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General Information

Research Interests

Asset Pricing, Risk Management and Financial Market Infrastructures

Teaching Fields

Financial Economics, Derivatives, Investments and Econometrics

Employment

Assistant Professor

Department of Economics, University of Western Ontario (London, Canada) 2020 - Present

Director of Financial Engineering and Research

Financial Network Analytics (London, UK) 2019 - Present

Visiting Associate Professor

Department of Economics, University of Western Ontario (London, Canada) 2019 - 2020

Principal Researcher

Funds Management and Banking Department, Bank of Canada (Ottawa, Canada) 2016 - 2019
Financial Markets Department, Bank of Canada (Ottawa, Canada) 2014 - 2015

Lecturer (Finance)

Sprott School of Business, Carleton University (Ottawa, Canada) 2016 - 2019
Telfer School of Management, University of Ottawa (Ottawa, Canada) 2018
Beedie School of Business, Simon Fraser University (Vancouver, Canada) 2007 - 2011

Associate Editor of the Bank of Canada *Financial System Review*

Financial Markets Department, Bank of Canada (Ottawa, Canada) 2014 - 2015

Senior Economist

Financial Markets Department, Bank of Canada (Ottawa, Canada) 2011 - 2014

Research / Teaching Assistant

Beedie School of Business, Simon Fraser University (Vancouver, Canada) 2004 - 2010

Other Affiliations

Associate Editor

Journal of Financial Market Infrastructures (JFMI) 2021 - Present
Latin American Journal of Central Banking (LAJCB) 2019 - Present

Member of the Advisory Board

New York Institute of Finance, Financial Times (New York, USA) 2016 - Present

Visiting Scholar / Research Fellow

De Nederlandsche Bank (Amsterdam, The Netherlands) 2019
HEC Paris (Paris, France) 2013 - 2014
Queensland University of Technology (Brisbane, Australia) 2012 - 2014

Education

Ph.D. in Business Administration (Finance)	2014
<i>Thesis: Essays on Collateral and Central Counterparties</i>	
Supervisors: Christophe Pérignon (HEC Paris, France) and Daniel Smith (QUT, Australia).	
External Supervisor: Peter Christoffersen (University of Toronto, Canada).	
Degree: Beedie School of Business, Simon Fraser University (Vancouver, Canada)	
Coursework:	
Sauder School of Business, The University of British Columbia (Vancouver, Canada)	2006 - 2008
Visits and stays:	
School of Economics and Finance, QUT (Brisbane, Australia)	2010 - 2011
Department of Finance, HEC Paris (Paris, France)	2010
M.A. in Financial Risk Management (Graduated Top of the Class)	2006
Project: <i>Short Term Market Reactions to Equity Carve-Outs of U.S. Traded Companies</i>	
Supervisors: Chris Veld and Christophe Pérignon	
Degree: Beedie School of Business, Simon Fraser University (Vancouver, Canada)	
B.B.A. Finance (First Class Joint Honours in Finance and Economics)	2005
Project: <i>Business Bankruptcy Prediction in Canada: A Theoretical Review and an Empirical Model for the Assessment of its Probability.</i>	
Supervisor: Clyde Reed	
Degree: Beedie School of Business, Simon Fraser University (Vancouver, Canada)	

Additional Training and Courses

Financial and Monetary Economics (ECO 529)	2018
Department of Economics, Princeton University (New Jersey, USA)	
Advanced Workshop for Central Bankers (Macroeconomic Models)	2017
Center for International Macroeconomics, Northwestern University (Evanston, USA)	
Advanced Topics in Empirical Finance	2013
Study Center Gerzensee, Swiss National Bank (Gerzensee, Switzerland)	
Systemic Risk Assessment: Identification and Monitoring	2012
Centre for Central Banking Studies, Bank of England (London, UK)	

Publications

European Puts, Credit Protection, and Endogenous Default	2020
<i>Quarterly Journal of Finance</i> . Co-authored with Alfredo Ibañez (Comillas Pontifical University)	
Who Pays? Who Gains? CCP Resource Provision in the post-Pittsburgh world	2019
<i>Journal of Financial Market Infrastructures</i> , 7(3), pp. 21 - 44. Co-authored with Fernando Cerezetti, Mark Manning and David Murphy.	
FMIC 2 Special Issue Introduction: A Policy View on Developments in the Field of Financial Market Infrastructures	2018
<i>Journal of Financial Market Infrastructures</i> , 6(2/3), pp. 1 - 20.	
Co-authored with Biliana Alexandrova-Kabadjova, Evangelos Benos, Jo Braithwaite, Ronald Heijmans, Mark Manning, David Murphy and Francisco Rivadeneyra.	
CoMargin	2017
<i>Journal of Financial and Quantitative Analysis</i> , 52(5), pp. 2183 - 2215.	
Co-authored with Jeffrey H. Harris, Christophe Hurlin and Christophe Pérignon.	

Publications (continued)

- Mind the Gap: Undercollateralization in the Global and Canadian OTCD Markets** 2015
Analyzing the Economics of Financial Market Infrastructures, Chapter 15, pp. 304 - 316, IGI Global, Deutsche Bundesbank, Banco de Mexico, and De Nederlandsche Bank.
- The Market for Collateral: The Potential Impact of Financial Regulation** 2013
Financial System Review, Bank of Canada, June 2013, pp. 45 - 53.
 Co-authored with Royce Mendes and Harri Vikstedt.
- Clearing House, Margin Requirements, and Systemic Risk** 2011
Review of Futures Markets, 19 Special Edition, pp. 39-54.
 Co-authored with Jeffrey H. Harris and Christophe Pérignon.

Working Papers

- Residual Risk and Default Waterfalls in Central Counterparties**
- Joint Determination of Counterparty and Liquidity Risk in Payment Systems**
 Awarded *Best Paper on Risk Management* at the NFA 2019 Conference.
 Co-authored with Charles Kahn (University of Illinois at Urbana-Champaign) and Gabriel Rodriguez (McGill University)
- Foreign Reserves and Tail Risks**
 Co-authored with Francisco Rivadeneyra (Bank of Canada)

Work in Progress

- Tail Risk Management in ETFs**
 Co-authored with Jesus Sierra (Victoria Island University)
- The Probability of Default Implicit in Option Markets**
 Co-authored with Alfredo Ibañez (Comillas Pontifical University)

Central Banking Activities

- Working Groups and Task Forces**
- Payments Modernization** 2016 - 2019
 Bank of Canada (Ottawa, Canada)
- OTC Derivatives** 2015
 Bank of Canada (Ottawa, Canada)
- Financial System Review** 2014 - 2015
 Bank of Canada (Ottawa, Canada)
- Margin Requirements** 2012 - 2013
 Bank of Canada (Ottawa, Canada)
- OTC Collateral Requirements** 2012 - 2013
 Bank of Canada (Ottawa, Canada)
- International Representation**
- Trinity of Stability Research Network** 2015
 Bank of Canada, Deutsche Bundesbank, Federal Reserve, Princeton University and Sveriges Riskbank

Teaching Experience

Graduate

Financial Economics (Master of Financial Economics)	2020 - Present
Department of Economics, University of Western Ontario (London, Canada)	
The Economics of Derivatives (Graduate Economics, Finance, Mathematics, Statistics)	2019 - Present
Department of Economics, University of Western Ontario (London, Canada)	
Financial Management Concentration Integration (MBA Capstone Course)	2016 - 2019
Sprott School of Business, Carleton University (Ottawa, Canada)	

Undergraduate

Intermediate Econometrics II	2021 - Present
Department of Economics, University of Western Ontario (London, Canada)	
Financial Economics (Honours Course)	2019 - Present
Department of Economics, University of Western Ontario (London, Canada)	
Derivatives	2018 - 2019
Sprott School of Business, Carleton University (Ottawa, Canada)	
Financial Management	2018
Telfer School of Management, University of Ottawa (Ottawa, Canada)	
International Financial Management	2011
Simon Fraser University (Vancouver, Canada)	
Investments	2009 - 2011
Simon Fraser University (Vancouver, Canada)	
Derivative Securities	2007 - 2011
Simon Fraser University (Vancouver, Canada)	
Corporate Banking	2008 - 2010
Simon Fraser University (Vancouver, Canada)	
Teaching Assistant (Undergraduate)	
Introduction to Corporate Finance	2004 - 2010
Simon Fraser University (Vancouver, Canada)	
Managerial Economics	2004 - 2005, 2008
Simon Fraser University (Vancouver, Canada)	
Intermediate Macroeconomic Theory	2004 - 2005
Simon Fraser University (Vancouver, Canada)	
Labour Economics	2005
Simon Fraser University (Vancouver, Canada)	

Academic Supervision

PhD Students

External Thesis Examiner for Raisul Islam, PhD (Finance)	2020
Thesis: Systemic Risk Transmission: Visualizing Vulnerability University of Tasmania (Hobart, Australia)	
External Thesis Examiner for Wenqian Huang, PhD (Finance)	2014 - 2017
Thesis: Trading and Clearing in Modern Times VU University Amsterdam (Amsterdam, The Netherlands)	

Master's Students

Summer Project Supervisor for Miaomiao Duo and Yanan Shao	2017
MS Math Finance Program, Boston University (Boston, USA)	
Project Supervisor for David Gontovnick and Clayton Wong	2014
MSc Finance Program, Simon Fraser University (Vancouver, Canada)	

Other Teaching Activities

Case Competitions

Coach for Rotman International Trading Competition University of Western Ontario (London, Canada)	2020
Founder of Finance International Case Competition Simon Fraser University (Vancouver, Canada)	2010
Coach for Queen's University ICBC Case Competition (Finance and Accounting) Simon Fraser University (Vancouver, Canada)	2007 - 2010
Coach for JDC West Competition 2008 (Finance and Accounting) Simon Fraser University (Vancouver, Canada)	2008
Representative at the Royal Roads International Case Competition Simon Fraser University (Vancouver, Canada)	2005

Awards, Grants and Fellowships

University of Western Ontario Research Grant CAD \$6,000/year University of Western Ontario (Vancouver, Canada)	2019, 2020
NFA Best Paper in Risk Management CAD \$2,000 Northern Finance Association (Vancouver, Canada) Paper: Joint Determination of Counterparty and Liquidity Risk in Payment Systems Co-authors: Charles Kahn (University of Illinois at Urbana-Champaign) and Gabriel Rodriguez (McGill University)	2019
CDI Research Grant for CAD \$75,000 Canadian Derivatives Institute (Montreal, Canada) Joint with Christophe Hurlin and Christophe Pérignon	2012 - 2015
Graduate Fellowship for CAD \$6,250/year Simon Fraser University (Vancouver, Canada)	2005 - 2011
President's PhD Research Stipend for CAD \$6,250 Simon Fraser University (Vancouver, Canada)	2010
HSBC Graduate Award in Business Administration for CAD \$5,200 HSBC Canada (Vancouver, Canada)	2007

Keynote Presentations

New Tools for Identifying, Measuring and Managing Risk in CCPs Annual Economics Conference: CCPs and Quantitative Disclosures, Federal Reserve Bank of Chicago (Chicago, USA)	2016
CoMargin: A collateral system to reduce systemic risk 4th Annual Collateral Management Forum, Global Leading Conferences (Vienna, Austria)	2015

Invited Seminar Presentations

Boston University	
MS in Mathematical Finance Program, Questrom School of Business (Boston, USA)	2017, 2019, 2021
Finance Department, Questrom School of Business (Boston, USA)	2015
George Mason University	
Antonin Scalia Law School (Arlington, USA)	2021
The University of Manchester	
Virtual Finance Seminar Series (Manchester, UK)	2020
HEC Montreal	
Department of Finance (Montreal, Canada)	2019
De Nederlandsche Bank (DNB)	
Financial Market Infrastructures Department (Amsterdam, The Netherlands)	2019
Center for Latin American Monetary Studies (CEMLA)	
Research Department (Mexico City, Mexico)	2019
Federal Reserve Board of Governors	
Quantitative Risk Analysis Section (Washington D.C., USA)	2019
Payment System Studies Section (Washington D.C., USA)	2018
University of Victoria	
Peter B. Gustavson School of Business (Victoria, Canada)	2018
Department of Economics (Victoria, Canada)	2018
University of Ottawa	
Statistics and Probability Research Group (Ottawa, Canada)	2018
London School of Economics (LSE)	
Systemic Risk Centre (London, UK)	2018
Bank of England	
Markets Infrastructure Directorate (London, UK)	2017, 2018
Financial Stability Department (London, UK)	2013
Centre for Central Banking Studies (London, UK)	2012
Bank for International Settlements (BIS)	
Committee on Payments and Market Infrastructures, CPMI (Basel, Switzerland)	2017
Representative Office for the Americas (Basel, Switzerland)	2016
VU University Amsterdam	
Faculty of Economics and Business Administration (Amsterdam, The Netherlands)	2017
Simon Fraser University	
Beedie School of Business (Vancouver, Canada)	2015, 2017
Banco de México (Banxico)	
Financial Stability Department (Mexico City, Mexico)	2014, 2017
Federal Reserve Bank of Chicago	
Research Department (Chicago, USA)	2016

Invited Seminar Presentations (continued)

U.S. Commodity Futures Trading Commission (CFTC) Economic Analysis Department (Washington D.C., USA)	2016
The University of Tokyo Faculty of Economics (Tokyo, Japan)	2014
Bank of Japan Financial System and Bank Examination Department (Tokyo, Japan)	2014
Instituto Tecnológico Autónomo de México (ITAM) Faculty of Business Administration and Department of Mathematics (Mexico City, Mexico)	2014
Queensland University of Technology School of Economics and Finance (Queensland, Australia)	2014
Bank of Canada Management Forum Presentation to the Board of Governors (Ottawa, Canada)	2013
Financial Markets Department (Ottawa, Canada)	2011
Reserve Bank of Australia Financial Stability Department (Sydney, Australia)	2011

Academic Conference Presentations

AFA Annual Meetings American Finance Association and Office of Financial Research (Boston, USA)	2015, 2022 (Forth.)
International Risk Management Conference 14th The Risk, Banking and Finance Society (Cagliari, Italy)	2021 (Forth.)
Australasian Finance and Banking Conference 23rd, 24th, 27th, 32nd, 33rd, 34th University of New South Wales (Sydney, Australia)	2010 [†] , 2011, 2014, 2019, 2020
New Zealand Finance Meeting Auckland Center for Financial Research, Auckland University of Technology (Auckland, New Zealand)	2014 [†] , 2019 [†]
National Congress of the Mexican Mathematical Society Sociedad Matemática Mexicana (Monterrey, Mexico)	2019 [†]
NFA Conference Northern Finance Association (Canada)	2012, 2016 [‡] , 2019
The Bank of Finland Payment and Settlement Simulator Seminar Society for Industrial and Applied Mathematics (Toronto, Canada)	2019
SIAM Conference on Financial Mathematics and Engineering Society for Industrial and Applied Mathematics (Toronto, Canada)	2019 [†]
CEA Annual Conference Canadian Economics Association (Canada)	2014, 2018, 2019 [†]
Joint Bank of Canada and Payments Canada Workshop 4th and 5th Bank of Canada and Payments Canada (Ottawa, Canada)	2017, 2018 [*]

[†]Invited Presentation, ^{*}Conference Chair, [‡]Session Chair, [‡]Discussant

Academic Conference Presentations (continued)

Summer Workshop on Money, Banking, Payments and Finance Federal Reserve Bank of St. Louis (St. Louis, USA)	2018
Mini-symposium on Systemic Risk The Fields Institute for Research in Mathematical Sciences and Global Risk Institute (Toronto, Canada)	2018 ⁱ
2018 Quantitative Risk Management and Financial Analytics Workshop University of Ottawa (Ottawa, Canada)	2018 ⁱ
Financial Market Infrastructure Conference II Bank of Canada, Bank of England, Bank of Mexico and De Nederlandsche Bank (Amsterdam, The Netherlands)	2017 ^{i,†}
FMA Conferences	
Financial Management Association Latin America (Mexico City, Mexico)	2017 ⁱ
Financial Management Association Asia (Tokyo, Japan)	2014 [†]
Financial Management Association Europe (Istanbul, Turkey)	2012
The Sixth Risk Management Conference University of Toronto, Bank of Canada, McGill University (Mont Tremblant, Canada)	2015 [‡]
Third BIS Research Network Meeting: Global Financial Interconnectedness Bank for International Settlements (Basel, Switzerland)	2015 [‡]
Bank of Canada Conferences	
Collateral, Liquidity and Central Bank Operations (Ottawa, Canada)	2014 [*]
Fellowship Learning Exchange (Ottawa, Canada)	2014
International Financial Markets Workshop (Ottawa, Canada)	2011
Financial Intermediation and Market Dynamics Workshop (Ottawa, Canada)	2011
Third IFSID Conference on Derivatives Institut de la Finance Structurée et des Instruments Dérivés de Montréal, HEC Montréal (Montreal, Canada)	2014
Systemic Risk and Financial Regulation Conference Banque de France and The Society for Financial Econometrics, SoFiE (Paris, France)	2014
XVII Annual Meeting of the Central Bank Researchers Network Center for Latin American Monetary Studies CEMLA (Montevideo, Uruguay)	2012
World Business and Economics Research Conference World Business Institute (Auckland, New Zealand)	2011
Frontiers in Financial Econometrics Workshop The Bendheim Center for Finance, Princeton University and The National Centre for Econometric Research, Queensland University of Technology (Brisbane, Australia)	2011
Conference on Extreme Dependence in Financial Markets Erasmus University (Rotterdam, The Netherlands)	2011

ⁱInvited Presentation, ^{*}Conference Chair, [†]Session Chair, [‡]Discussant

Academic Conference Presentations (continued)

The 6th Annual Interdisciplinary Research in the Mathematical and Computational Sciences Day	2011
Poster Presentation, Simon Fraser University (Burnaby, Canada)	
Ciclo de Conferencias Económicas	2008 ⁱ
Universidad Autónoma del Estado de Hidalgo (Pachuca, Mexico)	
ⁱ Invited Presentation, *Conference Chair, ⁺ Session Chair, [†] Discussant	

Invited Industry Presentations

Curso sobre Infraestructuras del Mercado Financiero	2020
Workshop presentation, Center for Latin American Monetary Studies CEMLA (Mexico City, Mexico)	
Payment Systems: Present Day Outlook and Perspectives	2019
Workshop presentation, Center for Latin American Monetary Studies CEMLA (Mexico City, Mexico)	
Collateral Management Forum	2017
Session presentation, Fleming (New York, USA)	
Cleared and Uncleared Margins: Solutions and Optimization	2017
Session presentation, Risk.net (New York, USA)	
Initial Margin Optimization for Financial Institutions	2017*
Session presentation, Global Financial Market Intelligence (New York, USA)	
New York Institute of Finance, Financial Times	
Seminar presentation, Chartered Financial Risk Engineer Program (New York City, USA)	2016, 2017, 2018
Seminar presentation, Central Banking Training (New York City, USA)	2017
National Asset-Liability Management Europe Conference	2017
Session presentation, Central Banking (London, UK)	
Global Risk Management Forum	2016
Session presentation, Fleming (New York, USA)	
5th Annual Collateral Management Forum	2016
Session presentation, Global Leading Conferences (Amsterdam, The Netherlands)	
Collateral Excellence	2016*
Session presentation, Global Financial Market Intelligence (New York, USA)	
Derivatives World Congress	2015
Panel presentation, American Leaders (Chicago, USA)	
Enterprise Collateral Conference	2014 [†]
Session presentation, WB Research (London, UK)	
Euro-Asia Economic Forum	2013 [†]
Panel Presentation (Xi'an, China)	
Toronto Financial Information Summit	2013
Panel Presentation (Toronto, Canada)	

*Conference Chair, ⁺Session Chair

Editorial Duties

Journal of Financial Market Infrastructures (JFMI)	
Associate Editor	2021 - Present
Co-Editor, Special Issue on Big Data and Data Science in Financial Market Infrastructures	2020 -2021
Co-Editor, Special Issue Financial Market Infrastructure Conference II Proceedings	2017
Latin American Journal of Central Banking (LAJCB)	
Associate Editor	2019 - Present
Bank of Canada Financial System Review	
Associate Editor	2014 - 2015

Peer Reviews

Journal Refereeing	
Latin American Journal of Central Banking (LAJCB)	2020, 2021
Journal of Financial and Quantitative Analysis (JFQA)	2020
Journal of Financial Market Infrastructures (JFMI)	2017, 2020
Canadian Journal of Economics (CJE)	2015, 2016
Quantitative Finance (QF)	2014, 2015
Revue Finance (Association Française de Finance)	2014
Books	
Fundamentals of Investing, First Canadian Edition, Pearson	2020
Conference Proceedings	
The Sixth Public Investors Conference Proceedings	2020
Bank for International Settlements, World Bank, Bank of Canada (Washington D.C., USA)	

Scientific Committees

NFA Conference	2017 - 2021
Northern Finance Association (Canada)	
New Zealand Finance Meeting	2015 - 2018
Auckland Center for Financial Research, Auckland University of Technology (Auckland, New Zealand)	
Joint Bank of Canada and Payments Canada Workshop	
5 th Edition: Innovations in Payment Systems, FinTech and Central Bank Digital Currencies (Ottawa, Canada)	2018
Bank of Canada Student Paper Award	
Bank of Canada (Ottawa, Canada)	2018
Bank of Canada and Canadian Economics Association (Ottawa, Canada)	2017
International Conference on Information Systems (ICIS)	2018
Association for Information Systems (San Francisco, USA)	
ANR Call for Proposals	2018
L'Agence nationale de la recherche (Paris, France)	
First International Conference on Physics, Mathematics and Statistics	2018
The University of Hong Kong and Georgia State University (Shanghai, China)	
Prepasup International Conference	2015
Prepasup (Paris, France)	

Organizing Committees

Financial Market Infrastructure Conference

3rd Edition: Organizing Committee 2018
 Bank of Canada, Bank of England, Bank of Mexico and De Nederlandsche Bank, Federal Reserve Bank of Chicago (Ottawa, Canada)

2nd Edition: Organizing Committee 2017
 Bank of Canada, Bank of England, Bank of Mexico and De Nederlandsche Bank (Amsterdam, The Netherlands)

Joint Bank of Canada and Payments Canada Workshop

5th Edition: Conference Chair, Innovations in Payment Systems, FinTech and Central Bank Digital Currencies, Bank of Canada and Payments Canada (Ottawa, Canada) 2018

Bank of Canada Seminar Series

Lead Coordinator, Funds Management and Banking Department (Ottawa, Canada) 2016 - 2017

Lead Coordinator, Financial Markets Department (Ottawa, Canada) 2011 - 2013

Global Risk Management Forum

Advisory Committee, Fleming (New York, USA) 2016, 2017

FMA Latin America Conference

Panel Organizer (Central Banking), 2017
 Financial Management Association (Mexico City, Mexico)

Derivatives World Congress

Advisory Committee, Fleming (Chicago, USA) 2016

Collateral, Liquidity and Central Bank Operations Conference

Organizing Committee, Bank of Canada (Ottawa, Canada) 2014

Volunteering and Community Involvement

Big Brother Mentor 2009

Big Brothers of Greater Vancouver (Vancouver, Canada)

Christmas Toy Ride Volunteer 2002 - 2008

Rotary International (Pachuca, Mexico)

Radio Show Co-host – Yucastereo 2004 - 2006

CJSF Radio 90.1 FM (Vancouver, Canada)

Volunteer Teacher 1999 - 2000

Casa del Niño DIF Orphanage (Pachuca, Mexico)

Personal Information

Citizenship: Canadian and Mexican

Hobbies: Soccer, chess, taekwondo (First Degree Black Belt, World Taekwondo Federation)