Proceedings of the 2nd Multidisciplinary Conference on Reinforcement Learning and Decision Making*, 2015. 4-page extended abstract.

### **Book Chapters**

[62] Daniel Lizotte. *Wiley StatsRef*, chapter Reinforcement Learning. Wiley, 2017. 3000 words.

### **Commentaries**

[63] Edward (Ted) A. Parson, Alona Fyshe, and Dan Lizotte. Artificial intelligence's societal impacts, governance, and ethics. Technical Report No. 19-44, UCLA School of Law, Public Law Research Paper, September 2019. Available at SSRN: <https://ssrn.com/abstract=3476399>.

### **Educational Cases in Public Health**

[64] S.L. Sibbald, J.R. Graham, and D.J. Lizotte. Development of an electronic health record strategy at the Glenburn public health unit. In S.L. Sibbald and G. McKinley, editors, *Western Public Health Casebook*. Public Health Casebook Publishing, London, ON, 2019.

### **Theses**

[65] Daniel Lizotte. *Practical Bayesian optimization*. PhD thesis, U. of Alberta, 2008.

[66] Daniel Lizotte. Budgeted learning of naïve Bayes classifiers. Master's thesis, University of Alberta, 2003.



WORKSHOPS,  
PRESENTATIONS,  
AND TUTORIALS

- Bayesian Pharmacokinetic Models for Dose Personalization** 2020  
Contributed talk at the Joint Statistical Meetings  
Philadelphia, USA (virtual)
- Introduction to AI, and scoping review on AI in Primary Health Care** 2019  
Invited talk with Jacqueline Kueper at Artificial INTELLIGENCE for efficient community  
based primary healTh CARE (INTELLIGENT-CARE) Workshop  
Québec, QC, Canada
- Characterizing Outcome Distributions of Dynamic Treatment Regimes** 2019  
Contributed talk in Emerging Challenges in Precision Medicine — Topic Contributed  
Papers at the Joint Statistical Meeting  
Denver, CO, USA
- Machine Learning and Opportunities for Health Promotion** 2019  
Invited talk at the IPPH-CIFAR Workshop on AI for Public Health Equity  
Toronto, ON, Canada
- AI Tools to Support Population Health Stakeholders** 2018  
Invited talk at the Symposium on Exploring the Role of Artificial Intelligence in Population  
Health Risk Assessment  
Toronto, ON, Canada
- Characterizing Outcome Distributions of Dynamic Treatment Regimes** 2018  
Invited talk at the Statistical Society of Canada Annual Meeting  
Montreal, QC, Canada
- Risk and Reward: Challenges and opportunities  
in electronic medical record data** 2017  
Invited talk at the Centre de recherches mathématiques Workshop on  
Risk Modeling, Management and Mitigation in Health Sciences.  
Montreal, QC, Canada
- Evaluating Sequences of Treatments using Big and Small Data** 2017  
Invited talk at Lawson Research Mental Health Group Retreat.  
London, ON, Canada
- Smart, Healthy Campus: Building leadership and psychological resilience  
in undergraduate students** 2017  
Presentation with Dr. Kevin Shoemaker. Bond University/Western University  
Collaboration Initiative  
Gold Coast, QLD, Australia
- Multi-objective Markov Decision Processes for Decision Support** 2015  
Contributed talk (15% acceptance) at RLDM, The Multi-disciplinary Conference on  
Reinforcement Learning and Decision Making (extended abstract available)
- Set-Valued Dynamic Treatment Regimes for Competing Outcomes** 2015  
Invited talk, Toyota AI Seminar Series at the University of Michigan
- Set-Valued Dynamic Treatment Regimes for Competing Outcomes** 2014  
Contributed talk, International Symposium on Business and Industrial Statistics and  
Conference of the ASA Section on Statistical Learning and Data Mining
- Linear Fitted-Q Iteration with Multiple Reward Functions** 2013  
Contributed talk, 23rd International Conference on Automated Planning and Scheduling  
(ICAPS), Journal Presentation track

<b>Multi-Objective RL for Decision Support</b>	2013
Invited talk at the Planning and Learning Workshop at the 23rd International Conference on Automated Planning and Scheduling (ICAPS)	
<b>The Reward Hypothesis, the Rationality Assumption, and Decision Support</b>	2013
Invited talk, University of Alberta AI Seminar	
<b>Optimality and Preference in Dynamic Treatment Regimes</b>	2013
Invited talk, University of Washington Center for Statistics and the Social Sciences	
<b>Possible Futures: Complexity in Sequential Decision-Making</b>	2013
Invited talk, Waterloo Institute for Complexity & Innovation	
<b>The Role of Active Learning in Sequential Decision-Making</b>	2012
Contributed talk, Joint Statistical Meeting	
<b>Supporting Preference-aware Sequential Medical Decision Making</b>	2012
Contributed talk, Workshop on Meaningful Use of Complex Medical Data	
<b>Inverse Preference Elicitation for Sequential Decision Making</b>	2011
Invited talk, INFORMS Healthcare Conference in Montreal, QC	
<b>Reward Preferences in Reinforcement Learning</b>	2011
Invited talk, Université de Liège	
<b>Learning and Planning from Batch Time Series Data</b>	2010
Principal organizer. Workshop at Neural Information Processing Systems	
<b>Gaussian Process Response Surface Optimization</b>	2010
Invited talk, INFORMS Computing Society meeting in Austin, TX	
<b>Gaussian Process Response Surface Optimization</b>	2009
Invited talk, NIPS Workshop on Adaptive Sensing, Active Learning and Experimental Design: Theory, Methods and Applications	
<b>Adaptive Treatment Strategies</b>	2009
Invited talk at the Wayne State University Pediatric Prevention Research Center	
<b>Bayesian Global Optimization for Robot Gait Learning</b>	2007
Invited talk, Reykjavík University	
<b>Comparisons Between Hamiltonian Monte Carlo and Maximum A Posteriori For A Bayesian Model For Apixaban Induction Dose &amp; Dose Personalization</b>	2020
Machine Learning for Health Care, Stanford, USA. (virtual) Poster presentation by A. Demetri Pananos (accompanying full paper submission.)	
<b>Artificial Intelligence and Primary Care: What research has been done and how do we move forward?</b>	2019
Trillium Primary Health Care Research Day. Toronto, ON. Poster presentation by Kueper, J.K.; Terry, A.L.; Zwarenstein, M.; Lizotte, D.J.	
<b>Impact of social determinants of health information on predictive models for chronic kidney disease in primary health care</b>	2018
Society for Medical Decision Making, Montreal, QC. Poster presentation by Jacqueline Kueper (PhD Western) with co-authors	

STUDENT  
PRESENTATIONS

- FRAMR-EMR: Framework for Prognostic Predictive Model Development** 2017  
**Using Electronic Medical Record Data With a Case Study in Osteoarthritis Risk**  
 North American Primary Care Research Group Conference, Montreal, QC.  
 Oral presentation by Jason Black (MSc Western) with co-authors Dr. Amanda Terry
- Cognition and Motor Function: A Novel Outcome Measure** 2017  
**for Studies of Pre-Dementia Syndromes**  
 Canadian Society of Epidemiology and Biostatistics 2017 Conference: From Molecules to Population, Banff, AB.  
 Oral presentation by Jacqueline Kueper (MSc Western) with co-authors Drs. Mark Speechley and Manuel Montero-Odasso
- Predicting Important Patient Domains for Glaucoma Management** 2017  
 Canadian Society of Epidemiology and Biostatistics 2017 Conference: From Molecules to Population, Banff, AB.  
 Oral presentation by Lavanya Uruthiramoorthy (MSc Western) with co-authors Drs. Monali Malvankar and Cindy Hutnik
- Health Related Quality of Life of Glaucoma and Glaucoma Suspect Patients** 2016  
 Western Ophthalmology Research Day, London, ON.  
 Oral Presentation by Lavanya Uruthiramoorthy (MSc Western) with co-authors Drs. Monali Malvankar and Cindy Hutnik
- gLOP: the global and Local Penalty for Capturing Predictive Heterogeneity** 2016  
 Machine Learning for Healthcare Conference, Los Angeles, CA  
 Poster Presentation by Rhiannon Rose (PhD Western) (full paper available)
- gLOP: A Penalized Regression Framework** 2015  
**with Applications in Exploratory and Predictive Healthcare Data Analysis**  
 Neural Information Processing Systems Workshop on Machine Learning for Healthcare, Montreal, QC.  
 Poster Presentation by Rhiannon Rose (PhD Western) (extended abstract available)
- Modelling the Effect of Mechanical Ventilation** 2013  
 Meaningful Use of Complex Medical Data at Children's Hospital Los Angeles  
 Oral Presentation by Chengbo Li (MMath Waterloo)
- Temporal Modelling of Patient-controlled Analgesia** 2013  
 Meaningful Use of Complex Medical Data at Children's Hospital Los Angeles  
 Poster Presentation by Rhiannon Rose (MMath Waterloo)
- Pattern Recognition and Characterization for Surface Self-Assembly Imaging** 2013  
 Waterloo Cheriton Symposium Poster Competition – Honourable Mention  
 Poster Presentation by Robert Suderman (MMath Waterloo)
- Pattern Recognition and Characterization for Surface Self-Assembly Imaging** 2013  
 Surface Canada Conference  
 Oral Presentation by Robert Suderman (MMath Waterloo)
- Bayesian Contact Tracing for Communicable Respiratory Disease** 2012  
 Society for Medical Decision Making  
 Poster Presentation by Ayman Shalaby (MMath Waterloo)

TEACHING  
 EXPERIENCE

**Instructor - Western**  
 CS 4433/9117/9647 - Unstructured Data

W18, W19, W20

MPH 9117 - Public Health Informatics	W17, W18, W19, W20
CS 4414/9114/9637 - Introduction to Data Science I	F17, F18, F19
CS 4437/9637 - Introduction to Data Science	W16, W17
EPIDEMIO 4715/9560 - Design and Analysis of Clinical Trials	W16

**Instructor - Waterloo**

I was recognized within University of Waterloo Computer Science as a Top Instructor for all of my undergraduate offerings.

CS 886 - Topics in AI: Applied Machine Learning	W12, F12, S13, F14
CS 136 - Elementary Algorithm Design and Data Abstraction	F11, F12, F13
CS 135 - Designing Functional Programs	F14

**Instructor - Reykjavík University**

T-529-ITME - Introduction to Machine learning	S07
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SUPERVISION

**Postdoctoral Supervision**

Ethan Jackson (PhD Computer Science), “Predictive modelling long-term care”  
1/2019–4/2019

Dr. Jackson assisted with the successful preparation and submission of a collaborative grant with PointClickCare, a leading provider of electronic health record software to the long-term care sector, and he worked with PCC staff to construct a first round of predictive models and evaluations for the project. Although Dr. Jackson was unable to complete the project he is now working at the Vector Institute with a focus on health partnerships.

Katherine Mathers (PhD Biology), “Predictive modelling in long-term care”  
5/2019–8/2019

Dr. Mathers stepped into the aforementioned project upon the departure of Dr. Jackson. Building on her outstanding research record in physiology and biochemistry, applied to metabolic regulation during hibernation and pregnancy, she continued the modelling work through to the end of the project and is now employed as a full-time member of the PCC Data Intelligence team. Dr. Mathers continues to facilitate interaction and collaboration between my research group and PCC as we embark on a larger project.

**Current Graduate Supervision - PhD**

Parisa Shooshtari, “Quantitative intersectionality research in epidemiology”  
PhD in Epidemiology, *co-supervised with Dr. Greta Bauer*  
9/2020–

Steven Hun Lee, “Machine learning and network analysis methods for the epidemiology of mental health”  
PhD in Epidemiology, *co-supervised with Dr. Kelly Anderson*  
9/2020–

Caroline Strickland, “Reinforcement learning methodology for decision support in primary and long-term care”  
PhD in Computer Science  
9/2019–

A. Demetri Pananos, “Combining pharmacokinetics, pharmacodynamics, and machine learning to improve models for personalized medicine”  
PhD in Biostatistics  
9/2017–

Jacqueline Kueper, "Artificial Intelligence methodology for learning primary healthcare systems"  
Combined PhD in Epidemiology and Computer Science  
9/2017–

Mozhgan Salimiparsa "Visual analytics for health informatics"  
PhD in Computer Science, *co-supervised* w/Dr. Kamran Sedig  
9/2018–

Brent Davis, "Disease outbreak surveillance and decision support using social media"  
PhD in Computer Science, *co-supervised* w/Dr. Kamran Sedig  
Started MSc 9/2015, transferred to PhD  
9/2016–

#### **Completed Graduate Supervision - PhD**

Rhiannon Rose, "Improving Prediction of Systemic Statin Exposure Using Concomitant Medications, Non-Linear Modelling, and Novel SNP Discovery"  
PhD in Epidemiology  
9/2014–9/2018

#### **Completed Graduate Supervision - MSc**

Steve Hun Lee, "Impact of Social Determinants of Health on the Cost of Coronary Artery Bypass Graft "  
MSc in Epidemiology, *co-supervised* w/Dr. Ava John-Baptiste  
9/2018–10/2020

Nathan Phelps, "Reinforcement learning in large, structured action spaces: A simulation study of decision support for spinal cord injury rehabilitation"  
MSc in Computer Science  
9/2018–7/2020

Maede Nouri, "A Visual Analytics System for Investigating Multimorbidity Using Supervised Machine Learning"  
MSc in Computer Science, *co-supervised* w/Dr. Kamran Sedig  
9/2018–4/2020

Nima Gheisarzadeh, "Pathways to care for persons with first-episode psychosis"  
MSc in Epidemiology, *co-supervised* w/Dr. Kelly Anderson  
9/2016–8/2019

Jason Black, "Prognostic Predictive Model to Estimate the Risk of Multiple Chronic Diseases: Constructing Copulas Using Electronic Medical Record Data"  
MSc in Epidemiology  
9/2016–9/2018

Elham Harirpoush, "Baseline Assisted Classification of Heart Rate Variability"  
MSc in Computer Science  
9/2016–5/2018

Patrick Kim, "Chronic Disease Risk Prediction Models and their Impact on Behavioural and Health Outcomes: A Systematic Review and Meta-analysis "  
MSc in Epidemiology, *co-supervised* w/Dr. Amanda Terry  
9/2015–12/2017

Lavanya Uruthiramoorthy, "Predicting Important Patient-Reported Outcomes for Glaucoma

Management: Cross-Sectional Study"  
MSc in Epidemiology, *co-supervised* w/Dr. Monali Malvankar  
9/2015–8/2017

Chengbo Li, "Sensitivity Analysis for Causal Inference with Decision Trees"  
MMath in Computer Science (Waterloo)  
9/2012–5/2015

Robert Suderman, "Pattern Understanding for Images of Self-assembled Nanomaterials"  
MMath in Computer Science (Waterloo) *co-supervised* w/Dr. N. Abukhdeir  
9/2012–9/2014

Rhiannon Rose, "gLOP: A Cleaner Dirty Model for Multitask Learning"  
MMath in Computer Science (Waterloo)  
9/2012–9/2014

Michael Cormier, "3D Reconstruction from Single Projections, with Applications to  
Astronomical Images"  
MMath in Computer Science (Waterloo) *co-supervised* w/Dr. R. Mann  
9/2011–9/2013

Ayman Shalaby, "Bayesian Methods for Syndromic Surveillance"  
MMath in Computer Science (Waterloo)  
9/2011–5/2014 (Part time)

#### **Research Assistant Supervision (non-degree)**

Arezoo Tahmasebi - Part time research assistant W16

#### **Undergraduate Supervision**

Sejin Kim - Medical Health Informatics 4980E Final Project F19-W20

Daniel Zhang - Epidemiology 4400Z Thesis F19-W20

Michael Lambert - Epidemiology 4400Z Thesis F18-W19

Cole Fisher - Computer Science 4490Z Thesis W17-F17

Diana Varyvoda - Computer Science 4490Z Thesis F17-W18

Jeremy Huang - Computer Science 4490Z Thesis F16-W17

Maria Jahja - Visiting Research Assistant S16

Jason Black - Medical Health Informatics 4980E Final Project F15-W16

Shannon Brown - Computer Science 3380B Final Project W15

#### **Thesis Reading and Committee Membership**

Anton Ninkov - Examiner for PhD (Library and Info. Sci.) under Dr. K. Sedig 2020

Vincent Sippola - Examiner for MSc (CS) under Dr. R. Mercer 2020

Sarah Singh - Examiner for PhD (Epidemiology) under Dr. S. Frisbee 2020

Moutasem Zakkar - C'tee Member for PhD (Public Health and Health Systems)  
under Dr. Craig Janes, U. of Waterloo 2020

Connor Chato - Examiner for MSc (Pathology) under Dr. Art Poon 2020

Parinaz Esfahani - Examiner for MSc (CS) under Dr. Kamran Sedig 2020

Gurjit Randhawa - Examiner for PhD (CS) under Dr. Lila Kari	2020
Matthias Babin - Examiner for MSc (CS) under Dr. Mike Katchabaw	2020
Elham Rahmani - Examiner for MSc (CS) under Dr. Nazim Madhavji	2020
Sudipta Roy - Examiner for MSc (CS) under Dr. Bob Mercer	2020
Amir HaghghatiMaleki - Examiner for MSc (CS) under Dr. Kamran Sedig	2020
Yuanyuan Han - Examiner for MSc (CS) under Dr. Charles Ling	2019
Muhammad Rifayat Samee - Examiner for MSc (CS) under Dr. Bob Mercer	2019
Jonathan Tan - Examiner for MSc (CS) under Dr. Mike Katchabaw	2019
Jumayel Islam - Examiner for MSc (CS) under Drs. Bob Mercer, Lu Xiao	2018
Hae Young Jung - Examiner for MSc (Biostat) under Dr. Yun-Hee Choi	2018
Stephen Solis-Reyes - Examiner for MSc (CS) under Dr. Lila Kari	2018
Ryan Chan - Examiner for MSc Nursing under Dr. Richard Booth	2018
Emma Farago - Examiner for MSc Engineering under Dr. Ana Luisa Trejos	2018
Jun Wang - Examiner for MSc (CS) under Dr. Charles Ling	2018
Naresh Eeda - Examiner for MSc (CS) under Dr. Nazim Madhavji	2017
Efstathia Kiatos - Examiner for MSc (Epi) under W Hodge, M Malvankar	2017
Oluwakemi Ola - Internal Examiner for PhD (CS) under K Sedig	2017
Ayan Chaudhury - Internal Examiner for PhD (CS) under J Barron	2017
Jacqueline Kueper - C'tee for MSc (Epi) under M Speechley, M Montero-Odasso	2017
Muhammad S. Ahmed - Examiner for MSc (CS) under L Ilie	2017
Dimo Angelov - Examiner for MSc (CS) under L Ilie, P Rogan	2017
Annette Azad - Examiner for MSc (CS) under M Bauer	2017
Leonard Guizzetti - Examiner for MSc (Epi) under GY Zhou, B Feagan	2017
Shuang Ao, Internal Examiner for PhD (CS) under CX Ling	2017
Mazen Melibari - Internal Examiner for PhD (CS) under P Poupart	2016
Mehrsa Golestaneh - Committee member for PhD (CS) under M Daley	2016
Aycha Tammour - University Examiner for PhD (Astronomy) under S Gallagher	2016
John Doucette - Committee member for PhD (CS) under R Cohen	2016
Farheen Omar - Committee member for PhD (CS) under P Poupart	2016
Sumeet Kalia - Reader for MSc (Biostat) under A Donner, N Klar	2015
Shrinu Kushagra - Reader for MMath (CS) under S Ben-David	2014
Dan Recoskie - Reader for MMath (CS) under R Mann	2014
Kun Xiong - Reader for MMath (CS) under M Li	2014
Arthur Carvalho - Examiner for PhD (CS) under K Larson	2014
Tameem Adel Hesham - Examiner for PhD (Engineering) under D Stashuk	2014
Xiao Yang - Reader for MMath (CS) under J Hoey	2014
George Zhu - Reader for MMath (CS) under J Hoey	2013
Nika Haghtalab - Reader for MMath (CS) under S Ben-David	2013
Ray Ruvinskiy - Reader for MMath (CS) under P van Beek	2013
Igor Kiselev - Reader for MMath (CS) under P Poupart	2013
Arthur Carvalho - Committee member for PhD (CS) under K Larson	2013
Mazen Melibari - Committee member for PhD (CS) under P Poupart	2013
John Doucette - Committee member for PhD (CS) under R Cohen	2013
Daniel Rasmussen - Examiner for PhD (CS/Neuro) under C Eliasmith	2012
Ryan Case - Reader for MMath (CS) under S Keshav	2012
Fatemeh Dorri - Reader for MMath (CS) under A Ghodsi	2012
Yuxin Yu - Reader for MMath (CS) under K Larson	2011

ACADEMIC  
SERVICE

**Co-Organizer, Summer Institute on AI and Society, Governance, and Ethics** 2019  
With my co-organizers Drs. Alona Fyshe and Ted Parson. A summary of the outputs of the workshop is given in our commentary [63].

**Program Leader, Statistical and Mathematical Sciences Institute (SAMSI) Program on Precision Medicine** 2018–2019

The goal of the year-long program was to bring together applied mathematicians, statisticians, computer scientists, and domain scientists to foster advances in methodology for precision medicine, with a particular emphasis on sequential decision-making. A summary is here:

<https://www.samsi.info/programs-and-activities/year-long-research-programs/program-statistical-mathematical-computational-methods-precision-medicine-pmed/>

### Senior Conference Organization

Senior Program Committee, Intl. Joint Conf. on Artificial Intelligence 2016, 2017, 2020  
 Senior Program Committee, Machine Learning in Health Care Conference 2017  
 Demonstrations Chair, American Association for Artificial Intelligence 2015

### Program Committee Member

American Association for Artificial Intelligence Conference (AAAI) 2008–2015  
 Artificial Intelligence and Statistics (AISTAT) 2011  
 International Conference on Automated Planning and Scheduling (ICAPS) 2012–2013  
 International Conference on Machine Learning (ICML) 2008–2016  
 International Joint Conference on Artificial Intelligence (IJCAI) 2007,2009,2015  
 Machine Learning for Health Care 2016–2020  
 Multi-disciplinary Conf. on Reinforcement Learning and Decision Making 2015, 2017  
 Neural Information Processing Systems Conference 2007–2013,2015–2016,2019,2020  
 Uncertainty in Artificial Intelligence (UAI) 2012–2016  
 Workshop on Data Integration and Applications 2015,2016

### Journal Reviewer

*Artificial Intelligence Journal, Biometrics, Information Sciences, BMC Health Services Research, Journal of Artificial Intelligence Research, Journal of Causal Inference, Journal of Data Mining and Knowledge Discovery, Journal of Machine Learning Research, Machine Learning Journal, Neurocomputing, Neuroscience, Statistical Methods for Medical Research, Statistics and Computing, Statistics in Medicine*

### Grant Reviewer

*MITACS (Canada), Natural Sciences and Engineering Research Council (Canada), Technology Foundation STW (Netherlands), Digital Technology Supercluster (Canada)*

UNIVERSITY  
SERVICE

### Administrative Roles

Associate Director of the Master of Data Analytics Program 2016-2020

### Departmental Service - Western

Appointments Committee (Computer Science) 2015–2020  
 MPH Admissions Committee 2017,2018  
 MMASc Admissions Committee 2016  
 Joint Appointments Committee (Computer Science, Stats. & Act. Sci.) 2015–2016  
 Scholarship Committee (Epidemiology & Biostatistics) 2015–2020  
 Scholarship Committee (Computer Science) 2015–2020  
 Data Analytics Program Curriculum Committee 2015–2016  
 co-chair with Dr. Douglas Woolford

### Departmental Service - Waterloo

Women in Computer Science Committee 2013–2014  
 Outreach Committee 2012–2013  
 Graduate Studies Committee 2011–2012



	<b>University Service - Waterloo</b> University of Waterloo Chronic Disease Prevention Initiative Networking Committee	2011–2013
OUTREACH	<b>Association of Commonwealth Universities Summer School</b> Lecture on “Big Data: Opportunities and Pitfalls”	2015
	<b>Waterloo Centre for Education in Mathematics and Computing</b> Lecture on “Teaching Computers to Make Decisions.” Explored possibilities for bringing machine learning to high school classrooms	2014
	<b>CS4U Day at Waterloo: Teaching Computers to Make Decisions</b> Introduced high school students to decision trees and feature construction. University of Waterloo David R. Cheriton School of Computer Science	2013
	<b>Grade 8 Science: “Robots are Awesome”</b> Introduced students to basic concepts about robots and intelligent agents. Richard S. Fowler Catholic Junior High School, St. Albert, AB	2007
	<b>Smithsonian Folklife Festival</b> Used hands-on demonstrations to illustrate the potential for learning in robots. CS Representative to the Alberta at the Smithsonian programme, Washington, DC.	2006
	<b>Women in Information Technology: Leap Toward the Future</b> Helped promote career paths in information technology for young women. In conjunction with the Canadian Information Processing Society.	2006
PERSONAL INFORMATION	<b>Citizenship:</b> Canadian <b>Languages:</b> English (native), French (reading, listening, speaking)	