## Curriculum Vitæ – Erica E. M. Moodie

March 31, 2020

\* Please see final page for a list of acronyms for funding agencies and societies \*

### A. IDENTIFICATION

Name: Erica Eleanor Margret Moodie

Address: Department of Epidemiology, Biostatistics, and Occupational Health

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Telephone: (514) 398-5520

Email: erica.moodie@mcgill.ca Website: www.ericamoodie.com

Citizenship: Canadian Languages: English, French

### **B. EDUCATION**

2006 Ph.D. (Biostatistics)

University of Washington, Seattle WA, USA

Ph.D. thesis title: Inference for optimal dynamic treatment regimes.

**Outstanding Student Award** 

Graduate School Merit Fellowship

Merck Graduate Fellowship

NSERC PGS-B, declined

2004 Master of Science (Biostatistics)

University of Washington, Seattle WA, USA

2001 Master of Philosophy (Epidemiology)

Cambridge University, UK

M.Phil. thesis title: Modelling techniques for missing data:

Intensive case-management versus standard case-management for severe psychosis.

Commonwealth Fellowship NSERC PGS-A, declined

2000 Bachelor of Arts (Mathematics and Statistics double-major)

University of Winnipeg, Winnipeg MB

Gold Medal in Statistics

Fessenden-Trott Scholarship

Women in Engineering and Sciences Fellowship (National Research Council)

Chancellor's Special Entrance Scholarship

Isbister Undergraduate Scholarship

Robert P. Purves Scholarship

Academic Proficiency Undergraduate Scholarship (1998 and 1999)

Professor Gunter Weiss Scholarship in Statistics

1997 International Baccalaureate Diploma

Kelvin High School, Winnipeg MB

Graduated in the top 1% world-wide, scoring 43 out of a possible 45 points

Governor General's Academic Medal (Bronze: Secondary School level)

## C. APPOINTMENTS

2020-present	Professor, Department of Epidemiology, Biostatistics, and Occupational Health,
	McGill University
2012-2020	Associate Professor, Department of Epidemiology, Biostatistics, and Occupational
	Health, McGill University
2012-present	Associate Member, Department of Mathematics and Statistics, McGill University
2006-2012	Assistant Professor, Department of Epidemiology, Biostatistics, and Occupational
	Health, McGill University
2019-2020	Telemachus Scholar, McGill University
2019-	Member, Mark Wainberg Centre for Viral Diseases

## D. SPECIAL HONOURS, AWARDS, RECOGNITION

### **Career Awards**

2006-2011	NSERC University Faculty Award \$200,000
	Due to maternity leaves, this award covered the period 2006-2013.
2013-2017	FRQS Chercheur-Boursier, Junior 2 \$256,943
2017-2021	FRQS Chercheur-Boursier, Senior \$295,451

# Recognitions

2020	CRM-SSC Prize
2018	Principal's Prize for Outstanding Emerging Researchers
2017, 2019	EBOH Excellence in Mentoring Award
2015-2021	William Dawson Scholar, McGill University
2015	Elected Member, International Statistical Institute

## E. TEACHING

# E1. Graduate Courses

# Department of Epidemiology and Biostatistics, McGill University

Course title	Course	In-class	Credits	Year	No.
	no.	hours			students
Advanced Generalized Linear Models:	BIOS 612	30	4	2007	4
Correlated Data				2009	5
				2010	10
				2013	10
				2015	10
Principles of Inferential Statistics	<b>EPIB</b> 607	39	4	2007	21
				2008	29
				2010	27
				2012	40
Epidemiology Regression Models II	<b>BIOS 602</b>	39	4	2016	10
				2017	11
				2018	9

# Elsewhere

			In-class	No.
Year	Course Title	Location	hours	Students
2014	Longitudinal Data Methods	Imperial College London	15	17

# **E2. Short Courses and Tutorials**

		In-class	No.
itle	Location	hours	Students
zed Medicine: Dynamic Treatment Regimes	U. of Washington	3	9
l Methods for Dynamic Treatment Regimes	Deming Conference	3	50
Structural Models	Fields Institute	3.5	25
Treatment Regimes, Sequentially Randomized	JSM	4	16
ls, and Causal Inference (co-taught with B.			
orty)			
i	Title dized Medicine: Dynamic Treatment Regimes al Methods for Dynamic Treatment Regimes Structural Models Treatment Regimes, Sequentially Randomized als, and Causal Inference (co-taught with B. Hoorty)	ized Medicine: Dynamic Treatment Regimes Il Methods for Dynamic Treatment Regimes Structural Models Treatment Regimes, Sequentially Randomized Ils, and Causal Inference (co-taught with B.  U. of Washington Deming Conference Fields Institute JSM	Title Location hours Ized Medicine: Dynamic Treatment Regimes U. of Washington 3 Id Methods for Dynamic Treatment Regimes Deming Conference 3 Istructural Models Fields Institute 3.5 It Treatment Regimes, Sequentially Randomized Is, and Causal Inference (co-taught with B.

2015	Statistical Methods for Tailoring Treatment to	JSM	1.5	~300
	Patients (co-taught with M. Kosorok & E. Laber)			
2016	Introduction to Causal Inference: Philosophy,	Universidade Federal	6	$\sim 20$
	Framework, and Key Methods	do Rio de Janeiro		
2016	Introduction to Causal Inference using the	U. of Toronto	5	$\sim 100$
	Propensity Score (co-taught with D. Stephens)			
2016	Introduction to Causal Inference: Philosophy,	U. of Calgary	6	$\sim 150$
	Framework, and Key Methods			
2017	Causal Questions and Principled Answers: A Guide	International Society for	6	45
	Through the Landscape for Practising Statisticians	Clinical Biostatistics		
	(co-taught with members of the STRATOS Causal			
	Inference Topic Group)			
2018	The Propensity Score as a Tool for Causal Inference	McGill Summer School in	6	35
	(co-taught with David Stephens)	Health Statistics		
2018	Causal Questions and Principled Answers: A Guide	Statistical Society of	6	46
	Through the Landscape for Practising Statisticians	Canada		
	(with the STRATOS Causal Inference Topic Group)			
2018	An Introduction to Adaptive Treatment Strategies from a	Roche Mississauga	4	50
	Statistical Perspective	C		
2019	The Propensity Score as a Tool for Causal Inference	McGill Summer School in	6	25
	(co-taught with David Stephens)	Health Statistics		
2019	Statistical Approaches to Adaptive Treatment Strategies	McGill Summer School in	6	25
		Health Statistics		
2019	Adaptive Treatment Strategies: An Introduction to	JSM	4	TBD
	Statistical Approaches for Estimation		•	

# E3. Research Trainees Supervised \*Indicates that I was the primary or sole supervisor.

# Post-doctoral trainee supervision

2009-2011	*Michael Regier (Co-supervisor: Robert Platt)
	Current position: Director of Insurance Analytics, Verisk
2011-2013	*Olli Saarela (Co-supervisor: David Stephens)
	Finnish Foundation for Technology Promotion (40,000Euros)
	Current position: Associate Professor, University of Toronto
2012-2013	Ashley Naimi (Co-supervisor: Jay Kaufman)
	FRSQ post-doctoral award (\$30,000/year, two years)
	SER Lilienfeld Postdoctoral
	Prize Paper Award
	Current position: Assistant Professor, University of Pittsburgh
2013-2016	*Michael Wallace (Co-supervisor 2014-2016: David Stephens)
	Thomas R. Ten Have Award at the Atlantic Causal Inference meeting (2014)
	CAN-AIM DSEN Fellowship (\$13,000)
	SSC Biostatistics Section Travel Award (\$250)
	Current position: Assistant Professor, University of Waterloo
2018-2019	*Juliana Schulz

Current position: Assistant Professor, HEC

2019- \*Mamadou Yauck

SAMSI-CANSSI Postdoctoral Fellowship (\$65,125 USD)

2019- \*Eric Rose

CANSSI-StatLab-CRM Postdoctoral Fellowship (\$45,000)

2020- \*Hiroshi Mamiya

### Graduate students: Doctoral degree supervision

2000-2009 \*Sheila McDonald, Ph.D. Epidemiology (Co-supervisor: John Lynch)

CIHR Doctoral Award; (\$20,000/year, three years)

Current position: Research Scientist, Alberta Health Services

2006-2012 Yongling Xiao, Ph.D. Biostatistics (Co-supervisor: Michal Abrahamowicz)

Graduate Research Enhancement and Travel Award (\$1000)

Current position: Biostatistician, Analysis Group

2006-2013 \*Benjamin Rich, Ph.D. Biostatistics (Co-supervisor: David Stephens)

NSERC CGS-D3 (\$21,000/year, three years)

Current position: Biostatistician, Certara

2009-2013 \*Mireille Schnitzer, Ph.D. Biostatistics (Co-supervisor: Robert Platt)

NSERC CGS-D3 (\$35,000/year, three years)

Canadian Scleroderma Research Group (CSRG) mentorship program (\$3,500)

SSC Travel Award (\$500)

SSC Case Studies Award (\$500)

FRQNT bourse de stage international (\$7,500)

Graduate Program for International Travel Award (\$950)

Statistics underpinning Science, Technology and Industry Travel Award (£300)

Graduate Research Enhancement and Travel Award (\$500)

Current position: Associate Professor, Université de Montréal

2010-2015 \*Alex Bliu, Ph.D. Biostatistics (Co-supervisor: James Hanley)

Current position: Biostatistician, Health Canada

2011-2015 \*Ethan Gough, Ph.D. Epidemiology (Co-supervisor: Amee Manges, UBC)

Vanier Canada Graduate Scholarship (\$50,000/year, three years)

Graduate Research Enhancement and Travel Award (\$1000)

Current position: Assistant Scientist, Johns Hopkins School of Public Health

2011-2015 Laurence Brunet, Ph.D. Epidemiology (Co-supervisor: Marina Klein)

FRQS doctoral award (\$20,000/year, three years)

Young Investigator Award, Canadian Association for HIV Research (\$1000)

Young Investigator Award, Conference on Retroviruses and Opportunistic Infections

Graduate Research Enhancement and Travel Award (\$1000)

Best presentation, Journée des étudiants du réseau sida et maladies

infectieuses du FRO-S

Current position: Director of Epidemiology, Epividian

2011-2017 \*Nabila Parveen, Ph.D. Biostatistics

McGill University Faculty of Medicine Graduate Scholarship (\$12,000)

Current position: Biostatistician, Health Canada's Biologics and

## Genetic Therapies Directorate

2012-2017 Carmine Rossi, Ph.D. Epidemiology (Co-supervisor: Marina Klein)

CIHR Doctoral Research Award (\$30,000/year, three years)

FRQS Doctoral Research Award (\$20,000/year, three years), declined

New Investigator Award, Canadian Association of HIV Research (\$1000)

Conference on Retroviruses and Opportunistic Infections (CROI), Young Investigator Award

Institute Community Support Travel Award, CIHR

Current position: Postdoctoral fellow, UBC

2012-(2018) Ryan Kyle, Ph.D. Epidemiology (Co-supervisor: Michal Abrahamowicz)

McGill University Faculty of Medicine Graduate Scholarship (\$12,000)

SSC Biostatistics Section Travel Award (\$250)

Studies interrupted for personal reasons.

Current position: Senior R Developer, Plotly

2012-(2018) \*Gillian Ainsworth, Ph.D. Biostatistics (Co-supervisor: Abbas Khalili)

Graduate Research Enhancement and Travel Award (\$500)

Changed supervisors in 2018.

2013-2018 Taylor McLinden, Ph.D. Epidemiology (Co-supervisor: Joseph Cox)

McGill University Faculty of Medicine Graduate Scholarship (\$12,000)

Canadian HIV Observational Cohort (CANOC) Centre Doctoral Scholarship (\$21,500)

McGill MedStar Award (\$500), in recognition of excellence in research

Current position: Epidemiologist, BC Centre for Excellence in HIV/AIDS

2015-2019 \*Gabrielle Simoneau, Ph.D. Biostatistics (Co-supervisor: Robert Platt)

FRQNT Doctoral Research Award (\$20,000/year, three years)

Statistics Society of Canada Travel Award (\$500)

Statistics Society of Canada Biostatistics Section Travel Award (\$250, twice)

Graduate Research Enhancement and Travel (GREAT) Award (\$900 in 2018, \$1000 in 2019)

Nominated for the CAGS/PROOUEST-UMI Distinguished Dissertation Award

2016- \*Janie Coulombe, Ph.D. Biostatistics (Co-supervisor: Robert Platt)

Statistics Society of Canada Case Studies Award (\$500)

NSERC CGS-D (\$21,000/year, two years)

2017-2019 Estelina Capistrano, Ph.D. in Statistics at Universidade Federal do Rio de

Janeiro, Brazil (Co-supervisor: Alexandra Schmidt)

\*Daniel Rodriguez Duque, Ph.D. Biostatistics (Co-supervisor: David Stephens)

NSERC Alexander Graham Bell Scholarship (CGS-D, \$35,000/year, two years)

FRQNT Doctoral Research Award (\$21,000/year, three years)

FRONT mobilité internationale étudiante pour les projets de recherche en équipe (\$4000)

2017- Gayatri Marathe, Ph.D. Epidemiology (Co-supervisor: Marina Klein)

McGill University Hospital Centre - Research Institute Studentship (\$9,125)

CanHepC Trainee Award (\$25,000/year, four years)

2017- Ouoc Nguyen, Ph.D. Epidemiology (Co-supervisor: Christina Wolfson)

Fondation du CHUM training award, Centre hospitalier de l'U. de Montréal (\$38,451), declined

FROS doctoral training award (\$39,323/year, four years)

CIHR doctoral training award (\$35,000/year, three years)

Département de médecine complementary training award, U. de Montréal (\$25,000)
Société québécoise de gériatrie training scholarship (\$1000)

2018Shuo (Mila) Sun, Ph.D. Biostatistics (Co-supervisor: Johanna Neslehova)
Armando Turchetta, Ph.D. Biostatistics (Co-supervisor: David Stephens)
CRM International Research Internship Award (\$10,000)

Ivan Marbaniang, Ph.D. Epidemiology (Co-supervisor: Joseph Cox)
Healthy Brains for Healthy Lives doctoral fellowship (\$15,000)
McGill Faculty of Medicine doctoral fellowship (\$12,000), declined

## Graduate students: Master's degree supervision

2007-2009	*Piotr Biernot, M.Sc. Biostatistics
	NSERC CGS-M (\$17,300/year, two years)
	Statistics Society of Canada Travel Award (\$500)
2008-2010	Julia Thorpe, M.Sc. Epidemiology (Co-supervisor: Marina Klein)
	National CIHR Research Training Program in Hepatitis C Fellowship (\$17,850)
	Best Clinical Science Presentation, 2010 Annual National CIHR Research
	Training Program in Hepatitis C Meeting (\$500)
	Department of EBOH Research Day, Oral Presentation First Place Honours (\$100)
	Young Investigator Award, 17th Annual Conference on Retroviruses and
	Opportunistic Infections
2010-2011	Niamh Higgins, M.Sc. Epidemiology (Co-supervisor: Marina Klein)
	CIHR Canadian Observational Cohort (CANOC) Collaboration Trainee Award (\$21,500)
	Canadian Medical Protective Association grant (\$32,040)
	RRSPQ Prix étudiant 2012, thèse de Maîtrise (\$1,000)
2010-2012	Julie Héroux, M.Sc. Biostatistics (Co-supervisor: Erin Strumpf)
	Department of EBOH Research Day, Oral Presentation First Place Honours (\$100)
	*Nassim Mojaverian, M.Sc. Biostatistics
	*Elizabeth Krakow, M.Sc. Epidemiology
	*Yuxin Fan, M.Sc. Biostatistics
	Hao Zhang, M.Sc. Biostatistics (Co-supervisor: David Stephens)
	*Shouao (Stan) Wang, M.Sc. Biostatistics (Co-supervisor: David Stephens)
2016-2017	*Wilhemina Pels, M.Sc. Mathematical Science, African Institute for Mathematical
	Sciences (AIMS), Senegal
	Cherry Chu, M.Sc. Epidemiology (Co-supervisor: Eric Latimer)
2017-2019	*Ferdous Hossain, M.Sc. Biostatistics
	McGill University Faculty of Medicine Graduate Scholarship (\$10,000)
2018-2019	
2018-	*Larry Dong, M.Sc. Biostatistics, co-tutelle with Universit'e Bordeaux's
	MSc in Digital Public Health (Co-supervisor: Melanie Prague)
	IVADO Excellence Scholarship (\$20,000/year, two years)
2018-(2019	Dirk Douwes-Shultz, M.Sc. Biostatistics (Co-supervisor: Alexandra Schmidt)
	Fast-tracked to PhD Program in 2019

## Undergraduate trainee supervision

2010	*Mathieu Bray
2011	*Julie Novak
2012	*Yue Ru Sun
2016	*Lara Mayeleff
	ISM Undergraduate Summer Research Scholarship, \$3,750
2019	*Zhicong Ma
2019	*Yang Lu

#### Thesis committee member

2010-2017 Sathya Karunananthan, Ph.D. Epidemiology (Supervisor: Christina Wolfson)

2012-2020 Hiroshi Mamiya, Ph.D. Epidemiology (Supervisors: David Buckeridge, Alexandra Schmidt)

McGill University Faculty of Medicine Graduate Scholarship (\$12,000/year, two years)

CIHR Institute Community Support Travel Award

Award for Outstanding Student or Post-Degree Abstract, 2nd prize, International Society for Disease Surveillance

2015-2019 Sahar Saeed, Ph.D. Epidemiology (Supervisors: Marina Klein, Erin Strumpf)

CIHR - Frederick Banting and Charles Best Canada Graduate Scholarship Doctoral Award (Ranked Top 3%, \$35,000/year, three years)

Canadian Institute of Health Research Travel Award \$2449

Infectious Diseases and Immunity in Global Health Travel Award \$2449

FRQS Doctoral Award (ranked 1st in division, \$20,000/year, three years)

Canadian Hepatitis C Network - Doctoral Award (\$23,000/year, three years)

Graduate Research Enhancement and Travel (GREAT) Award \$3000

Best Poster, 2nd Annual Infectious Diseases and Immunity in Global Health Research Day (\$200)

5th Symposium on Hepatitis C, Best Clinical Presentation (\$500)

Department of EBOH Research Day, Oral Presentation Second Place (\$50)

Three minute Thesis Video Competition, University without Walls, 2nd Prize (\$500)

Young Investigator Award, Conference on Retroviruses and Opportunistic Infections, 2017, 2018 (\$1500 each year)

2018- Lydia Ould Brahim, Ph.D. Nursing (Co-supervisors: Sylvie Lambert & Nancy Feeley)

2020- Shaddam Bagmar Hossain, Ph.D. Biostatistics (Supervisors: Andrea Benedetti & Mireille Schnitzer)

### Other supervision

Celline Brasil, Ph.D. in Medications and Pharmaceutical Assistance
at Universidade Federal de Minas Gerais, Brazil (visiting student, one year)
Widemberg Nobre, Ph.D. in Statistics at Universidade Federal do Rio de
Janeiro, Brazil (visiting student, one year)
Sebastián Martínez, Ph.D. in Statistics at University of Glasgow, UK

(visiting student, one month)

2019	Bianca Granato, Ph.D. in Quantitative Life Sciences, McGill (rotation)
2019-2020	Cássia C.P. Mendicino, Ph.D. in Epidemiology at Universidade Federal
	de Minas Garais Brazil (visiting student, one year)

de Minas Gerais, Brazil (visiting student, one year)

Emerging Leaders in the Americas Program (ELAP) award (\$9,700), declined

CAPES Sandwich Program award from the Brazilian Ministry of Education (\$13,602)

2020 Romain Demeulemeester, Ph.D. in Statistics at Université Paul Sabatier, France

## Research Assistant supervision

2012 \*Yue Ru Sun 2013-2014\*Jamie Karran 2016-2017\*Shomoita Alam

# **E4.** Mentoring activities

## Mentorship of new faculty

2015-2019	Denis Talbot, Université Laval
2016-2018	Paramita Saha-Chaudhuri, McGill University
2016-2018	Alexandra Schmidt, McGill University
2019-2021	Nicole Basta, McGill University
2020	Alissa Koski, McGill University

## **Student Mentorship**

2016	SSC Case Studies competition Faculty Mentor; two teams made up of Biostatistics graduate
	and Statistics undergraduate students.
2017	SSC Case Studies competition Faculty Mentor; two teams made up of Biostatistics graduate
	and Statistics undergraduate students. First prize won by the team made up of J. Coulombe,
	S. McGrath, & Z. Wang
2018-2019	Graduate student mentor through the U. of Washington Huskies@Work program; two students.
2019-2020	Mentor to U. of Winnipeg undergraduate student.

## F. Other Contributions

## F1. Journals

## Journal Editorships

2009	Guest Editor, International Journal of Biostatistics
2009-2013	Associate Editor, International Journal of Biostatistics
2011	Guest Editor, Statistical Communications in Infectious Diseases

2011-2013	Associate Editor, Journal of Causal Inference
2013-	Associate Editor, Biometrics
2014-2019	Associate Editor, Journal of the American Statistical Association, Theory & Methods

## Reviewer of Journal Articles

Annals of Statistics, Annals of Operations Research, American Journal of Epidemiology, American Journal of Nephrology, Biometrics, Biometrika, Biostatistics, Canadian Journal of Public Health, The Canadian Journal of Statistics, Clinical Trials, Computer Methods and Programs in Biomedicine, Epidemiologic Methods, Epidemiology, International Journal of Biostatistics, International Journal of Eating Disorders, International Journal of Epidemiology, International Journal of Public Health, Journal of the American Statistical Association, Journal of Clinical Epidemiology, Journal of Multivariate Analysis, Journal of the Royal Statistical Society, Lifetime Data Analysis, Neuroimage, PLoS - Medicine, Statistics in Biosciences, Statistics in Medicine, Statistica Sinica

## Reviewer of Book Proposals, Chapters, and Reports

Chapman & Hall, CRC Press, SAS Press, U.S. Department of Education (National Center for Special Education Research), Wiley & Sons.

#### F2. Grant Reviews

## Reviewer for Granting Agencies

2009-2011,	NSERC Discovery Grants
2016, 2018	
2009	MITACS Networks & Training Initiative
2012	The Netherlands Organisation for Health Research and Development (ZonMw):
	Health Technology Assessment Methodology Grants
2012	Israel Science Foundation
2013	French National Research Agency
2013, 2016	Medical Research Council (United Kingdom)
2015	Flanders Research Foundation (FWO, Belgium)
2018	Banff International Research Station
2018	Healthy Brains for Healthy Lives Innovative Ideas Awards
2019	Wellcome Trust Sir Henry Dale Fellowships
2020	Health Research Council of New Zealand

### Panel Member of Review Committees

2010, 2013	CIHR Public, Community & Population Health Operating Grants
2018	
2011-2013	CIHR Meetings, Planning and Dissemination Grants

2013-2015	NSERC Discovery Grants
2017	CIHR Innovative Biomedical and Clinical HIV/AIDS Research Grants
2018	U.S. Department of Education, Institute of Education Sciences Research Training Programs

# F3. Administrative Responsibilities and Committees

## Department of Epidemiology, Biostatistics, and Occupational Health / School of Population and Global Health

Member, Epidemiology Ph.D. Program Committee
Member, Epidemiology M.Sc. Program Committee
Member, Biostatistics Programs Committee
Member, Biostatistics Admissions Committee
Chair, Biostatistics Applied Exam Committee
Organizer, Biostatistics Seminar Series
Director, Biostatistics Graduate Programs
Member, Departmental Tenure Committee
Member, Recruitment Committee (Biostatistics)
Member, Appointments Committee
Chair, Biostatistics Theory Exam Committee
Chair, Recruitment Committee (Biostatistics)
Chair, Recruitment Committee (Joint: Biostatistics, Radiology)
Director, Biostatistics Internship Program
Member, Big Data working group

In 2010, I established the Biostatistics Educational Activities Fund to support the activities of our department for the expansion of our students' (bio)statistical education. The funds primarily serve activities such as the Biostatistics seminar series and workshops.

## McGill University

2010-2012	Member, Faculty of Medicine Postgraduate Awards Committee (PGAC)
2013	Member, Recruitment Committee (Obstetrics and Gynecology)
2013	Pro-dean (thesis examination) on two occasions
2015	Pro-dean (thesis examination) on two occasions
2016	Pro-dean (thesis examination) on two occasions
2017-	Director, McGill Health Statistics Training Network
2018-	Member, McGill initiative in Computational Medicine subcommittee on Education
2018-2020	Member, University Tenure Committee for the Faculty of Medicine
2019-2021	Assessor, Harassment & Discrimination Assessment Committee

2019	Reviewer, Faculty of Medicine Internal Grant Review Panel
2019	Member, Working Group on Salary Equity

## National and International

2008-2013	Member, Bilingualism Committee, Statistical Society of Canada
2009-2014, &	Member, Elections Committee, Statistical Society of Canada
2019-2022	
2012	Doctoral Thesis Examiner, University of Ghent, Statistical Data Analysis Program
2013-2015	Member, Biostatistics Section Elections Committee, SSC
2013-2016	Co-chair, Causal Inference Topic Group for STRengthening Analytical Thinking for
	Observational Studies, an initiative launched by the International
	Society for Clinical Biostatistics to improve analyses of observational data
2014-2018	Statistics Representative, Scientific Committee of the CRM
2014-2017	SSC Representative to the CRM
2015	Doctoral Thesis Examiner, Université du Québec à Montréal, Department of Mathematics
2015-2019	Associate Director (Quebec) of CANSSI
2015-2019	Member, Nominating Committee for the Scientific Advisory Committee of CANSSI
2016-2017	Scientific Program Chair, SSC 2017 Annual Meeting
2016	Doctoral Thesis Examiner, Université Paris Ouest Nanterre, Mathematics Department
2016-	Steering Group, Causal Inference Topic Group for STRATOS
2018	Doctoral Thesis Examiner, University of Waterloo, Department of Statistics & Actuarial
	Sciences
2018-2019	Chair, Respectful SSC Committee
2019	Search Committee for the Regional Director of the CANSSI-Quebec Regional Centre
2019-2020	Member, Advisory Board of CANSSI-Quebec
2019-2020	Judge, ASA Health Policy Statistics Section student award competition
2020	Member, CRM StatLab-CANSSI postdoctoral fellowship award committee

# **F4. Professional Associations**

2004-	Royal Statistical Society
2005-2007	Western North American Region of the International Biometrics Society
2006-	Statistical Society of Canada
2007-	Eastern North American Region of the International Biometrics Society
2009-	Centre de recherches mathématiques

#### G. RESEARCH

#### **G1. Research Activities**

My primary research interest lies in the intersection of longitudinal data methods and causal inference, with particular focus on dynamic (or adaptive) treatment regimes. My research programme currently focuses on three topics in biostatistics: dynamic treatment regimes, "imperfect" data in longitudinal studies (missingness, measurement error), and statistical methods for HIV research. Within the substantive area of HIV, I am involved in the investigation of various aspects of treatment and lifestyle exposures in HIV-positive populations, including men who have sex with men in Montreal and Canadians who are co-infected with the Hepatitis C virus.

I am a member of both the Liver Working Group and the Mental Health Working Group of the North American AIDS Cohort Collaboration on Research and Design (NA-ACCORD).

#### **G2.** Grants Obtained

As Principal Investigator: Title, total (years). \*Indicates sole investigator/applicant.

- 1. CIHR Foundation Scheme grant Advancing the methodological frontiers of adaptive treatment strategies, \$497,872 (2019–2027).
- 2. FRQNT Programme Samuel de Champlain de développement de partenariats stratégiques en matière d'enseignement et de recherche Modélisation du recrutement dans le cadre d'essais séquentiels pour des algorithmes de traitement des soins adaptatifs des maladies chroniques: une étude statistique, \$18,300 (+ 12,750Euros to French co-I St-Pierre) (2019-2021).
- 3. \*NSERC Discovery Grant Causal inference in network settings, \$230,000 (2019–2024).
- 4. NIMH R01 Improved tailoring of depression care using customized clinical decision support. \$1,511,994 (2018–2022) Co-PI: Susan Shortreed (Kaiser Permanente Washington Research Institute), co-investigator: Gregory Simon (Kaiser Permanente)
- 5. CANSSI Workshop Grant Causal inference in the presence of dependence and network structure: modelling strategies and model selection, \$12,000 (2018). Co-organizers: Alexandra Schmidt, David Stephens
- 6. PIMS Workshop Grant Causal inference in the presence of dependence and network structure: modelling strategies and model selection, \$4,500 (2018). Co-organizers: Alexandra Schmidt, David Stephens
- 7. Healthy Brains for Healthy Lives Innovative Ideas Award A personalized approach to depression care: Discovering adaptive treatment strategies, \$131,695 (2018-2020). Co-investigators: Samy Suissa (McGill), Christel Renoux (Lady Davis Research Institute).
- 8. CANSSI Workshop Grant Risk modeling, management and mitigation in health sciences, \$8,000 (2017). Co-organizers: Daniel Graham (Imperial College London), Nicholas Jewell (University of California, Berkeley) and David Stephens (McGill).
- 9. CANSSI Distinguished Visitor Program Grant. \$3,050 (2017). Co-organizers: Gabrielle Simoneau, Marie-Pier Côté.

- CIHR Catalyst Grant (SPOR Innovative Clinical Trials) Adaptive internet-based stress management: A
  pilot sequential multiple assignment randomized trial (SMART) design. Co-PI: Sylvia Lambert (McGill),
  \$99,998 (2017–2018)
- 11. CIHR Operating Grant Personalized medicine using registry cohort data: Developing an adaptive treatment strategy to prevent and treat graft-versus-host disease, \$54,000 (2017–2018). Co-investigators: David Stephens (McGill), Elizabeth Krakow (Fred Hutchinson Cancer Research Center).
- 12. CANSSI Health Science Collaborating Centre seed grant McGill Health Statistics Training Network. \$10,000 (2017).
- 13. CANSSI Distinguished Visitor Program Grant. \$3,000 (2016). Co-organizers: Kevin McGregor, Gabrielle Simoneau.
- 14. Pacific Institute for the Mathematical Sciences (PIMS) Workshop Grant Statistical causal inference and its applications to genetics, \$2,000 (2016). Co-organizers: Robin Evans (University of Oxford), Chris Holmes (University of Oxford), Marloes Maathuis (ETH Zürich), Ilya Shpitser (University of Southampton), David Stephens (McGill University) and Caroline Uhler (IST Austria).
- 15. CANSSI Workshop Grant Statistical causal inference and its applications to genetics, \$25,000 (2016). Co-organizers: Robin Evans (University of Oxford), Chris Holmes (University of Oxford), Marloes Maathuis (ETH Zürich), Ilya Shpitser (University of Southampton), David Stephens (McGill University) and Caroline Uhler (IST Austria).
- 16. \*NSERC Discovery Grant A new framework for estimation and inference of optimal dynamic treatment regimes, \$140,000 (2014–2019).
- 17. CIHR Operating Grant Assessing time-varying drug exposures in the Canadian Co-infection Cohort: Methodological tools to address missing data and measurement error, \$263,949 (2013–2017). Co-investigators (McGill University): David Stephens, Marina Klein, James Hanley.
- 18. Quebec Population Health Research Network Book-writing Grant Dynamic treatment regimes for personalized medicine, \$5,000 (2011). Co-investigator: Bibhas Chakraborty (Columbia University).
- 19. CIHR Meetings, Planning and Dissemination Grants Causal inference in health research, \$10,410 (2011). Co-organizers (McGill University): Jay Kaufman, Robert Platt.
- 20. \*MITACS Networks and Training Program Causal inference in health research, \$15,000 (2011).
- 21. \*NSERC Discovery Grant Optimal adaptive treatment strategies: Finding practical solutions to inferential challenges, \$80,000 (2009–2014).
- 22. CIHR Operating Grant Statistical methods for causal inference in longitudinal studies with non-compliance and missing data, \$285,177 (2008–2011). Co-investigators (McGill University): Michael Kramer, Robert Platt, Samy Suissa.
- 23. \*NSERC Discovery Grant Optimal dynamic treatment regimes: Extending the framework, \$36,000 (2006–2009).
- 24. McGill University Start-up Grant, \$50,000 (2006).

### As Co-Investigator or Named Expert: Title, PI, total (years)

25. CIHR Project Grant – The role of fatty liver in the epidemic of advanced chronic liver disease among people living with HIV. PI: Giada Sebastiani. \$685,440 (2019–2024)

- 26. MEDTEQ Ministére de l'Économie et de l'Innovation (MÉI) Un système de santé apprenant pour la gestion de la douleur chronique : Une plateforme numérique avec une perspective de réseau. PI: Sara Ahmed and Regina Visca \$589,306 (2019–2022)
- 27. Heart and Stroke Foundation Anticoagulants oraux et prévention de la démence chez les patients atteints de fibrillation auriculaire : étude de cohorte en population générale. PI: Christel Renoux. \$151,870 (2019–2021)
- 28. CIHR Project Grant Antiretroviral-based HIV prevention and its impact on sexual risk behaviours and HIV/STIs among gay, bisexual and other men who have sex with men: Engage Cohort Study. PI: Joseph Cox et al., \$2,673,676 (2019–2023)
- 29. FRQNT Team Grant Méthodes d'inférence causale et la prise de décision dans un cadre bayésien. PI: David Stephens, \$205,740 (2018–2021)
- 30. CIHR Catalyst Grant (SPOR Innovative Clinical Trials) An adaptive dyadic self-directed coping and self-management skills training intervention for caregivers of individuals with cancer: A pilot sequential multiple assignment randomized trial (SMART) design. PI: Sylvia Lambert, \$99,969 (2017–2018)
- 31. CIHR Catalyst Grant Biostatistical methods for estimating the cumulative impact of environmental contaminant exposures on preterm birth. PI: Lawrence McCandless, \$198,330 (2017–2019)
- 32. CIHR Project Grant New statistical methods for cohort studies of adverse effects of medications. PI: Michal Abrahamowicz, \$753,035 (2016–2021)
- 33. SAMSI Workshop Grant Statistical causal inference and its applications to genetics. PI: Robin Evans (University of Oxford), \$6,500USD (2016)
- 34. CIHR Foundation Scheme Tracking a revolution: Evaluating the impact of modern HCV therapy on HIV-HCV coinfection. PI: Marina Klein, \$4,835,202 (2015–2022)
- 35. CIHR Foundation Scheme Statistical methods in pharmacoepidemiology and perinatal epidemiology. PI: Robert Platt, \$1,071,721 (2015–2022)
- 36. CIHR Planning and Dissemination Grant Prenatal exposure to environmental contaminants and fetal growth: How to account for multiplicity when testing multiple statistical hypotheses? PI: Lawrence McCandless, \$12,500 (2015–2016)
- 37. CIHR Team Grant Canadian network for advanced interdisciplinary methods for prospective studies of drug safety and effectiveness. PI: Michal Abrahamowicz, \$1,250,000 (2014–2019)
- 38. CIHR Operating Grant Understanding blood pressure and end organ damage in adolescents. PI: Michael Zapitelli, \$438,115 (2014–2018)
- 39. CIHR Bridge Grant The coming revolution in HCV therapy: Will HIV-HCV co-infected patients really benefit? PI: Marina Klein, \$100,000 (2014–2015).
- 40. CIHR Bridge Grant Phylogenetic-based prevention interventions to curb the Montreal Men-Having-Sex with Men (MSM) epidemic, PI: Bluma Brenner, \$100,000 (2014–2015).
- 41. CIHR Operating Grant Propensity scores and marginal structural models in drug safety research, PI: Robert Platt, \$405,940 (2012–2015).
- 42. CIHR Operating Grant Prospective investigation of the relationship between food insecurity and health and behavioural outcomes in HIV-HCV co-infection: Clues for prevention interventions, PI: Joseph Cox, \$385,413 (2011–2014).

- 43. CIHR Operating Grant Development of strategies to curb the Quebec HIV epidemic based on molecular epidemiological surveillance, PI: Bluma Brenner, \$311,718 (2011–2014).
- 44. CIHR Operating Grant Stemming the epidemic of liver related morbidity and mortality in HIV-HCV co-infection: Is ART enough? PI: Marina Klein, \$1,924,155 (2010–2015).
- 45. FRQNT Team Grant Méthodes statistiques pour les études multiniveaux, PI: Nandini Dendukuri, \$145,800 (2008–2011).
- 46. NIH Operating Grant Soy-rich diet for preventing chronic post breast cancer surgery pain, PI: Yoram Shir, \$236,446 (2008–2010).

### As Collaborator: Title, PI, total (years)

- 47. CIHR AI Summer School AI for public health (AI4PH): A focus on equity and prevention, PI: David Buckeridge, \$525,000 (2019–2024).
- 48. MRC Methodology Research Programme Grant Comparative Effectiveness Research using OBServational data: methodological developments and a roadmap (CER-OBS), PI: Bianca de Stavola

### **G3.** Publications (bolded authors indicate trainees under my supervision)

### G3a. Articles published in peer-reviewed journals

### Methodological and statistical papers -

- 1. **Simoneau G.**, <u>Moodie E. E. M.</u>, and Platt R. P. Finite sample variance estimation for optimal dynamic treatment regimes of survival outcomes. Submitted to *Statistics in Medicine* (invited revision)
- 2. <u>Moodie E. E. M.</u> and Krakow E. F. (2020) Precision medicine: Statistical methods for estimating adaptive treatment strategies *Bone Marrow Transplantation* (accepted)
- 3. <u>Moodie E. E. M.</u> and Stephens D. A. (2020) Clarifying endogeneous data structures and consequent modelling choices using causal graphs *Statistical Science* (accepted)
- 4. Shortreed S. M. and <u>Moodie E. E. M.</u> (2020) Automated analyses: Because we can, does it mean we should? *Statistical Science* (accepted)
- 5. **Simoneau G.**, Moodie E. E. M., Azoulay L., and Platt R. W. (2020) Adaptive treatment strategies with survival outcomes: An application to the treatment of Type 2 Diabetes using a large observational database. *American Journal of Epidemiology* https://doi.org/10.1093/aje/kwz272
- 6. **Wallace M. P.**, Moodie E. E. M., and Stephens D. A. (2020) Model selection for G-estimation of dynamic treatment regimes. *Biometrics* (accepted).
- 7. **Simoneau G.**, <u>Moodie E. E. M.</u>, Platt R. W., and Nijjar J. S. (2020) Estimating optimal dynamic treatment regimes with survival outcomes. *Journal of the American Statistical Association* (accepted). *This paper won the Lifetime Data Science (LiDS) 2019 Student Paper Competition*.
- 8. Capistrano E. S. M., Moodie E. E. M., and Schmidt A. M. (2019) Bayesian estimation of the average treatment effect on the treated using inverse weighting. *Statistics in Medicine* **38**:2447–2466.
- 9. **Alam S.**, Moodie E. E. M., and Stephens D. A. (2019) Should a propensity score model be super? The utility of ensemble procedures for causal adjustment. *Statistics in Medicine* **38**:1690–1702.

- 10. **Saeed S.**, <u>Moodie E. E. M.</u>, Strumpf E. C. and Klein M. B. (2019) The difference-in-differences approach to evaluate health policies. *International Journal of Public Health* **64**:637–642.
- 11. **Kyle R. P.**, <u>Moodie E. E. M.</u>, Abrahamowicz M., and Klein M. B. (2019) Evaluating flexible modeling of continuous time-varying covariates in inverse weighted estimators. *American Journal of Epidemiology* **188**:1181–1191.
- 12. Moodie E. E. M., Stephens D. A., Alam S., Zhang M.-J., Logan B., Arora M., Spellman S., and Krakow E. F. (2019) A cure-rate model for Q-learning: Estimating an adaptive immunosuppressant treatment strategy for allogeneic hematopoietic cell transplant patients. *Biometrical Journal* **61**:442–453.
- 13. Moodie E. E. M., Saarela O., and Stephens D. A. (2018) A doubly robust weighting estimator of the average treatment effect on the treated. *Stat* 7:e205, doi:10.1002/sta4.205
- 14. **Pels, W. A.**, **Alam S.**, Carpp L. N., and <u>Moodie E. E. M.</u> (2018) A call caution in using information criteria to select the working correlation structure in generalized estimating equations. *Epidemiology* **29**:e51–e52.
- 15. **Parveen N.**, Moodie E. E. M., Cox J., Lambert G., Roger M., Otis J., and Brenner B. (2018) New challenges in HIV research: Combining phylogenetic cluster size and epidemiological data. *Epidemiologic Methods* doi:10.1515/em-2017-0017
- 16. **Wallace M. P.**, <u>Moodie E. E. M.</u>, and Stephens D. A. (2018) Reward ignorant modeling of dynamic treatment regimes. *Biometrical Journal* **20**:991–1002.
- 17. <u>Moodie E. E. M.</u>, Stephens D. A., and **Wallace M. P.** (2018) G-estimation. *Wiley StatsRef* doi:10.1002/9781118445112.stat08046
- 18. **Simoneau G.**, <u>Moodie E. E. M.</u>, Platt R. W., and Chakraborty B. (2018) Non-regular inference for dynamic weighted ordinary least squares: Understanding the impact of solid food intake in infancy on childhood weight. *Biostatistics* **19**:233–246.
- 19. **Saeed S.**, Moodie E. E. M., Strumpf E. C. and Klein M. B. (2018) Segmented generalized mixed effect models to evaluate health outcome. *International Journal of Public Health* **63**:547–551.
- 20. Moodie E. E. M. and Stephens D. A. (2017) Dynamic treatment regimes. *Wiley StatsRef* doi:10.1002/9781118445112.stat08040.
- 21. <u>Moodie E. E. M.</u> and Stephens D. A. (2017) Treatment prediction, balance and propensity score adjustment. *Epidemiology* **28**e51–e53.
- 22. **Wallace M. P.**, Moodie E. E. M., and Stephens D. A. (2017) Model validation and selection for personalized medicine using dynamic weighted ordinary least squares. *Statistical Methods in Medical Research* **26**:1641–1653.
- 23. **Wallace M. P.**, Moodie E. E. M., and Stephens D. A. (2017) Dynamic treatment regimen estimation via regression-based techniques: Introducing R Package DTRreg. *Journal of Statistical Software* **80**:1–20.
- 24. **Krakow E. F.**, Hemmer M., Wang T., Logan B., Arora M., Spellman S., Couriel D., Alousi A., Pidala J., Last M., Lachance S., and <u>Moodie E. E. M.</u> (2017) Tools for the precision medicine era: How to develop highly personalized treatment recommendations from cohort and registry data using Q-learning. *American Journal of Epidemiology* **186**:160–172. *This paper was chosen by the Editors as one of AJE's 2017 Articles of the Year.*
- 25. **Parveen N.**, Moodie E. E. M., and Brenner B. (2017) Correcting covariate-dependent measurement error with non-zero mean. *Statistics in Medicine* **36**:2786–2800.

- 26. Suissa S., Dell'Aniello S., and Moodie E. E. M. (2017) New-user cohort designs for comparative drug studies by conditional propensity scores. *Pharmacoepidemiology & Drug Safety* **26**:459–468. *This paper was selected for the Robert D. Mann Bets Paper Award*.
- 27. **Wallace M. P.**, <u>Moodie E. E. M.</u>, and Stephens D. A. (2017) An R package for g-estimation of structural nested mean models. *Epidemiology* **28**:e18–e20.
- 28. Wallace M. P., Moodie E. E. M., and Stephens D. A. (2016) Discussion of 'Personalized dose finding using outcome weighted learning'. *Journal of the American Statistical Association* 111:1530–1534.
- 29. Moodie E. E. M., **Karran J. C.**, and Shortreed S. M. (2016) A case study of SMART attributes: A qualitative assessment of generalizability, retention rate, and trial quality. *Trials* **17**:242, doi: 10.1186/s13063-016-1368-3.
- 30. **Kyle R. P.**, Moodie E. E. M., Abrahamowicz M., and Klein M. B. (2016) Correcting for measurement error in time-varying covariates in marginal structural models. *American Journal of Epidemiology* **84**:249–258. *This paper was one of three finalists for the 2016 Epidemiology Congress of the Americas, Reuel Stallones Student Prize Paper Award.*
- 31. Chakraborty B., Ghosh P., <u>Moodie E. E. M.</u>, and Rush A. J. (2016) Estimating optimal shared-parameter dynamic regimens with application to a multistage depression clinical trial. *Biometrics* **72**:865–876.
- 32. **Wallace M. P.**, <u>Moodie E. E. M.</u>, and Stephens D. A. (2016) Model assessment in dynamic treatment regimen estimation via double robustness. *Biometrics* **72**:855–864.
- 33. **Naimi A. I.**, Schnitzer M. E., <u>Moodie E. E. M.</u>, and Bodnar L. M. (2016) Mediation analysis for health disparities research. *American Journal of Epidemiology* **184**:315–324.
- 34. **Wallace M. P.**, <u>Moodie E. E. M.</u>, and Stephens D. A. (2016) SMART thinking: a review of recent developments in sequential multiple assignment randomized trials. *Current Epidemiology Reports* 1–8, doi: 10.1007/s40471-016-0079-3.
- 35. **Regier M. D.** and <u>Moodie E. E. M.</u> (2016) An extension of the EM algorithm for uniquely parameterized distributions. *International Journal of Biostatistics* **12**:65–77.
- 36. **Rich B.**, <u>Moodie E. E. M.</u>, Stephens D. A. (2016) Optimal individualized dosing strategies: A pharmacologic approach to developing dynamic treatment regimens for continuous-valued treatments. *Biometrical Journal* **58**:502–517.
- 37. **Saarela O.**, Arjas E., Stephens D. A., and <u>Moodie E. E. M.</u> (2015) Predictive Bayesian inference and dynamic treatment regimes. *Biometrical Journal* **57**:941–958.
- 38. **Mojaverian N.**, <u>Moodie E. E. M.</u>, **Bliu A.**, and Klein M. B. (2015) The impact of sparse follow-up on marginal structural models for time-to-event data. *American Journal of Epidemiology* **182**:1047–1055.
- 39. Wang Y., Murphy O., Turgeon M., Wang Z., Bhatnagar S. R., Schulz J, and Moodie E. E. M. (2015) The perils of Quasi-likelihood Information Criteria. *Stat* **4**:246–254.
- 40. **Karran J.**, Moodie E. E. M., and **Wallace M. P.** (2015) Statistical method use in public health research. *Scandinavian Journal of Public Health* **43**:776–7825.
- 41. **Wallace M. P.** and <u>Moodie E. E. M.</u> (2015) Doubly-robust dynamic treatment regimen estimation via weighted least squares. *Biometrics* **71**:636–644.
- 42. **Rich B.**, Moodie E. E. M., Stephens D. A. (2015) Influence re-weighted g-estimation. *International Journal of Biostatistics* **11**, doi: 10.1515/ijb-2015-0015.

- 43. **Saarela O.**, Stephens D. A., <u>Moodie E. E. M.</u>, and Klein M. B. (2015) On Bayesian estimation of marginal structural models. (With Response to Discussion) *Biometrics* **71**:279–288.
- 44. **Parveen N.**, Moodie E. E. M., and Brenner B. (2015) The non-zero mean SIMEX: Improving estimation in the face of measurement error. *Observational Studies* **1**:91–123.
- 45. **Naimi A. I.**, Auger A., <u>Moodie E. E. M.</u>, and Kaufman J. S. (2014) Stochastic mediation contrasts in epidemiologic research: Interpregnancy interval and the educational disparity in preterm delivery. *American Journal of Epidemiology* **180**:436–445.
- 46. **Naimi A. I.**, <u>Moodie E. E. M.</u>, Auger A., and Kaufman J. S. (2014) Semiparametric adjusted exposure-response curves. *Epidemiology* **25**:919–922.
- 47. Sauerbrei, W. et al. (including <u>Moodie E. E. M.</u>) (2014) STRengthening Analytical Thinking for Observational Studies: The STRATOS initiative. *Statistics in Medicine*. **33**:5413–5432.
- 48. Moodie E. E. M., Dean N. and **Sun Y. R.** (2014) Q-learning: Flexible learning about useful utilities. *Statistics in Biosciences* **6**:223–243.
- 49. **Schnitzer M.**, van der Laan M. J., <u>Moodie E. E. M.</u>, and Platt R. W. (2014) Effect of breastfeeding on gastrointestinal infection in infants: A targeted maximum likelihood approach for clustered longitudinal data. *Annals of Applied Statistics* **8**:703–725. *This paper was nominated for American Statistical Association's 2015 Outstanding Applications Award*.
- 50. **Xiao Y.**, Abrahamowicz M., <u>Moodie E. E. M.</u>, Weber R., and Young J. (2014) Flexible marginal structural models for estimating the cumulative effect of a time-dependent treatment on the hazard: Reassessing the cardiovascular risks of didanosine treatment in the Swiss HIV Cohort. *Journal of the American Statistical Association* **109**:455–464.
- 51. **Wallace M. P.** and <u>Moodie E. E. M.</u> (2014) Personalizing medicine: A review of adaptive treatment strategies. *Pharmacoepidemiology & Drug Safety* **23**:580–585.
- 52. **Schnitzer M.**, <u>Moodie E. E. M.</u>, van der Laan M. J., Platt R. W., and Klein M. B. (2014) Modeling the impact of hepatitis C viral clearance on end-stage liver disease in an HIV co-infected cohort with Targeted Maximum Likelihood Estimation. *Biometrics* **70**:144–152.
- 53. **Rich B.**, <u>Moodie E. E. M.</u>, Stephens D. A. (2014) Simulating sequential multiple assignment randomized trials to generate optimal personalized Warfarin dosing strategies. *Clinical Trials* **11**:435–444.
- 54. Moodie E. E. M., Stephens D. A. and Klein M. B. (2014) A marginal structural model for multiple-outcome data. *Statistics in Medicine* **33**:1409–1425.
- 55. **Héroux J.**, <u>Moodie E. E. M.</u>, Strumpf E., Coyle N., Tousignant P., and Diop M. (2014) Marginal structural models for skewed outcomes: Identifying causal relationships in health care utilization. *Statistics in Medicine* **33**:1205–1221.
- 56. **Naimi A. I.**, <u>Moodie E. E. M.</u>, Auger A. and Kaufman J. S. (2014) Constructing inverse probability weights for continuous exposures: a comparison of methods. *Epidemiology* **25**:292–299.
- 57. **Regier M. D.**, Moodie E. E. M., and Platt R. W. (2014) The effect of error-in-confounders on the estimation of the causal parameter when using marginal structural models and inverse probability-of-treatment weights: A simulation study. *The International Journal of Biostatistics* **10**:1–10, doi: 10.1515/ijb-2012-0039.
- 58. **Schnitzer M.**, <u>Moodie E. E. M.</u>, and Platt R. W. (2013) Targeted maximum likelihood for longitudinal marginal structural models under density misspecification. *Biostatistics* **14**:1–14.

- 59. **Xiao Y.**, <u>Moodie E. E. M.</u>, and Abrahamowicz M. (2013) Comparison of approaches to weight truncation for marginal structural Cox models. *Epidemiologic Methods* **2**:1–20, doi: 10.1515/em-2012-0006.
- 60. <u>Moodie E. E. M.</u>, Chakraborty B., and Kramer M.S. (2012) Q-learning for estimating optimal dynamic treatment rules from observational data. *The Canadian Journal of Statistics* **40**:629–645.
- 61. Shortreed, S. M. and <u>Moodie E. E. M.</u> (2012) Estimating the optimal dynamic treatment regime for schizophrenia: Evidence from the sequentially randomized CATIE Schizophrenia Study. *Journal of the Royal Statistical Society, Series C* **61**:577–599.
- 62. Hanley J.A. and Moodie E. E. M. (2012) Sample size, precision and power calculations: A unified approach. *Journal of Biometrics & Biostatistics* **2**, doi:10.4172/2155-6180.1000124.
- 63. <u>Moodie E. E. M.</u> and Stephens D. A. (2012) Estimation of dose-response functions for longitudinal data using the Generalized Propensity Score. *Statistical Methods in Medical Research*, **21**:148–167.
- 64. <u>Moodie E. E. M.</u> and Stephens D. A. (2011) Marginal Structural Models: Unbiased estimation for longitudinal studies. *International Journal of Public Health*, **56**:117–119.
- 65. <u>Moodie E. E. M.</u> and Stephens D. A. (2010) Using Directed Acyclic Graphs to detect limitations of traditional regression in longitudinal studies. *International Journal of Public Health*, **55**:701–703.
- 66. **Rich B.**, <u>Moodie E. E. M.</u>, Stephens D. A., and Platt R. P. (2010) Model checking with residuals for gestimation of optimal dynamic treatment regimes. *The International Journal of Biostatistics*, **6**(2): Article 10.
- 67. **Xiao Y.**, Abrahamowicz M., and <u>Moodie E. E. M.</u> (2010) Accuracy of conventional and marginal structural Cox model estimators: A simulation study. *The International Journal of Biostatistics*, **6**(2): Article 11.
- 68. **Biernot, P.** and <u>Moodie E. E. M.</u> (2010) A comparison of variable selection approaches for dynamic treatment regimes. *The International Journal of Biostatistics*, **6**(1): Article 6.
- 69. <u>Moodie E. E. M.</u> and Richardson T. S. (2009) Estimating optimal dynamic regimes: Correcting bias under the null. *The Scandinavian Journal of Statistics* **37**:126–146.
- 70. Moodie E. E. M. (2009) A note on the variance of doubly-robust G-estimates. *Biometrika* **96**:998-1004.
- 71. <u>Moodie E. E. M.</u> (2009) Risk factor adjustment in marginal structural model estimation of optimal treatment regimes. *Biometrical Journal*, **51**:774–788
- 72. <u>Moodie E. E. M.</u>, Platt R. W., and Kramer M. S. (2009) Estimating response-maximized decision rules with applications to breastfeeding. *Journal of the American Statistical Association* **104**:155–165.
- 73. Moodie E. E. M., Delaney J. A. C., LeFebvre G., and Platt R. W. (2008) Missing confounding data in marginal structural models: a comparison of inverse probability weighting and multiple imputation. *The International Journal of Biostatistics*, **4**: Article 13.
- 74. Hanley J. A., Julien M., and Moodie E. E. M. (2008) Student's z, t, and s: what if Gosset had R? *The American Statistician*, **62**:64–69.
- 75. Moodie E. E. M., Richardson, T. S., and Stephens, D. A. (2007) Demystifying optimal dynamic treatment regimes. *Biometrics*, **63**:447–455.
- 76. White I., <u>Moodie E. E. M.</u>, Thompson S., Croudace T. (2003) A modelling strategy for the analysis of clinical trials with partly missing longitudinal data. *International Journal of Methods in Psychiatric Research*, **12**:139–150.

77. Currie J. D., Moodie E. E. M. (2003) A word on 7 letters which is non-repetitive up to mod 5. *Acta Informatica*, **39**:451–468.

### Substantive papers -

- 78. Latimer E. A., Rabouin D., Cao Z., Ly A., Powell G., Aubry T., Distasio J., Hwang S. W., Somers J. M., Bayoumi A. M., Mitton C., <u>Moodie E. E. M.</u>, and Goering P. (2020) Cost-effectiveness of Housing First with assertive community treatment: Results from the Canadian At Home/Chez Soi trial. *Psychiatric Services* (accepted)
- 79. **Nasiri K.**, <u>Moodie E. E. M.</u>, and Abenhaim H. A. (2020) To what extent is the association between race and fetal growth restriction explained by adequacy of prenatal care? A mediation analysis of a retrospective cohort. *American Journal of Epidemiology* (accepted)
- 80. **Chu C. M. T.**, <u>Moodie E. E. M.</u>, Streiner D. L. and Latimer E. A. (2020) Trajectories of homeless shelter utilization in the At Home/Chez Soi trial of Housing First. *Psychiatric Services* (accepted)
- 81. **Saeed S.**, Strumpf E. C., <u>Moodie E. E. M.</u>, Wong L., Cox J., Walmsley S., Tyndall M., Cooper C., Conway B., Hull M., Martel-Laferriere V., Gill M. J., Wong A., Vachon M. L., and Klein M.B., for the Canadian Co-Infection Cohort Study Investigators (2020) Eliminating structural barriers: The impact of unrestricted access on hepatitis C treatment uptake among people living with HIV. *Clinical Infectious Disease* (in press)
- 82. Latimer E., Rabouin D., Cao Z., Ly A., Powell G., Adair C. E., Sareen J., Somers J., Stergiopoulos V., Pinto A., Moodie E. E. M. and Veldhuizen S. for the At Home/Chez Soi Investigators. (2019) Cost-effectiveness of Housing First with Intensive Case Management compared to treatment as usual for homeless adults with mental illness. *JAMA Network Open* 2:e199782.
- 83. **Mamiya H.**, Schmidt A. M., <u>Moodie E. E. M.</u>, Ma Y., and Buckeridge D. (2019) An area-level indicator of latent soda demand: Spatial statistical modeling of grocery store transaction data to characterize the nutritional landscape in Montreal, Canada. *American Journal of Epidemiology* **188**:1713–1722.
- 84. Karunananthan S., <u>Moodie E. E. M.</u>, Bergman H., Payette H., Wolfson D., Diehr P. H., and Wolfson C. (2019) The association between physical function and proximity to death in older adults: A multilevel analysis of 4,150 decedents from the Cardiovascular Health Study. *Annals of Epidemiology* **35**:59–65.
- 85. Kronfli N., Bhatnagar S. R., Hull M. W., <u>Moodie E. E. M.</u>, Walmsley S., Gill J., Cooper C., Martel-Laferriere V., Pick N., Cox J., and Klein M. B. (2019) Trends in cause-specific mortality in HIV-Hepatitis C co-infection following hepatitis C treatment scale-up. *AIDS* **33**:1013–1022.
- 86. Almeida-Brasil C. C., Moodie E. E. M., Cardoso T. S., Nascimento E., and Ceccato M. G. B. (2018) Comparison of the predictive performance of adherence measures for virologic failure detection in people living with HIV: a systematic review and pairwise meta-analysis. *AIDS Care* 31:647–659.
- 87. Kronfli N., Nitulescu R., Cox J., <u>Moodie E. E. M.</u>, et al. (2018) Previous incarceration impacts access to hepatitis C virus (HCV) treatment among HIV-HCV co-infected patients in Canada. *Journal of the International AIDS Society* **21**:e25197
- 88. Ustun C., Morgan E., <u>Moodie E. E. M.</u>, et al. (including **Coulombe J.**). (2018) Core-binding factor acute myeloid leukemia with t(8;21): Risk factors and a novel scoring system (I-CBFit). *Cancer Medicine* 7:4447–4455.

- 89. Saeed S., Moodie E. E. M., Strumpf E. C., Gill M. J., Wong A., Cooper C., Walmsley S., Hull M., Martel-Laferriere V., and Klein M. B. (2018) Real-world impact of direct acting antiviral therapy on health-related quality of life in HIV-Hepatitis C co-infected individuals. *Journal of Viral Hepatitis* 25:1507–1514.
- 90. **Mamiya H.**, Moodie E. E. M., Ma Y., and Buckeridge D. (2018) Susceptibility to price discounting of soda by neighborhood educational status: An ecological analysis of disparities in soda consumption using point-of-purchase transaction data in Montreal, Canada. *International Journal of Epidemiology* **47**:1877–1886.
- 91. **McLinden T.**, <u>Moodie E. E. M.</u>, Hamelin A.-M., Harper S., Walmsley S. L., Paradis G., Klein M. B., and Cox J. (2018) Injection drug use, food insecurity, and HIV-HCV co-infection: a longitudinal cohort analysis. *AIDS Care* **30**:1322–1328.
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- 122. Brenner, B. and Moodie E. E. M. (2012) HIV sexual networks: The Montreal experience. *Statistical Communications in Infectious Diseases* **4**(1): Article 1.
- 123. Kramer M. S., <u>Moodie E. E. M.</u>, and Platt R. W. (2012) Infant feeding and growth: Can we answer the causal question? *Epidemiology* **23**:790–794.

- 124. Hull M. W., Rollet K., <u>Moodie E. E. M.</u>, Walmsley S., Cox J., Potter M., Cooper C., Pick N., Saeed S., and Klein M. B. for the Canadian HIV-HCV Cohort Investigators. (2012) Insulin Resistance is associated with progression to hepatic fibrosis in a cohort of HIV/HCV co-infected patients. *AIDS* **26**:1789–1794.
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- 127. Kramer M. S., <u>Moodie E. E. M.</u>, Dahhou M., and Platt R. W. (2011) Breastfeeding and infant growth: An empirical demonstration of reverse causality. *American Journal of Epidemiology* **173**988–989. See also commentary by Schisterman et al. and response.
- 128. Moodie E. E. M., Pai N. P., and Klein M. (2009) Is anti-retroviral therapy causing long-term liver damage? Results from an HIV-only and HIV-Hepatitis C co-infected cohort. *PLoS One*, **4**: e4517
- 129. Pai, N. P., Milton Estes, M., Moodie E. E. M., Reingold, A. L. and Tulsky, J. P. (2009) The impact of antiretroviral therapy in a cohort of HIV infected patients going in and out of the San Francisco County jail. *PLoS One* **4**: e7115, doi:10.1371/journal.pone.0007115
- 130. Pai N. P., Joshi R., Dogra S., Taksande B., Mendiratta D., Kalantri S.P., Pai M., Moodie E. E. M., Narang P., Tulsky J. P., and Reingold A. (2008) Profile of adults seeking voluntary HIV testing and counseling in rural Central India: Results from a hospital based study. *AIDS Care*, **21**:294–300.
- 131. Veerapathran A., Joshi R., Goswami K., Dogra S., <u>Moodie E. E. M.</u>, Reddy M. V. R., Kalantri S., Schwartzman K., Behr M. A., Menzies D., and Pai M. (2008) T-cell assays for tuberculosis infection: Deriving cut-offs for conversions using reproducibility data. *Public Library of Science (PLoS) One*, **3**: e1850.
- 132. Delaney J. A. C., <u>Moodie E. E. M.</u>, and Suissa S. (2008) Validating the effects of drug treatment on blood pressure in the General Practice Research Database. *Pharmacoepidemiology and Drug Safety*, **17**:535–545.

### G3b. Books

Statistical Methods for Dynamic Treatment Regimes: Reinforcement Learning, Causal Inference, and Personalized Medicine. (2013) Chakraborty B. and Moodie E. E. M. Springer (Statistics for Biology and Health series).

## G3c. Books Edited

Adaptive Treatment Strategies in Practice: Planning Trials and Analyzing Data for Personalized Medicine. (2016) Edited by Kosorok M. R. and <u>Moodie E. E. M.</u> ASA-SIAM (American Statistical Association-Society for Industrial Mathematics) Publishing. Philadelphia, PA.

#### **G3d.** Book Chapters

1. **Krakow E. K.** and <u>Moodie E. E. M.</u> (2018) Tools for the precision medicine era: developing highly adaptive and personalized treatment recommendations using SMARTs. In "A Guide to Outcome Modeling In

- Radiotherapy and Oncology: Listening to the Data." Edited by El-Naqa I.
- 2. **Schnitzer M.**, van der Laan M. J., <u>Moodie E. E. M.</u>, and Platt R. W. (2018) Longitudinal targeted maximum likelihood estimation with clustering. In "Targeted Learning in Data Science: Causal Inference for Complex Longitudinal Studies." Edited by van der Laan M. J. and Rose S. Springer.
- 3. Wallace M. P. and Moodie E. E. M. (2016) Analysis in the single-stage setting: An overview of estimation approaches for dynamic treatment regimes. In "Adaptive Treatment Strategies in Practice Planning Trials and Analyzing Data for Personalized Medicine." Edited by Kosorok M. R. and Moodie E. E. M.

#### G3e. Non-refereed contributions: Articles, book reviews, and miscellanea

- 1. Lambert G., Cox J., Messier-Peet M., Apelian H., <u>Moodie E. E. M.</u> et les membres de l'équipe de recherche Engage. Engage Montréal, Portrait de la santé sexuelle des hommes de la région métropolitaine de Montréal ayant des relations sexuelles avec des hommes, Cycle 2017-2018, Faits saillants. Direction régionale de santé publique du CIUSSS du Centre-Sud-de-l'Île-de-Montréal, janvier 2019.
- 2. Goetghebeur E., De Stavola B., <u>Moodie E. E. M.</u>, Waernbaum I. and le Cessie S. for the STRATOS group on causal inference (2016) "The statistics of tragedy" or "the tragedy of statistics"? *Significance Magazine* Feb. 2016, page 46
- 3. Young J., <u>Moodie E. E. M.</u>, Abrahamowicz M., Klein M. B., Weber R., Bucher H. C. (2015) Incomplete modelling of the effect of antiretroviral therapy on the risk of cardiovascular events. *Clinical Infectious Diseases* **61**:1206–1207.
- 4. <u>Moodie E. E. M.</u>, Hanley J. A., and Manges A. R. (2013) Hey baby, what's your sign? How children born under Sagittarius are denied day-care. *Significance* **10**: 33-36.
- 5. <u>Moodie E. E. M.</u>, Kaufman J. S. and Platt R. W. (2012) Special issue on causal inference in health research (Editorial Introduction). *The International Journal of Biostatistics*, 8(2): Article 1.
- 6. Kramer M.S., <u>Moodie E. E. M.</u>, Dahhou M., and Platt R.W. Response to "Causation or 'noitasuaC'?" *American Journal of Epidemiology*, **173**: 988-989.
- 7. Moodie E. E. M. and Stephens D. A. (2010) Special issue on causal inference (Editorial Introduction). The International Journal of Biostatistics, 6(2): Article 1.
- 8. **McDonald S.**, <u>Moodie E. E. M.</u>, and Lynch, J. (2010) Methodological approaches to conceptualizing and modeling the effect of dynamic family structure on child behavior. *American Journal of Epidemiology* **11**: Supplement, S112
- 9. Moodie E. E. M. (2009) Book review: An Introduction to Generalized Linear Models (Third Edition) by A. J. Dobson and A. G. Barnett. *The Journal of Biopharmaceutical Statistics* **19**: 568-569.
- 10. Ball A. M., Leca N., <u>Moodie E. E. M.</u>, Kendrick E. A., Davis C. L. (2006) Outcomes of steroid-free immunosuppression with tacrolimus/sirolimus (FK/Sr) in kidney transplant patients. *Journal of the American Society of Nephrology* (special volume for ASN meeting, November 2006).
- 11. Moodie E. E. M. (2004) Letter to the editor. Clinical Trials, 1: 471.

#### **G3f.** Conference Presentations

### Conference presentations (invited) -

- 1. Computational Methods for Modeling and Precision Medicine in Neurodegeneration workshop, Montreal Neurological Institute, Montreal (November, 2019) Sequential decision-making with observational data: challenges and opportunities.
- 2. SAMSI Precision Medicine Transition Workshop, Durham North Carolina (May, 2019) Sequential decision-making with observational data.
- 3. McGill initiative on Computational Medicine Symposium, Montreal, QC (November, 2018) Statistical perspectives on precision medicine: Tailoring immunosuppressant therapy to transplant patients. Keynote address.
- 4. JSM, Vancouver, BC (August, 2018) Shared-parameter G-estimation of optimal treatments for rheumatoid arthritis.
- 5. SSC Annual Meeting, Montreal, QC (June, 2018) Shared-parameter G-estimation of optimal treatments for rheumatoid arthritis.
- 6. ENAR/IBS Meeting, Atlanta, GA (March, 2018) Shared-parameter G-estimation of optimal treatments for rheumatoid arthritis.
- 7. Atelier de maillage, Montreal, QC (March 2018) CANSSI: The role of statisticians in data science.
- 8. Statistics and Health Conference, Toulouse Institute of Mathematics and the International Centre for Mathematics and Computer Science in Toulouse, France (January, 2018). An introduction to SMART designs. Keynote address.
- 9. Canadian Network for Observational Drug Effect Studies (CNODES) Semi-Annual Research Meeting, Montreal, QC (October, 2017) Dynamic treatment regimes: Statistical perspectives on a personal approach to medical decision-making.
- Innovative Statistics and Machine Learning for Precision Medicine, Institute for Mathematics and its Applications, Minneapolis, MN (September, 2017) Doubly-robust estimation of shared-parameter adaptive treatment strategies.
- 11. International Society for Clinical Biostatistics (ISCB), Vigo, Spain (July, 2017) Personalizing immunosuppressant regimes following transplantation.
- 12. Blood and Marrow Transplantation (BMT) Tandem Meetings, Orlando, FL (February, 2017) An introduction to adaptive treatment strategies.
- 13. Joint Statistical Meetings (JSM), Chicago, IL (August, 2016) The vexing problem of analyzing real data: Discussion of 'Personalized dose finding using outcome weighted learning'.
- 14. Joint Statistical Meetings (JSM), Chicago, IL (August, 2016) Model validation and selection in estimation of dynamic treatment regimes.
- 15. International Biometrics Conference, Victoria, BC (July, 2016) Modeling marginal hazard in the presence of unobserved histories: Does interrupting ART increase the risk of liver fibrosis?
- 16. Eastern North American Region of the International Biometric Society (ENAR/IBS) Meeting, Austin, TX (March, 2016) Model validation and selection in estimation of dynamic treatment regimes.

- 17. World Statistics Congress, Rio de Janeiro, Brazil (July, 2015) A cure-rate model for estimating the optimal dynamic treatment sequence following bone marrow transplantation.
- Eastern North American Region of the International Biometric Society (ENAR/IBS) Meeting, Miami, FL (March, 2015) From idealized to realized: Estimating dynamic treatment regimens from electronic medical records.
- 19. United Kingdom Causal Inference Meeting, Bristol, UK (April, 2015) Correcting measurement error in HIV phylogenetic cluster size.
- 20. Science Atlantic Mathematics, Statistics and Computer Science Conference, St. John, NB (October, 2014) Dynamic treatment regimens: Quantitative tools for the personalization of medicine. Keynote Speaker: Field Lecture.
- 21. United Kingdom Causal Inference Meeting, Cambridge, UK (April, 2014) Addressing measurement error in the confounders in inverse probability weighting.
- 22. The American Statistical Association (ASA) Significance Media Luncheon, Montreal, QC (August, 2013) Hey baby, what's your sign? Why being a Sagittarius is no fun at all. Keynote address.
- 23. Joint Statistical Meetings (JSM), Montreal, QC (August, 2013) Q-learning with a useful utility.
- 24. Conference for the Society for Clinical Trials, Boston, MA (May, 2013) Generating candidate optimal individualized dosing strategies.
- 25. University of Pennsylvania 6th Annual Conference on Statistical Issues in Clinical Trials, Philadelphia, PA (April, 2013) Generating candidate optimal individualized dosing strategies.
- 26. Eastern North American Region of the International Biometric Society (ENAR/IBS) Meeting, Orlando, FL (March, 2013) Generating candidate optimal individualized dosing strategies.
- 27. The Bill & Melinda Gates Foundation, Seattle, WA (January, 2013) Marginal Structural Models and Mediation Analyses. Keynote address at FHI360 and USAID collaborative meeting on "Best practices in analytic approaches to assess the effect of hormonal contraception on HIV acquisition with observational data".
- 28. SSC, Guelph, ON (June, 2012) Q-learning for Estimating Optimal Dynamic Treatment Rules from Observational Data.
- 29. Time for Causality Causal Inference and Dynamic Decisions in Longitudinal Studies Workshop, Bristol, UK (April, 2012) Q-learning for estimating optimal dynamic treatment rules from observational data.
- 30. Foundations and Frontiers: A Conference Celebrating the Contributions of Mary Thompson to the Statistical Sciences, Waterloo, ON (October, 2011) Q-learning for estimating optimal dynamic treatment rules from observational data.
- 31. Eastern North American Region of the International Biometric Society (ENAR/IBS) Meeting, New Orleans, LA (March, 2010) Model-checking for semiparametric estimation of optimal dynamic treatment regimes.
- 32. Joint Statistical Meetings (JSM), Washington D.C. (August, 2009) Structural nested mean modeling of response-maximized breastfeeding strategies.
- 33. Atlantic Causal Modeling Conference, Philadelphia, PA (May, 2009) Invited discussants of 'Structural Nested Mean Models for Assessing Time-Varying Effect Moderation' by Daniel Almirall, Thomas Ten Have, and Susan A. Murphy.

- 34. Western North American Region of the International Biometric Society (WNAR/IBS) Meeting, Davis, CA (June, 2008) Quantifying dose-response for a continuous treatment in the presence of non-compliance or confounding.
- 35. Statistical and Applied Mathematical Sciences Institute (SAMSI) summer programme on Dynamic Treatment Regimes and Multistage Decision-Making, Durham, NC (June, 2007) Asymptotic bias correction for g-estimation of optimal dynamic regimes.
- 36. Statistical Society of Canada (SSC) meeting; St. John's, NL (June, 2007) Quantifying dose-response for a continuous treatment in the presence of non-compliance or confounding.
- 37. Western North American Region of the International Biometric Society (WNAR/IBS) Meeting; Flagstaff, AZ (June, 2006) Bias correction in non-differentiable estimating equations for optimal dynamic regimes.

#### Presentations at universities or research institutes (invited) -

- 1. University of Washington, Biostatistics Seminar Series (January, 2020) Doubly robust estimation of adaptive treatment strategies through weighted regression.
- 2. McGill University, Biostatistics Seminar Series (November, 2019) Social interference: Inference in the presence of influential friends.
- 3. University of North Carolina, Biostatistics Seminar Series (November, 2019) Doubly robust estimation of adaptive treatment strategies through weighted regression.
- 4. McGill University, Quantitative Life Sciences Seminar Series (December, 2018) SMART studies: An evidence-based approach to precision medicine.
- 5. McGill University, Cutting Edge Lectures in Science (December, 2018) Did this make that happen? What statisticians have to say about causality.
- 6. Université de Québec à Montréal, Séminaire Statistique (December, 2018) Statistical approaches to precision medicine: An overview.
- 7. Ipsen Cambridge, MA location (December, 2018) SMART studies: An evidence-based approach to precision medicine
- 8. University of Winnipeg, Department of Mathematics and Statistics (September, 2018) An introduction to causal inference in statistics.
- 9. Université de Montréal, Faculté de pharmacie (December, 2017) Adaptive treatment strategies: An introduction from a statistical perspective.
- 10. Johns Hopkins University, Bloomberg School of Public Health, Department of Biostatistics (October, 2017) G-estimation: Is it all you need?
- 11. McGill University, Department of Epidemiology, Biostatistics, & Occupational Health Biostatistics seminar series. (October, 2015) How SMART is your trial? Obtaining quality data about dynamic treatment regimes.
- 12. Dartmouth University, Department of Biostatistics and Epidemiology (May, 2015) SMART studies and the personalization of medical care.
- 13. University of Glasgow, Department of Statistics (May, 2014) SMART studies and the personalization of medical care.

- 14. Oxford University, Department of Statistics (April, 2014) SMART studies and the personalization of medical care.
- 15. London School of Hygiene and Tropical Health, Centre for Statistical Methodology (April, 2014) SMART studies and the personalization of medical care.
- 16. University of Manchester, Centre for Biostatistics, Institute of Population Health (March, 2014) How SMART is your study? Obtaining quality data to estimate dynamic treatment regimes.
- 17. Cambridge University, Medical Research Council Biostatistics Unit (March, 2014) How SMART is your study? Obtaining quality data to estimate dynamic treatment regimes.
- 18. Oxford University, Centre for Statistics in Medicine (January, 2014) How SMART is your study? Obtaining quality data to estimate dynamic treatment regimes.
- 19. Université de Sherbrooke, Department of Mathematics (April, 2013) The current state of Q-learning for personalized medicine.
- 20. McGill University, Department of Mathematics & Statistics. (September, 2012) The current state of Q-learning for personalized medicine.
- 21. Ghent University, Center for Statistics. (July, 2012) Learning of optimal dynamic treatment rules from observational data.
- 22. McGill University, Department of Epidemiology, Biostatistics, & Occupational Health Epidemiology seminar series. (March, 2012) Learning about optimal personalized treatment rules from observational data.
- 23. Harvard School of Pubic Health (September, 2010) Marginal structural models for competing risks.
- 24. London School of Hygiene and Tropical Medicine, Medical Statistics Unit (August, 2009) Structural nested modeling of optimal breastfeeding strategies.
- 25. MUHC Department of Clinical Epidemiology (March, 2009) Estimating unbiased dose-response curves from repeated measures in the presence of confounding.
- 26. University of Toronto, Dalla Lana School of Public Health Biostatistics (March, 2009) Estimating unbiased dose-response curves from repeated measures in the presence of confounding.
- 27. Laval University, Department of Statistics (March, 2008) The multivariate generalized propensity score: Estimating dose-response functions from longitudinal data.
- 28. University of Washington, Department of Biostatistics and Department of Statistics [special joint seminar] (January, 2008) The multivariate generalized propensity score: Estimating dose-response functions from longitudinal data.
- 29. University of Texas MD Anderson Cancer Center, Department of Biostatistics. (September, 2007) Optimal adaptive treatment strategies: Using structural nested models to estimate the optimal duration of breastfeeding.
- 30. McGill University, Department of Epidemiology, Biostatistics, and Occupational Health Biostatistics seminar series. (September, 2007) Optimal adaptive treatment strategies: Using structural nested models to estimate the optimal duration of breastfeeding.
- 31. University of Winnipeg, Department of Mathematics and Statistics. (April, 2007) Optimal adaptive treatment regimes: unbiased estimation for endogenous variables.

- 32. McGill University, Department of Epidemiology, Biostatistics, and Occupational Health Biostatistics seminar series. (October, 2006) Bias correction in non-differentiable estimating equations for optimal dynamic regimes.
- 33. Colloque du Centre de Recherches Mathématiques. (October, 2006) Introduction to optimal dynamic treatment regimes.

### Conference presentations (contributed) -

- 1. Joint Statistical Meetings (JSM), Seattle, WA (August, 2015) Estimating the optimal treatment sequence for graft-versus-host-disease following bone marrow transplantation. *Note:* This was a "topics contributed" session.
- 2. Eastern North American Region of the International Biometric Society (ENAR/IBS) Meeting; Washington, DC (April, 2012) Q-learning for Estimating Optimal Dynamic Treatment Rules from Observational Data.
- 3. Statistical Society of Canada (SSC) meeting; Wolfville, NS (June, 2011) Estimation of optimal dynamic treatment rules with shared parameters and non-regularity
- 4. Joint Statistical Meetings (JSM), Vancouver, B.C. (August, 2010) G-estimation of structural nested model parameters for optimal dynamic treatment regimes: Looking for problems. *Note:* This was a "topics contributed" session.
- 5. Statistical Society of Canada (SSC) meeting; Quebec, QC (May, 2010) Quantifying dose-response for a continuous treatment in the presence of non-compliance or confounding.
- 6. Statistical Society of Canada/Société Francovcaise de Statistique meeting: Ottawa, ON (May, 2008) Bias reduction for g-estimation of optimal dynamic regimes at exceptional laws.
- 7. Western North American Region of the International Biometric Society (WNAR/IBS) Meeting; Fairbanks, AK (June, 2005) A new calculation for recursive g-estimation of optimal dynamic treatment regimes.
- 8. Royal Statistical Society (RSS) Meeting; Manchester, UK (September, 2004) Dynamic Treatment Regimes: Review and an Application.

#### Poster presentations (invited and/or peer-reviewed) -

- 1. Moodie E. E. M. (2007) Causal inference techniques for longitudinal data. CIHR Institute of Infection and Immunity New Investigator Forum; King City, ON.
- 2. Moodie E. E. M., Saeed S., Klein M. B. (2010) Extending marginal structural models for competing risks: The effect of ART interruptions on death. International Workshop on HIV Observational Databases; Barcelona, Spain.
- 3. Thorpe J., Saeed S., Moodie E. E. M., Klein M. B. (2010) Interruption of antiretroviral therapy is associated with progression of liver fibrosis in HIV/HCV co-infected adults. International Workshop on HIV Observational Databases; Barcelona, Spain.

### Workshops, working groups, and other activities -

1. Co-organized the Healthy Brains for Healthy Lives Annual Symposium, held at McGill University, May 7, 2020.

- 2. Co-organized a half-day *Longitudinal data & causal inference symposium* at McGill University, March 24, 2020.
- 3. As a Program Leader, co-organizing a year-long programme on *Precision Medicine* at the Statistical and Applied Mathematical Sciences Institute, August 1, 2018-May 31, 2019. Involvement includes co-chairing a working group with regular (approximately weekly) online meetings and planning of the Opening Workshop, held August 13-17, 2018.
- 4. Co-organized a four-week short programme entitled *Causal inference in the presence of dependence and network structure: modelling strategies and model selection* at the CRM, June 11-July 6, 2018. The CRM contributed \$52,000 towards the meeting. Financial support was also provided by CANSSI (\$12,000) and PIMS (\$4,500).
- 5. Co-organized a three-day workshop entitled *Risk Modeling, Management and Mitigation in Health Sciences* at the Centre de Recherches Mathématiques (CRM), December 12-13, 2017. The CRM contributed \$15,000 towards the meeting. CANSSI also provided financial support.
- 6. Co-organized a four-week short programme entitled *Statistical Causal Inference and its Applications to Genetics* at the CRM, July 25-August 19, 2016. The CRM contributed \$25,000 towards the meeting. Financial support was also obtained from CANSSI and PIMS.
- 7. Co-organized a five-day workshop entitled *Developing a Comprehensive, Integrated Framework for Advanced Statistical Analyses of Observational Studies* at the Banff International Research Station (BIRS), July 3-8, 2016.
- 8. Led a working group on "Connecting to Health and Social Sciences" and gave a scientific presentation on "Statistical Causal Inference and its Applications to Genetics" at the Canadian Statistical Sciences Institute (CANSSI) workshop and retreat at the Banff International Research Station (BIRS), September 25-27, 2015.
- 9. Organized a one-day workshop on R programming led by Dr. Duncan Murdoch (University of Western Ontario) with sponsorship from the Statistics Laboratory of the CRM, which was held in Montreal, QC June 9, 2014.
- 10. Organized a five-day workshop entitled *Causal Inference in Health Research* as part of the themed semester in statistics sponsored by the Statistics Laboratory of the CRM, which was held in Montreal, QC May 9-13, 2011. The CRM contributed \$25,000 towards the meeting.
- 11. Organized a two-day workshop entitled *Statistical Methods in HIV Research* as part of the themed semester in statistics sponsored by the Statistics Laboratory of the CRM, Montreal, QC, April 14-15, 2011. The CRM contributed \$15,000 towards the meeting.
- 12. Organized and chaired an Invited Session (sponsored by WNAR) at the Joint Statistical Meeting in Vancouver, BC, July 31-August 6, 2010.
- 13. Chaired a contributed session on "Biostatistics" at the Statistical Society of Canada (SSC) Meeting; Quebec, QC, May 22-26, 2010.
- 14. Organized a five-day workshop along with David Stephens (Mathematics and Statistics, McGill) entitled *Causal Inference in Statistics and the Quantitative Sciences* at BIRS, May 3-8, 2009.
- 15. Invited presentation on Early Career and Renewal in an Academic Position at the Ontario/Quebec regional Young Investigators meeting of the Statistical Society of Canada, a meeting co-sponsored by the CRM in Montreal, QC, April 4, 2009.

- 16. Organized and chaired an Invited Session at the XXIV International Biometric Conference in Dublin, Ireland, July 13-18, 2008. The proposal was one of 20 selected from among 77 submissions.
- 17. Led a working group on "Practical Challenges and Applications" in the SAMSI summer programme on Dynamic Treatment Regimes and Multistage Decision-Making; Durham, NC. June 25-27, 2007.

## G3g. Software

DTRreg: Dynamic treatment regime estimation & inference via G-estimation, dynamic WOLS, and Q-learning; implemented in R.

### H. DELAYS AND INTERRUPTIONS

2009-2010 Maternity leave: April 10, 2009 to March 26, 2010.

2010-2011 Maternity leave: December 12, 2010 to December 12, 2011.

### **ACRONYMS**

CAN-AIM CAnadian Network for Advanced Interdisciplinary Methods

CANSSI Canadian Statistical Sciences Institute
CIHR Canadian Institutes of Health Research
CRM Centre de recherches mathématiques
DSEN Drug Safety and Effectiveness Network
ENAR Eastern North American Region of the IBS

FRQNT Fonds de recherche du Québec - Nature et technologie

FRQS Fonds de recherche du Québec - Santé
IBS International Biometrics Society
ISM Institut des sciences mathématiques
IVADO Institut de valorisation des données

JSM Joint Statistical Meetings

MITACS Mathematics of Information Technology and Complex Systems

NIMH (U.S.) National Institute of Mental Health

NSERC Natural Sciences and Engineering Research Council RRSPQ Réseau de recherche en santé des populations du Québec

SER Society for Epidemiologic Research SPOR Strategy for Patient-Oriented Research

SSC Statistical Society of Canada

STRATOS STRengthening Analytical Thinking for Observational Studies

WNAR Western North American Region of the IBS