March 6, 2025

RICHARD LUGER

Department of Finance, Insurance and Real Estate
Laval University

Contact Information

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Education

Ph.D. Economics, Université de Montréal, 2001
M.A. Economics, McGill University, 1995
B.Sc. Applied Mathematics, Concordia University, 1993
B.Sc. Computer Science, Université de Montréal, 1990

Work Experience

Laval University (Quebec City, Canada)

Department of Finance, Insurance and Real Estate

- Full Professor, 2022–present (retroactive to June 2021)
- Associate Professor, 2017–2022
- Assistant Professor, 2014–2017

Georgia State University (Atlanta, United States)

Department of Risk Management and Insurance; *and* Department of Economics

- Associate Professor, 2010–2014

Emory University (Atlanta, United States)

Department of Economics

- Assistant Professor, 2004–2010

Bank of Canada (Ottawa, Canada)

- Senior Analyst, Department of Monetary and Financial Analysis, 2003–2004
- Senior Analyst, Research Department, 2001–2003
- Analyst, Research Department, 2000–2001

Visits

Melbourne Business School (Australia), May 2024
CREST (Paris, France), September 2018
CEMFI (Madrid, Spain), September 2008–June 2009

Publications (authors in alphabetical order)

Refereed scholarly

1. Luger, R., 2025. “Regularizing stock return covariance matrices via multiple testing of correlations,” *Journal of Econometrics,* 248, Article 105753.

2. Fu, H., Luger, R., 2022. “Multiple testing of the forward rate unbiasedness hypothesis across currencies,” *Journal of Empirical Finance,* 68, 232–245.

3. Gungor, S., Luger, R., 2021. “Exact inference in long-horizon predictive quantile regressions with an application to stock returns,” *Journal of Financial Econometrics,* 19, 746–788.

4. Gungor, S., Luger, R., 2020. “Small-sample tests for stock return predictability with possibly non-stationary regressors and GARCH-type effects,” *Journal of Econometrics,* 218, 750–770.

5. Liu, X., Luger, R., 2018. “Markov-switching quantile autoregression: a Gibbs sampling approach,” *Studies in Nonlinear Dynamics and Econometrics,* 22, 1–33.

6. Dufour, J.-M., Luger, R., 2017. “Identification-robust moment-based tests for Markov-switching in autoregressive models,” *Econometric Reviews,* 36, 713–727.

7. Gungor, S., Luger, R., 2016. “Multivariate tests of mean-variance efficiency and spanning with a large number of assets and time-varying covariances,” *Journal of Business and Economic Statistics*, 34, 161–175.

8. Liu, X., Luger, R., 2015. “Unfolded GARCH models,” *Journal of Economic Dynamics and Control*, 58, 186–217.

9. Gungor, S., Luger, R., 2015. “Bootstrap tests of mean-variance efficiency with multiple portfolio groupings,” *L’Actualité économique*, 91, 35–65. (Special issue in English on “Identification, Simulation, and Finite-Sample Inference.”)

10. Luger, R., 2014. “Testing for GARCH effects with quasilikelihood ratios,” *Journal of Risk* 16, 23–59.

11. Gungor, S., Luger, R., 2013. “Testing linear factor pricing models with large cross-sections: a distribution-free approach,” *Journal of Business and Economic Statistics* 31, 66–77.

12. Luger, R., 2012. “Finite-sample bootstrap inference in GARCH models with heavy-tailed innovations,” *Computational Statistics and Data Analysis* 56, 3198–3211.

13. Garcia, R., Luger, R., 2012. “Risk aversion, intertemporal substitution, and the term structure of interest rates,” *Journal of Applied Econometrics* 27, 1013–1036.

14. Luger, R., 2010. “An omnibus test for heteroskedasticity,” *Economics Letters* 106, 22–24.

15. Gungor, S., Luger, R., 2009. “Exact distribution-free tests of mean-variance efficiency,” *Journal of Empirical Finance* 16, 816–829.

16. Liu, Y., Luger, R., 2009. “Efficient estimation of copula-GARCH models,” *Computational Statistics and Data Analysis* 53, 2284–2297.

17. Garcia, R., Luger, R., 2007. “The Canadian macroeconomy and the yield curve: an equilibrium-based approach,” *Canadian Journal of Economics* 40, 561–583.

18. Luger, R., 2006. “Median-unbiased estimation and exact inference methods for first-order autoregressive models with conditional heteroscedasticity of unknown form,” *Journal of Time Series Analysis* 27, 119–128.

19. Luger, R., 2006. “Exact permutation tests for non-nested non-linear regression models,” *Journal of Econometrics* 133, 513–529.

20. Garcia, R., Luger, R., Renault, E., 2005. “Viewpoint: Option prices, preferences, and state variables,” *Canadian Journal of Economics* 38, 1–27.

21. Garcia, R., Luger, R., Renault, E., 2003. “Empirical assessment of an intertemporal option pricing model with latent variables,” *Journal of Econometrics* 116, 49–83.

22. Luger, R., 2003. “Exact non-parametric tests for a random walk with unknown drift under conditional heteroscedasticity,” *Journal of Econometrics* 115, 259–276.

23. Luger, R., 2001. “A modified CUSUM test for orthogonal structural changes,” *Economics Letters* 73, 301–306.

Non-refereed

24. Guay, A., Luger, R., Zhu, Z., 2003. “The new Phillips curve in Canada,” in *Price Adjustment and Monetary Policy.* Ottawa: Bank of Canada, 59–94.

25. Luger, R., 2011. “Book review: Introducing Monte Carlo methods with R,” *Econometric Reviews* 30, 469–474.

Presentations at Professional Meetings

- 18th International Conference on Computational and Financial Econometrics (CFE 2024), King’s College London, UK; Monash University, Australia, 2024; Melbourne Business School, Australia, 2024.

- Canadian Economics Association 57th Annual Conference, Winnipeg, 2023;

- 2022 European Winter Meeting of the Econometric Society, Berlin School of Economics, Germany; 2022 Frontiers of Factor Investing Conference, Lancaster University, UK; 2022 CIREQ Econometrics Conference in Honor of Eric Renault (Poster Session), Montreal; 2022 RCEA Conference on Recent Developments in Economics, Econometrics and Finance, Virtual.

- 15th International Conference on Computational and Financial Econometrics (CFE 2021), Virtual; Annual Conference of the International Association for Applied Econometrics (IAAE 2021), Virtual; Canadian Economics Association 55th Annual Conference (CEA 2021), Virtual; 14th International Conference on Computational and Financial Econometrics (CFE 2020), Virtual.

- 13th International Conference on Computational and Financial Econometrics (CFE 2019), University of London, UK; 36th International Conference of the French Finance Association (AFFI), Université Laval, 2019; Canadian Economics Association 53nd Annual Conference, Banff, 2019; 59^e Congrès Annuel de la Société Canadienne de Science Économique, Québec, 2019.

- CREST, France, 2018; 20th OxMetrics User Conference, Cass Business School, London, UK, 2018; Canadian Economics Association 52nd Annual Conference, McGill University, 2018; Journée du CRREP (Centre de recherche sur les risques, les enjeux économiques, et les politiques publiques), Université Laval, 2018.

- 11th International Conference on Computational and Financial Econometrics (CFE 2017), University of London, UK; 34th Meeting of the Canadian Econometric Study Group (Poster Session), Toronto, 2017; 57^e Congrès Annuel de la Société Canadienne de Science Économique, University of Ottawa, 2017.

- 10th International Conference on Computational and Financial Econometrics (CFE 2016), University of Seville, Spain; 69th European Meeting of the Econometric Society, Geneva, Switzerland, 2016; Canadian Economics Association 50th Annual Conference, University of Ottawa, 2016; 56^e Congrès Annuel de la Société Canadienne de Science Économique, Québec, 2016; 2016 CIREQ Econometrics Conference in Honor of Jean-Marie Dufour, Montréal.

- 9th International Conference on Computational and Financial Econometrics (CFE 2015), University of London, UK; 11th World Congress of the Econometric Society, Montréal, 2015; International Association for Applied Econometrics 2015 Annual Conference, University of Macedonia – Thessaloniki, Greece; Canadian Economics Association 49th Annual Conference, Ryerson University, 2015; 55^e Congrès Annuel de la Société Canadienne de Science Économique, Université du Québec à Montréal, 2015.

- 22nd Annual Symposium of the Society for Nonlinear Dynamics and Econometrics, Baruch College, NY, 2014; Laval University, 2014; Syracuse University, 2014.

- 23rd Annual Meeting of the Midwest Econometrics Group, Indiana University, 2013; Canadian Economics Association 47th Annual Conference, HEC Montréal, 2013.

- 6th CSDA International Conference on Computational and Financial Econometrics, Oviedo, Spain, 2012; Midwest Econometrics Group Meetings, University of Kentucky, 2012; North American Summer Meeting of the Econometric Society, Northwestern University, 2012; 7th New York Camp Econometrics Conference, Cooperstown, NY, 2012; 2012 CIREQ Conference on High-Dimensional Problems in Econometrics (Poster Session), Montréal; 52^e Congrès Annuel de la Société Canadienne de Science Économique, Mont-Tremblant, QC, 2012.

- 5th CSDA International Conference on Computational and Financial Econometrics, University of London, UK, 2011; Northern Finance Association Conference, Vancouver, 2011; 17th International Conference on Computing in Economics and Finance, San Francisco, 2011; North American Summer Meeting of the Econometric Society, Washington University in St. Louis, 2011; Canadian Economics Association 45th Annual Meeting, University of Ottawa, 2011; Bank of Canada Financial Econometrics Workshop, 2011.
- 4th CSDA International Conference on Computational and Financial Econometrics, University of London, UK, 2010; International Conference on High-Dimensional Econometric Modeling, Cass Business School, City University of London, UK, 2010; Midwest Econometrics Group Meetings, Washington University in St. Louis, 2010; Georgia State University, 2010; Northern Illinois University, 2010.
- North Carolina State University, 2008; Canadian Economics Association 42nd Annual Conference, University of British Columbia, 2008.
- 7th Annual Missouri Economics Conference, 2007; International Workshop on Computational and Financial Econometrics, University of Geneva, Switzerland, 2007; North American Summer Meetings of the Econometric Society, Duke University, 2007; Midwest Econometrics Group Meetings, Saint Louis University, 2007.
- 6th Annual Missouri Economics Conference, 2006; Canadian Economics Association 40th Annual Conference, Concordia University, 2006; North American Summer Meetings of the Econometric Society, University of Minnesota, 2006.
- Simon Fraser University, 2004; Emory University, 2004; European Center for Advanced Research in Economics and Statistics (ECARES) Bruxelles, Belgium, 2004; Tilburg University, 2004; Centro de Estudios Monetarios y Financieros (CEMFI) Madrid, Spain, 2004.
- Carleton University, 2003; Concordia University, 2003; Bank of Canada Annual Conference, 2002.
- University of Toronto, 2001; Latin American and Caribbean Economic Association (LACEA) Montevideo, Uruguay 2001 Conference; Université de Montréal (CRDE) "Resampling Methods in Econometrics" Conference, 2001; Canadian Economics Association 35th Annual Meeting, McGill University, 2001.
- Université de Montréal, 2000; Latin American and Caribbean Economic Association (LACEA) Rio de Janeiro, Brazil 2000 Conference; Mathematics of Information Technology and Complex Systems (MITACS) First Annual Conference (Poster Session), University of Toronto, 2000.
- University of Delaware, 2000; University of Toronto, 2000; Queen's University, 2000; Université du Québec à Montréal, 2000; Bank of Canada, 1999.

Research Grants

1. Autorité des marchés financiers (AMF), Fonds de recherche AMF sur la gestion intégrée des risques des institutions financières (AMF-GIRIF), 2024–2026, \$34,738. Thème: "Évaluation statistique du risque systémique dans les réseaux financiers à haute dimension."

2. Social Sciences and Humanities Research Council of Canada (SSHRC), 2021–2024, \$73,168. Theme: "Multiple-testing regularization of target matrices in dynamic covariance models: New methods and applications."

3. Autorité des marchés financiers (AMF), Fonds de recherche AMF sur la gestion intégrée des risques des institutions financières (AMF-GIRIF), 2021–2022, \$20,000. Thème: "Amélioration de la prévision des covariances entre les rendements des actifs financiers."

4. Social Sciences and Humanities Research Council of Canada (SSHRC), 2018–2021, \$64,932. Theme: "Variance targeting, heavy-tailed financial time series, and risk predictions: New methods for inference."

5. Institut de la Finance Structurée et des Instruments Dérivés de Montréal (IFSID), 2015-2017, \$30,000. Thème: "Dynamic interaction between sovereign credit rating events and credit default swaps," with Marie-Claude Beaulieu.

6. Université Laval, Chaire d'Assurance et de Services Financiers l'Industrielle-Alliance, 2015-2017, \$16,408. Thème: "Modelling the risk of financial contagion: A copula-CAViaR approach," with David Ardia.

7. Université Laval, Démarrage nouveau chercheur, 2014–2017, \$30,000. Thème: "New methods for quantile regression analysis with applications in finance."

Research and Teaching Awards

1. Université Laval, Distinction Socrate pour l'année 2021–2022

2. Université Laval, Médaille de la recherche pour l'excellence en publication 2018

Supervision of M.Sc. and Ph.D. students

<u>At Laval</u>

- Antoine Béland St-Onge, "Modélisation du VIX incluant une prime de risque de variance," 2024, M.Sc. advisor.

- Acsa Emmanuelle Kouassi, "L'Expected Shortfall pour les cryptomonnaies: Une analyse basée sur les modèles GARCH," 2024, M.Sc. advisor.

- Oussama Bettaibi, "Tester la performance de la combinaison d'estimations de la matrice covariance avec des fonctions de pénalités dans le problème d'optimisation de portefeuilles," 2023, MBA advisor.

- Abenco Gohou, “Risque systémique: Contribution des banques canadiennes lors de la COVID-19,” 2023, MBA advisor.
- Rebecca Holden, “The Absorption Ratio as an indicator for large price movements in times of market turbulence,” 2023, M.Sc. advisor.
- Céran Kouatchouang Nana, “Modélisation de la structure par terme des taux d’intérêt: cas du Canada,” 2022, M.Sc. advisor.
- Reine Sadia, “Évaluation de la propriété de valeur refuge de l’or au Canada et aux États-Unis à l’aide de la valeur à risque,” 2022, M.Sc. advisor.
- Bérénice Agbodossindji, “Prêts pair-à-pair: Analyse des multi-prêteurs, du langage et de la formation de groupes,” 2022, M.Sc. co-advisor.
- Carlos Alberto Chaparro Sepulveda, “Forecasting quantiles of cryptocurrency returns using MCMC algorithms,” 2021, M.Sc. advisor.
- Adéline Teka Zatse, “Modélisation des pertes sur prêts bancaires: développement du modèle dynamique de Vasicek,” 2021, M.Sc. advisor.
- Dominique Toupin, “Three essays on the informative content of the option-implied return distribution,” 2020, Ph.D. committee member.
- Koffi Akakpo, “Essays in Energy Economics and Climate Change Adaptation,” 2020, Ph.D. (Economics), committee member.
- Alexandre Petit, “Do Greece sovereign credit ratings impact the volatility of sovereign credit-default swaps of economically similar countries?” 2018, M.Sc. advisor.
- Pierre-Vincent Shehyn-Plante, “Prévisibilité à long terme des rendements du marché canadien,” 2017, M.Sc. committee member.
- Simon Rhainds, “Développement d’un modèle de notation de crédit économétrique général pour des financements de projet,” 2017, M.Sc. committee member.
- Mariam Djelassi, 2017–present, Ph.D. committee member (ongoing).
- Léa Séris, “Analyse de l’impact de l’investissement dans les titres du luxe sur la performance d’un portefeuille,” 2017, MBA advisor.
- Meryem Azzaoui, “Cross-hedging strategies for electricity prices: the case of Oregon,” 2017, M.Sc. advisor.
- Standley Réginald Baron, “Business cycle and credit default swap spread curve: a dynamic copula Nelson-Siegel model,” 2016, M.Sc. committee member.
- Kabeya Kalonji, “Les fiducies de placements immobiliers au Canada: actifs financiers ou immobiliers?,” 2016, M.Sc. committee member.

- Djéket Oga, "Tester la contagion entre le Canada et les États-Unis durant la crise de 2007–2009 avec un modèle Copule-GARCH," 2015, M.Sc. advisor.
- Ali Ghali, "Transactions intérimaires: impact sur l'évaluation de la performance des fonds mutuels d'actions américains," 2015, M.Sc. committee member.

At GSU (in RMI)

- Jinyu Yu, "Essays on Financial Risk Modeling and Forecasting," 2014, Ph.D. advisor (First job placement: AIG).
- Xue Qi, "Essays on Catastrophe Risk," 2013, Ph.D. committee member.
- Sampan Nettayanun, "Essays on Strategic Risk Management," 2014, Ph.D. committee member.

At Emory (in Economics)

- Xiaochun Liu, "Three Essays in Modeling and Forecasting Economic Dynamics," 2014, Ph.D. co-advisor (with Tao Zha) (First job placement: University of Central Arkansas).
- Lei Jiang, "Essays on Stock Return Predictability and Market Efficiency," 2011, Ph.D. committee member.
- Sermin Gungor, "Market Liquidity and Linear Factor Pricing Models: Empirical Assessment and New Distribution-Free Tests," 2010, Ph.D. advisor (First job placement: Bank of Canada).
- Alysa Shcherbakova, "Essays in Empirical Finance: Evaluating Risk in Financial Markets," 2009, Ph.D. advisor (First job placement: Office of the Comptroller of the Currency).
- Yan Liu, "Three Essays in Financial Market Prediction," 2007, Ph.D. advisor (First job placement: LYZ Capital Advisors LLC).
- Yan Li, "Stock Market Bubbles: Effects on Fixed Investment and Financial Market," 2008, Ph.D. committee member.
- John Qi Zhu, "Essays on Consumer Preferences and Asset Pricing," 2007, Ph.D. committee member.
- Andrew Bauer, "Three Essays in Macroeconomics," 2007, Ph.D. committee member.
- Hisham Foad, "Better In or Out? Assessing the Impact of the European Monetary Union on Cross-Country Price Convergence, Foreign Direct Investment, and Foreign Portfolio Investment," 2006, Ph.D. committee member.

External Examining

- Evan Jo (Zhou), "Two Essays in Financial Economics," Ph.D. in Finance, McGill University, 2021, External examiner.

- Carole Métais, "Étude Théorique et Empirique de la Distribution des Rentabilités des Actifs Financiers et de leur Volatilité," Ph.D. in Finance, Université Paris-Dauphine, 2011, External examiner.

- Hui Liu, "Three Essays on Unit Root Tests and Cointegration: Theory and Applications," Ph.D. in Economics, University of Ottawa, 2006, External examiner.

Continuing Education Activities

- Bermuda Monetary Authority, Course on "Financial Risk Modeling, Capital Requirements, and Economic Capital Models," March 2014, (co-taught with Daniel Bauer and Ajay Subramanian).

- Professional Risk Managers' International Association (PRMIA), Webinar Presentation on "Managing Financial Risk over Long Horizons," June 2013.

- Cairo University, Egypt, Course in Financial Econometrics, Instructor, January 2012.

- Bank of Albania, Course on Forecasting Economic Time Series Techniques, Instructor, October 2003.

- Bank of Albania, Course on Econometric Techniques, Instructor, July 2003.

- National Bank of the Republic of Macedonia, Course on Forecasting Economic Time Series Techniques, Instructor, November 2002.

- Bank of Albania and National Bank of the Republic of Macedonia, Course in Statistics and Econometric Techniques, Instructor, July 2002.

Service Activities at Laval University

- Coordinator of the B.Sc. in Quantitative Finance (since 2021);

- Business School graduate program committee (since 2019);

- Program committee for the B.Sc. in Quantitative Finance (since 2021);

- Department recruiting committee (every year since 2015).

Service Activities at Georgia State University
In the Risk Management and Insurance Department

- Researcher with the GSU CRO Risk Index Project (www.gsucroriskindex.org), 2011–2017.

- Graduate Mathematical Risk Management Program Advisor, 2012–2014.

- Faculty Recruiting Committee, 2010.

- Ph.D. Admissions Committee, 2011.
- Ph.D. Qualifying Examinations Committee, 2011–2014.

In the Economics Department

- Visiting Faculty Recruiting Committee, 2010.
- Faculty Recruiting Committee, 2011.

Service Activities at Emory University

In the Graduate School

- Woodruff Social Sciences Fellowships Selection Committee, 2008.

In Emory College

- Plenary session presentation of my teaching philosophy, 2008 Emory CTC Teaching Retreat.
- Honor Council Faculty Liaison, 2007–2010.
- Honor Council Faculty Advisor, 2006–2010 (Elected Best Advisor of the Year 2006–07).
- Honor Code Appeal Panel Member, 2006.

In the Economics Department

- Undergraduate Program Committee, 2009–2010.
- Graduate Student Recruitment Weekend, February 2008.
- Class of 2010 Orientation Day, August 2006.
- Graduate Student Recruiting Committee, 2005, 2006.
- Faculty Recruiting Committee, 2005–2008, 2010.
- Chair of the Econometrics Core Exam Committee, 2005–2008.
- Honors Thesis Advisor: Andrew Joy, 2010; Jason Kapnick, 2008; Veronica Mejia, 2008; Suhas Sridharan, 2008; Nicholas Lake, 2008; Sinthu Satawiriya, 2006.
- Honors Thesis Committee Member: Matthew Lilling, 2005.

Service Activities at CEMFI

- Masters Thesis Advisor: Luis García Álvarez, 2009.

Service Activities in Academic and Professional Organizations

- Reviewer Board Member of *Journal of Risk and Financial Management,* 2020–present

- Editor of *L'Actualité économique, Revue d'analyse économique,* 2016–2020.

- Referee for Academic Journals: *Oxford Bulletin of Economics and Statistics; International Journal of Finance and Economics; Econometric Theory; Journal of the Royal Statistical Society: Series C; International Journal of Financial Studies; Sustainability; North American Journal of Economics and Finance; International Statistical Review; Journal of Futures Markets; International Review of Economics and Finance; Financial Review; Communications in Statistics - Simulation and Computation; Communications in Statistics - Theory and Methods; Economics Letters; Statistical Inference for Stochastic Processes; International Journal of Forecasting; Biometrika; Quantitative Finance and Economics; Econometrics and Statistics; European Journal of Finance; Journal of Risk and Insurance; Research Policy; Econometric Reviews; Economic Inquiry; Journal of Banking and Finance; Journal of Applied Econometrics; Asia Pacific Management Review; Spanish Economic Review; Computational Statistics and Data Analysis; Empirical Economics; Journal of Financial Econometrics; Journal of Economic Dynamics and Control; Quantitative Finance; Journal of Business and Economic Statistics; Studies in Nonlinear Dynamics and Econometrics; Canadian Journal of Economics; Journal of Econometrics; IEEE Transactions on Neural Networks; L'Actualité économique.*

- Assessor for Research Grant Agencies: *Social Sciences and Humanities Research Council of Canada.*

- Session Organizer and Member of the Scientific Programme Committee, 15th International Conference on Computational and Financial Econometrics (CFE 2021), Virtual.

- Session Organizer and Member of the Scientific Programme Committee, 11th International Conference on Computational and Financial Econometrics (CFE 2017), University of London, UK.

- Session Organizer, 10th International Conference on Computational and Financial Econometrics (CFE 2016), University of Seville, Spain.

- Session Organizer and Member of the Scientific Programme Committee, 9th International Conference on Computational and Financial Econometrics (CFE 2015), University of London, UK.

- Member of the Program Committee, 2014 Annual Meeting of the Midwest Finance Association.

- Discussant:

  2018 CIREQ Econometrics Conference: Recent Advances in the Method of Moments.

  2015 CIRANO Conference in honour of René Garcia's 65th anniversary.

  2015 Canadian Economics Association 49th Annual Conference, Ryerson University.

2011 Canadian Economics Association 45th Annual Conference, University of Ottawa.

2008 Canadian Economics Association 42nd Annual Conference, University of British Columbia.

2006 CIREQ Financial Econometrics Conference.

2005 CIREQ Time Series Conference.

2001 Canadian Economics Association 35th Annual Conference, McGill University.