

Christoph Frei

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- SUMMARY** Strongly committed to advancing and integrating academic research with industrial practice in risk management and quantitative finance
- RESEARCH** Areas: risk management, algorithmic trading, quantitative finance, banking
Methods: time series analysis, machine learning, stochastic analysis and control
- EDUCATION** **Ph.D. Studies in Mathematical Finance**, ETH Zürich May 2006 – Oct. 2009
- *Doctor of Sciences*, Oct. 2009
 - Advisor: Prof. Martin Schweizer
- Diploma Studies in Mathematics**, ETH Zürich Oct. 2001 – Apr. 2006
- *Diploma in Mathematics* (with distinction), Apr. 2006
 - Extra Diploma in Insurance Mathematics, Apr. 2006
- EMPLOYMENT** **University of Alberta**, Edmonton, Canada
- Department Chair*, Mathematics and Statistics since July 2023
- Interim Department Chair*, Mathematics and Statistics July 2022 – June 2023
- Professor* (with tenure), Mathematical Finance since July 2021
- Associate Chair Graduate*, Mathematics and Statistics July 2021 – June 2022
- McCalla Professor* (awarded for significant contributions to the integration of teaching, research, and leadership) Sept. 2020 – Aug. 2022
- Associate Professor* (with tenure), Mathematical Finance July 2014 – June 2021
- Assistant Professor* (tenure track), Mathematical Finance July 2010 – June 2014
- ETH Zürich**, Switzerland Jan. 2013 – June 2013
- Visiting Professor*, Department of Mathematics
- École Polytechnique**, Palaiseau, France Oct. 2009 – June 2010
- Postdoctoral Researcher*, Mathematical Finance
- Credit Suisse**, Zürich, Switzerland May 2001 – Sept. 2009
- Financial Controller* (20%), External Reporting
- SELECTED PUBLICATIONS** A complete list can be found at www.math.ualberta.ca/~cfrei/research.html.
- [1] Baldauf, M., Frei, C., and Mollner, J. (2024): Block Trade Contracting. *Journal of Financial Economics* **160**, 103901, 29 pages
 - [2] Frei, C. (2023): Open Banking: Opportunities and Risks. In: Walker, T., Nikbakht, E., and Kooli, M. (eds.), *The Fintech Disruption: How Financial Innovation Is Transforming the Banking Industry*, Palgrave Macmillan, 167–189
 - [3] Baldauf, M., Frei, C., and Mollner, J. (2022): Principal Trading Arrangements: When Are Common Contracts Optimal? *Best Paper in Asset Pricing (SFS Cavalcade North America, 2019)*, *Management Science* **68**, 3112–3128
 - [4] Frei, C., Capponi, A., and Brunetti, C. (2022): Counterparty Risk in Over-the-Counter Markets. *Journal of Financial and Quantitative Analysis* **57**, 1058–1082
 - [5] Frei, C. and Mitra, J. (2021): Optimal Closing Benchmarks. *Finance Research Letters* **40**, 101674, 8 pages
 - [6] Ewanchuk, L. and Frei, C. (2019): Recent Regulation in Credit Risk Management: a Statistical Framework. *Risks* **7**, 40, 19 pages

SELECTED
PROJECTS

**Visiting Researcher at the Board of Governors of
the Federal Reserve System, Washington, D.C., USA**

Assessing systemic risk from nonbank financial institutions Jan. 2026 – Apr. 2026
Modelling counterparty risk in CDS markets Jan., Apr. & May 2017

**Mitacs Accelerate Fellowships for a Collaboration
with ATB Financial, Calgary, Canada**

Building a framework for learning, warning, and prevention

Jan. 2019 – June 2022

**Mitacs, NSERC Alliance, and Engage Projects
with Canadian Western Bank, Edmonton, Canada**

Analyzing implications of new regulation in credit risk

Sept. 2018 – Oct. 2021

Mitacs Project with Vario Ventures, Calgary, Canada

Applying machine learning in business valuation

Jan. 2020 – Apr. 2020

UBS, Zürich, Switzerland

Developing a risk allocation and attribution framework

Dec. 2018 – Mar. 2019

Evaluating and improving credit risk models

July 2016 – Mar. 2017

ACTIVITIES
IN ORGANI-
ZATIONS

PRMIA (Professional Risk Managers' International Association)

Regional Co-Director, Edmonton Chapter

since Jan. 2020

Member of the Steering Committee, Edmonton Chapter

Apr. 2015 – Dec. 2019

**NSERC (Natural Sciences and Engineering Research Council of Canada),
Scholarships and Fellowships for Mathematical Sciences**

Chair of the Selection Committee

July 2016 – June 2017

Member of the Selection Committee

July 2014 – June 2016

TEACHING

- MATH 154 and 156: Calculus for Business and Economics I + II (Fall 2020: 161 students and teaching evaluation 4.8/5.0; Winter 2020: 137 students and teaching evaluation 4.8/5.0; Fall 2019: 149 students and teaching evaluation 4.5/5.0)
- MATH 408/508: Computational Finance (Fall 2021: 12 students and teaching evaluation 4.9/5.0; Winter 2020: 22 students and teaching evaluation 4.9/5.0)
- STAT 471: Probability Theory (Fall 2017: 46 students and teaching evaluation 5.0/5.0; Fall 2015: 33 students and teaching evaluation 4.7/5.0)
- STAT 479: Time Series Analysis (Winter 2018: 22 students and teaching evaluation 4.9/5.0; Winter 2014: 19 students and teaching evaluation 4.9/5.0)

STUDENT
TRAINING

- Over the last five years, I supervised two postdoctoral researchers, three doctoral students, eleven master's students, and six undergraduate students, who started successful careers in academia and the finance and risk management industry.
- Further information about my current team and former students can be found at www.math.ualberta.ca/~cfrei/team.html.
- As Associate Chair Graduate of the Department of Mathematical and Statistical Sciences, I oversaw academically and administratively the Department's graduate programs.
- As Regional Co-Director of PRMIA Edmonton, I establish and strengthen links for students to the finance and risk management industry.

RESEARCH
GRANTS

- NSERC Discovery Grant (*Principal Investigator*)
- SSHRC Insight Grant (*Co-Principal Investigator*)

Apr. 2025 – Mar. 2031

Apr. 2022 – Mar. 2028