Arsène Brou

Department of Finance, Insurance, and Real Estate, Université Laval, Québec, Canada

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EDUCATION

Ph.D. in Quantitative Finance
Department of Finance, Insurance and Real Estate, Université Laval, 2020 – 2025
Advisor: Prof. Richard Luger

M.Sc. in Statistics and Quantitative Economics (ISE) 2016 – 2019
Ecole Nationale Supérieure de Statistique et d'Économie Appliquée (ENSEA)
Abidjan, Côte d'Ivoire

B.Sc. in Economics - Mathematics 2014 – 2016
Institut National Polytechnique (INP-HB), Yamoussoukro, Côte d'Ivoire

RESEARCH INTERESTS

Primary fields: Financial Econometrics, Asset Pricing, Financial Risk Modeling
Secondary fields: Machine Learning, Numerical Methods

JOB MARKET PAPER

A. Brou: The economic value of reward-to-risk timing strategies using return-decomposition GARCH models.

WORKING PAPERS

1. **A. Brou** and R. Luger: A new decomposition approach to modeling financial returns: conditioning sign on magnitude (R&R at the Journal of Banking & Finance)
2. **A. Brou** and R. Luger: Combining multiple variance-ratio tests: an exact resampling-based approach
3. **A. Brou**, L. Arango-Castillo and R. Luger: Testing for directional dependence in economic time series: A Markov-chain approach
4. **A. Brou** and R. Luger: Matrix-free equicorrelation models

REFERENCES

Richard Luger (Advisor)
Full Professor of Finance
Université Laval
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Stéphane Chrétien
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Florian Richard
Assistant Professor of Finance
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Issouf Soumaré
Full Professor of Finance
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EXPERIENCES

Non Academic

Consultant in Statistics, Centre for Affordable Housing Finance in Africa (CAHF), Johannesburg Area, South Africa – 8 months 2019

- Conducted a comprehensive study on housing finance solutions tailored for low-income households, identifying key barriers and opportunities
- Led training sessions for team members on data collection methodologies, ensuring accurate and efficient data gathering
- Designed and implemented survey frameworks, supervising the data collection process to maintain high standards of integrity and reliability
- Analyzed collected data, translating findings into actionable insights to inform policy recommendations and enhance housing finance strategies final report

Internship (Corporate Credit Risk Management), Banque Nationale d'Investissement (BNI), Abidjan, Cote d'Ivoire – 5 months 2018

- Developed score models and calculated Probability of Default (PD) for corporate clients in compliance with Basel agreements, enhancing the bank's risk assessment framework
- Estimated transition matrices between default classes, providing insights into credit risk dynamics and improving predictive accuracy
- Identified and analyzed key explanatory factors contributing to defaults within the bank's portfolio, informing risk management strategies and decision-making processes

Academia

Instructor at Université Laval

- GSF-2107: Quantitative Investment Analysis and Programming, Undergraduate W 2022, F 2024
- R and VBA Programming with Applications in Finance, Graduate F 2022 – Present

Teaching Assistant at Université Laval

- GSF-3105: Computational Finance, Undergraduate F 2023, F 2024
- GSF-7000: Financial Econometrics II, Graduate W 2021 – Present
- GSF-6094: Quantitative Risk Management, Graduate F 2021 – Present
- GSF-2107: Quantitative Investment Analysis and Programming, Undergraduate F 2020, W 2021, F 2021

Research Assistant for Prof. Issouf Soumaré 2020

Research support for the writing of the book Commodity Exchanges: Concepts, Tools and Guidelines

RECENT & UPCOMING CONFERENCES

A new decomposition approach to modeling financial returns: conditioning sign on magnitude

- 2024 Africa Meeting of the Econometric Society (AFES 2024)

  June 2024, Abidjan, Cote d'Ivoire (virtual)
- 57th Annual Conference of the Canadian Economics Association (CEA 2023)

  June 2023, Winnipeg, Canada
- 62e Conférence annuelle de la Société Canadienne des Sciences Économiques (SCSE 2023)

  May 2023, Québec, Canada
- Centre de Recherche sur les Risques, les Enjeux Economiques et les Politiques Publiques (CRREP) Ph.D. Student Day

  May 2023, Université Laval, Québec, Canada
- 16th International Conference on Computational and Financial Econometrics (CFE 2022)

  December 2022, King's College, London, United Kingdom
- Ph.D. Workshop in Economics, Statistics, and Finance (online)

  December 2022, Montréal, Canada

The economic value of reward-to-risk timing strategies using return-decomposition GARCH models

- Financial Management Association, 2025 Annual Meeting (FMA 2025)

  October 2025, Vancouver, Canada
- 18th International Conference on Computational and Financial Econometrics (CFE 2024)

  December 2024, King's College, London, United Kingdom (invited - virtual)
- 58th Annual Conference of the Canadian Economics Association (CEA 2024)

  June 2024, Toronto, Canada
- 63e Conférence annuelle de la Société Canadienne des Sciences Économiques (SCSE 2024)

  May 2024, Montréal, Canada
- 17th International Conference on Computational and Financial Econometrics (CFE 2023)

  December 2023, University of Applied Sciences, Berlin, Germany (virtual)
- Ph.D. Workshop in Economics, Statistics, and Finance (virtual)

  December 2023, Montréal, Canada

Combining multiple variance-ratio tests: an exact resampling-based approach

- 64e Conférence annuelle de la Société Canadienne des Sciences Économiques (SCSE 2025)

May 2025, Orford, Canada

- 59th Annual Conference of the Canadian Economics Association (CEA 2025)
  May 2025, Montreal, Canada

SERVICE

- Discussant CEA Conference - CESG Testing session 2025
- Discussant CEA Conference - Financial Economics: Risk Management II session 2025
- Chair for the CEA Conference - Financial Economics: Portfolio Management session 2024
- Chair for the SCSE Conference - Finance session 2023
- Mentorship Session with M.Sc. Students from ENSEA and Various Universities in Abidjan, Côte d'Ivoire, on Pursuing a Ph.D. in North America 2024
- Invited talk on Côte d'Ivoire's Economy and Culture; Model United Nations final preparation St. Lawrence college, Québec, Canada 2024
- Member of the organizing committee for the 9th Africa Business and Entrepreneurship Research Society (ABERS) Conference 2022

SOFTWARE, LANGUAGES, AND ASSOCIATION MEMBERSHIPS

Software: Good knowledge of R, C++, Rcpp, Python, Julia, VBA, Stata, LaTeX, Bloomberg terminal

Languages: French (native), English (fluent), Spanish (Advanced beginner)

Association Memberships: Canadian Economics Association, Econometric Society, American Finance Association, Financial Management Association

AWARDS AND GRANTS

- Ph.D. Student Scholarship, CRREP, Université Laval ($ 6000 CAD) 2022, 2024, 2025
- Ph.D. Student Scholarship, Finance Department, Université Laval ($ 5000 CAD) 2022, 2025
- CEA Student Travel Grant ($ 1250 CAD) 2024
- Ph.D. Student Scholarship, Finance Department, Université Laval ($ 8000 CAD) 2024
- Université Laval Finance Department Entrance Scholarship (Ph.D.) ($ 20000 CAD) 2020 – 2024
- Scholarship, Fonds Conrad-Leblanc, Université Laval ($ 2000 CAD) 2022
- Scholarship, Chaire IG Gestion de Patrimoine en Planification Financière ($ 5000 CAD) 2022
- Public Forum Debate Winner (with a team), ENSEA 2019

Last update: August 17, 2025