



36th Canadian Econometric Study Group Meetings

Machine Learning Econometrics

October 18-20, 2019

Université du Québec à Montréal
Cœur des sciences
200 Rue Sherbrooke Ouest
Montréal, QC H2X 1X5, Canada

Organized by UQAM and Concordia University

Local organizing committee:

Prosper Dovonon (Concordia, CIRANO, CIREQ) Xintong Han (Concordia University, CIREQ)
Dalibor Stevanovic (UQAM, CIRANO)

Scientific committee:

Marine Carrasco (Université de Montréal)	Arthur Charpentier (UQAM)	Prosper Dovonon (Concordia)
Debbie Dupuis (HEC, Montréal)	Alain Guay (UQAM)	Silvia Goncalves (McGill)
Benoit Perron (Université de Montréal)	Dalibor Stevanovic (UQAM)	Vicky Zinde-Walsh (McGill)

Notes:

Presentations: 30 minutes; ***Discussions:*** 8 minutes; ***Audience:*** 2 minutes

Presentations in Room SH-2800

Poster sessions I and II: Friday October 18 and Saturday October 19: Room SH-4800.

FRIDAY, OCTOBER 18, 2019

18:00 – 20:00 Registration @ Entrance hall of 200, rue Sherbrooke Ouest, Montréal
Welcome cocktail
SESSION I: POSTERS SESSION I (Room SH-4800)
(See Program appendix for the list of posters)

SATURDAY, OCTOBER 19, 2019

- 8:00 - 8:30** **Registration @ Entrance hall of 200, rue Sherbrooke Ouest, Montréal**
- 8:30 - 9:15** **SESSION II: KEYNOTE ADDRESS I – Chair: Prosper Dovonon (Concordia University)**
- **Gregory Duncan** (Amazon and University of Washington)
Machine Learning from an Econometrics Perspective and Suggested Next Steps
- 9:15 – 10:35** **SESSION III: Forecasting using machine learning – Chair: Debbie Dupuis (HEC, Montréal)**
- **Robin Lumsdaine** (American Univ. and NBER), with Myrthe van Dieijen (Erasmus School of Economics)
What Say They About Their Mandate? A Textual Assessment of Federal Reserve Speeches
Discussant: **Alex Maynard** (University of Guelph)
 - **Dalibor Stevanovic** (UQAM), with P. Goulet Coulombe (Univ. of Pennsylvania), M. Leroux (UQAM) and S. Surprenant (UQAM)
How is Machine Learning Useful for Macroeconomic Forecasting?
Discussant: **Francesca Rondina** (University of Ottawa)
- 9:35 - 10:55** **Break**
- 10:55 - 12:15** **SESSION IV: Nonparametric MLE and dynamic deconvolution – Chair: Benoit Perron (U. de Montréal)**
- **Christian Gourieroux** (University of Toronto, TSE, CREST), with Joann Jasiak (York University)
Dynamic Deconvolution of Independent Autoregressive Sources
Discussant: **Vicky Zinde-Walsh** (McGill)
 - **Jiaying Gu** (University of Toronto), with Roger Koenker (University College London)
Nonparametric Maximum Likelihood Methods for Binary Response Models with Random Coefficients
Discussant: **Tom Parker** (University of Waterloo)
- 12:15 - 13:15** **Lunch (Room SH-4800)**
- 13:15 - 15:15** **SESSION V: *In memory of Ramazan Gençay* – Chair: Vicky Zinde-Walsh (McGill University)**
- **Bertille Antoine** (Simon Fraser University)
Asset Pricing with a Large Matching Model
Discussant: **Lars Stentoft** (University of Western Ontario)
 - **Youngki Shin** (McMaster Univ.), with S. Lee (Columbia), Y. Liao (Rutgers Univ.) and M. H. Seo (Seoul Nat. Univ.)
Factor-Driven Two-Regime Regression
Discussant: **Bill McCausland** (Université de Montréal)
 - **Carrasco Marine** (Université de Montréal), with Ada Nayihouba (Université de Montréal)
A Regularization Approach to the Dynamic Panel Data Model Estimation
Discussant: **Doosoo Kim** (Ryerson University)
- 15:15 - 15:35** **Break**
- 15:35 - 16:55** **SESSION VI: Model selection – Chair: Arthur Charpentier (UQAM)**
- **Hui Xiao** (University of Guelph), with Yiguo Sun (University of Guelph)
On the Tuning Parameter Selection in Model Selection and Model Averaging: A Monte Carlo Study
Discussant: **Qiao Yang** (ShanghaiTech University)
 - **Antoine Djogbenou** (York University), with Razvan Sufana (York University)
Tests for Group-Specific Heterogeneity in High-Dimensional Factor Models
Discussant: **Minsu Chang** (University of Pennsylvania)
- 16:55 - 18:00** **SESSION VII: POSTERS SESSION II (Room SH-4800): (See Program appendix for the list of posters)**
- 19:00** **CONFERENCE DINNER @ Hotel Le Crystal, 1100 Rue de la Montagne, Montréal, QC H3G 0A1 (*Registration required*)**

SUNDAY, OCTOBER 20, 2019

8:30 - 9:15 **SESSION VIII: KEYNOTE ADDRESS II – Chair: Sílvia Gonçalves** (McGill University)

- **Dacheng Xiu** (Booth School of Business, University of Chicago), with Zheng Ke (Harvard) and Bryan Kelly (Yale)
Predicting Returns with Text Data

9:15 - 10:35 **SESSION IX: Matching and aggregation with heterogeneous preferences– Chair: Joann Jasiak** (York U.)

- **Roy Allen** (University of Western Ontario), with John Rehbeck (Ohio State University)
Assessing Misspecification and Aggregation for Structured Preferences
Discussant: **John Galbraith** (McGill University)
- **Xiaoting Sun** (Simon Fraser University)
Identification and Estimation of Many-to-One Matching with an Application to the U.S. College Admissions
Discussant: **Ismael Mourifie** (University of Toronto)

10:35 - 10:55 **Break**

10:55 - 12:20 **SESSION X: Generative models and networks – Chair: Pascale Valery** (HEC, Montréal)

- **Guillaume Pouliot** (University of Chicago), with Tetsuya Kaji (U. of Chicago) and Elena Manresa (New York U.)
Generative Adversarial Networks are Optimal
Discussant: **Xintong Han** (Concordia University)
- **Vadim Marmer** (University of British Columbia), with D. Kojevnikov (Vancouver Sch. of Econ.) and K. Song (UBC)
Limit Theorems for Network Dependent Random Variables
Discussant: **Bulat Gafarov** (University of California, Davis)

12:20 - 13:30 **Lunch (Room SH-4800)**

13:30 – 13:40 **AWARD CEREMONY – Chair: Benoit Perron** (Université de Montréal, Director of CIREQ)

Presentation of the Analysis Group Best Student Poster Award
Presented by: **Michal Popiel** (Analysis Group)

13:40 - 15:40 **SESSION XI: Bootstrap inference and Robustness – Chair: Lynda Khalaf** (Carleton University)

- **Russell Davidson** (McGill University)
A Comparison of Methods for Bootstrapping Time Series: A New Method Based on Machine Learning
Discussant: **Matthew Webb** (Carleton University)
- **Yuehao Bai** (Univ. of Chicago), with H. Ho (U. of Chicago), G. Pouliot (U. of Chicago) and J. Shea (U. of Chicago)
Inference for Support Vector Regression under l_1 Regularization
Discussant: **Harold D. Chiang** (Vanderbilt University)
- **Iain Snoddy** (Vancouver School of Economics)
Learning about Selection: An Improved Correction Procedure
Discussant: **Saraswata Chaudhuri** (McGill University)

15:40 **Adjourn**

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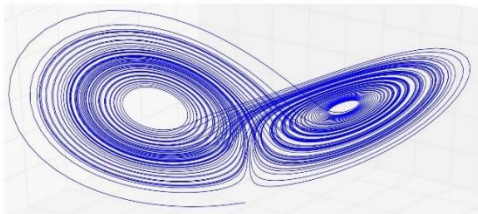
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APPENDIX - POSTERS SESSION I: FRIDAY OCTOBER 18, 2019

Posters in competition for CESG - Analysis Group's Prize for Best Student Poster on Machine Learning

1. **Chiyong Ahn** (Vancouver School of Economics, University of British Columbia)
Optimal Transfer Program Design and Counterfactual Welfare Effects
2. **Md. Nazmul Ahsan** (McGill University), with Jean-Marie Dufour (McGill University)
High-Frequency Instruments and Identification-Robust Inference for Stochastic Volatility Models
3. **Chaoyi Chen** (University of Guelph), with Thanasis Stengos (University of Guelph)
A GMM Estimator for Linear Index Threshold Model
4. **Harold D. Chiang** (Vanderbilt University)
Many Average Partial Effects in L1-Regularized Binomial and Fractional Regressions: With an Application to Gendered Language on the Internet
5. **Ehsan Fazel** (Concordia University)
Asset Pricing Implications of Grouped Patterns of Heterogeneity
6. **Philippe Goulet Coulombe** (University of Pennsylvania)
Time-varying Parameters: A Machine Learning Approach
7. **Helmi Jedidi** (HEC, Montréal), with Georges Dionne (HEC, Montréal)
Using Machine Learning Algorithms to Detect Asymmetric Information: Application to the U.S. Mortgage Servicing Market
8. **Antoine Noel** (Queen's University), with Morten Nielsen (Queen's University and CREATES)
Efficient Computation of ARCH(infinity) Models
9. **Thomas Russell** (University of Toronto), with JoonHwan Cho (University of Toronto)
Inference on Functionals of Set-Identified Parameters Defined by Convex Moments
10. **Masaya Takano** (McGill University), with Jean-Marie Dufour (McGill University)
Approximation Bounds for Conditional Expectations, Nonparametric Regressions, and Machine Learning: Partial Identification and Inference
11. **Ruonan Xu** (Michigan State University)
Asymptotic Properties of M-estimators with Finite Populations under Cluster Sampling and Cluster Assignment
12. **Chenyang Yang** (University of British Columbia)
Location Choices of Multi-plant Oligopolists: Theory and Evidence from the Cement Industry
13. **Jianhua Zhou** (University of Miami), with Christopher Parmeter (University of Miami)
Data-Driven Resistant Robust Regression

Doosoo Kim (Ryerson University)

Updating-Free Generalized Method of Moment Estimator based on a Reduced Form Model

Mathieu Marcoux (Université de Montréal), with Yuanyuan Wan (University of Toronto)

A Simple Specification Test for Partially Identified Models

Philip Merrigan (UQAM), with Jimmy Royer (Analysis Group Inc), and Kip Brown (Université de Montréal)

Estimating Average Treatment Effects with Propensity Scores Estimated with Four Machine Learning Procedures: Simulation Results in High Dimensional Settings and With Time to Event Outcomes

Denis Pelletier (North Carolina State University), with Ji Shen (SAS Institute Inc.)

Multivariate Realized Rotated Volatility for High Frequency Data

Francesca Rondina (University of Ottawa)

Policy Evaluation and Uncertainty about the Effects of Oil Prices on Economic Activity

Tatsuma Wada (Keio University)

Out-of-Sample Forecasting of Foreign Exchange Rates: The Band Spectral Regression and LASSO

APPENDIX - POSTERS SESSION II: SATURDAY OCTOBER 19, 2019

Minsu Chang (University of Pennsylvania), with Paul Sangrey (University of Pennsylvania)
Bypassing the Curse of Dimensionality: Feasible Multivariate Density Estimation

Saraswata Chaudhuri (McGill University)
Efficient Estimation when the Misspecification of Nuisance Parameters does not Affect the Consistency of the Estimator for the Parameters of Interest: An Application to FGLS

Prosper Dovonon (Concordia University), with Xiaochun Liu (University of Alabama)
Volatility Impulse Responses to Common Shocks: A Conditionally Heteroskedastic Structural FAVARMA Framework

Bulat Gafarov (University of California, Davis)
Inference in High-Dimensional Set-Identified Affine Models

Hyunseok Jung (University of Arkansas)
LASSO for Stochastic Frontier Models with Many Efficient Firms

Nail Kashaev (Univ. of Western Ontario), with Victor Aguiar (U. of Western Ontario) and Roy Allen (U. of Western Ontario)
Prices, Profits, and Production: Identification and Counterfactuals

Dongwoo Kim (Simon Fraser University)
Partially Identifying Competing Risks Models: Applications to the War on Cancer and Unemployment Spells

Min Seong Kim (U. of Connecticut), with T. Conley (UWO), S. Gonçalves (McGill), and B. Perron (U. de Montréal)
Bootstrap Inference under Cross Sectional Dependence

Steven Lehrer (Queen's University), with Weili Ding (Queen's, NYU) and Tian Xie (Xiamen University)
An Initial Assessment of the Hype for Machine Learning Strategies for Causal Effects

Robin Lumsdaine (American University, NBER), with Justyna Klejdysz (Warsaw School of Economics)
Shifts in ECB communication: a text mining approach

Alex Maynard (Univ. of Guelph), with C. Chen (U. of Guelph), N. Gospodinov (Atlanta Fed) and E. Pesavento (Emory U.)
Long-Horizon Stock Valuation and Return Forecasts Conditional on Demographic Projections

Ismael Yacoub Mourifie (University of Toronto, with Kory Kroft (University of Toronto, NBER)
An Empirical Framework for Matching with Imperfect Competition

Cathy Ning (Ryerson University), with Wanling Huang (U. of Texas Rio Grande Valley) and Dinghai Xu (U. of Waterloo)
Leverage Effect, Volatility Clustering, and Feedback Effect: A Vine Copula Approach

Guillaume Poulin-Bellisle (Bank of Canada), with Julien Champagne (B. of Canada), and Rodrigo Sekkel (B. of Canada)
Introducing the Bank of Canada Staff Economic Projections Database

Paul Rilstone (York University)
Higher-Order Expansions for Nonlinear Two-Step Estimators

Suyong Song (University of Iowa), with Stephen Baek (University of Iowa)
Shape Matters: Evidence from Machine Learning on Body Shape-Income Relationship

Lars Stentoft (University of Western Ontario), with Marcos Escobar (UWO) and Javad Rastegari (UWO)
Option Pricing with Conditional GARCH Models

Rami Tabri (University of Sydney), with Ruxin Chen (University of Sydney)
Jackknife Empirical Likelihood for Inequality Constraints on Regular Functionals

Qiao Yang (ShanghaiTech Univ.), with Xin Jin (Shanghai U. of Finance and Economics), and John Maheu (McMaster U.)
A Bayesian Nonparametric Approach on Model Combination for Short-term Interest Rates