

# Christoph Frei

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SUMMARY	Strongly committed to advancing and integrating academic research and 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	<b>Ph.D. studies in mathematical finance</b> , ETH Zürich	May 2006 – Oct. 2009
	<ul style="list-style-type: none"><li>• <i>Doctor of Sciences</i>, Oct. 2009</li><li>• Advisor: Prof. Martin Schweizer</li></ul>	
	<b>Diploma studies in mathematics</b> , ETH Zürich	Oct. 2001 – Apr. 2006
	<ul style="list-style-type: none"><li>• <i>Diploma in mathematics</i> (with distinction), Apr. 2006</li><li>• Extra diploma in insurance mathematics, Apr. 2006</li></ul>	
EMPLOYMENT	<b>University of Alberta</b> , Edmonton, Canada	
	<i>Department Chair</i> , Mathematics and Statistics	since July 2023
	<i>Interim Department Chair</i> , Mathematics and Statistics	July 2022 – June 2023
	<i>Professor</i> (with tenure), Mathematical Finance	since July 2021
	<i>Associate Chair Graduate</i> , Mathematics and Statistics	July 2021 – June 2022
	<i>McCalla Professor</i> (awarded for significant contributions to the integration of teaching, research, and leadership)	Sept. 2020 – Aug. 2022
	<i>Associate Professor</i> (with tenure), Mathematical Finance	July 2014 – June 2021
	<i>Assistant Professor</i> (tenure track), Mathematical Finance	July 2010 – June 2014
	<b>ETH Zürich</b> , Switzerland	Jan. 2013 – June 2013
	<i>Visiting Professor</i> , Department of Mathematics	
	<b>École Polytechnique</b> , Palaiseau, France	Oct. 2009 – June 2010
	<i>Postdoctoral Researcher</i> , Mathematical Finance	
	<b>Credit Suisse</b> , Zürich, Switzerland	May 2001 – Sept. 2009
	<i>Financial Controller</i> (20%), External Reporting	
SELECTED PUBLICATIONS	A complete list can be found at <a href="http://www.math.ualberta.ca/~cfrei/research.html">www.math.ualberta.ca/~cfrei/research.html</a> .	
	[1] Baldauf, M., Frei, C., and Mollner, J. (2024): Block Trade Contracting. <i>Journal of Financial Economics</i> <b>160</b> , 103901, 29 pages	
	[2] Frei, C. (2023): Open Banking: Opportunities and Risks. In: Walker, T., Nikbakht, E., and Kooli, M. (eds.), <i>The Fintech Disruption: How Financial Innovation Is Transforming the Banking Industry</i> , Palgrave Macmillan, 167–189	
	[3] Baldauf, M., Frei, C., and Mollner, J. (2022): Principal Trading Arrangements: When Are Common Contracts Optimal? <i>Best Paper in Asset Pricing (SFS Cavalcade North America, 2019)</i> , <i>Management Science</i> <b>68</b> , 3112–3128	
	[4] Frei, C., Capponi, A., and Brunetti, C. (2022): Counterparty Risk in Over-the-Counter Markets. <i>Journal of Financial and Quantitative Analysis</i> <b>57</b> , 1058–1082	
	[5] Frei, C. and Mitra, J. (2021): Optimal Closing Benchmarks. <i>Finance Research Letters</i> <b>40</b> , 101674, 8 pages	
	[6] Ewanchuk, L. and Frei, C. (2019): Recent Regulation in Credit Risk Management: a Statistical Framework. <i>Risks</i> <b>7</b> , 40, 19 pages	

INDUSTRY PROJECTS	<b>Mitacs Accelerate Fellowships for collaboration with ATB Financial</b> , Calgary, Canada Jan. 2019–June 2022 Building a framework to use banking data for learning, warning, and prevention
	<b>Mitacs, NSERC Alliance and Engage projects with Canadian Western Bank</b> , Edmonton, Canada Sept. 2018–Oct. 2021 <i>Academic Partner</i> of a project to analyze implications of new regulation in credit risk
	<b>Mitacs Accelerate with Vario Ventures</b> , Calgary, Canada Jan. 2020–Apr. 2020 Machine learning in business valuation using merger and acquisition data
	<b>UBS</b> , Zürich, Switzerland Developing a risk allocation and attribution framework Dec. 2018–Mar. 2019 Assessing and improving credit risk models July 2016–Mar. 2017
	<b>Board of Governors of the Federal Reserve System</b> , Washington DC, USA Jan., Apr. & May 2017 <i>Visiting Researcher</i> for a project on how counterparty risk affects CDS markets
ACTIVITIES IN ORGANI- ZATIONS	<b>PRMIA (Professional Risk Managers’ International Association)</b> <i>Regional Co-Director</i> , Edmonton Chapter since Jan. 2020 <i>Member of the Steering Committee</i> , Edmonton Chapter Apr. 2015–Dec. 2019
	<b>NSERC (Natural Sciences and Engineering Research Council of Canada)</b> , Scholarships and Fellowships for Mathematical Sciences <i>Chair of the Selection Committee</i> July 2016–June 2017 <i>Member of the Selection Committee</i> July 2014–June 2016
TEACHING	<ul style="list-style-type: none"> <li>• 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)</li> <li>• 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)</li> <li>• 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)</li> <li>• 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)</li> </ul>
STUDENT TRAINING	<ul style="list-style-type: none"> <li>• Over the last five years, I supervised two postdoctoral researchers, three Ph.D. students, eleven master’s students, and six undergraduate students, who started successful careers in academia and the finance and risk management industry.</li> <li>• Further information about my current team and former students can be found at <a href="http://www.math.ualberta.ca/~cfrei/team.html">www.math.ualberta.ca/~cfrei/team.html</a>.</li> <li>• As the Associate Chair Graduate of the Department of Mathematical and Statistical Sciences, I oversaw academically and administratively the Department’s graduate programs.</li> <li>• As the Regional Co-Director of PRMIA Edmonton, I establish and strengthen links for students to the finance and risk management industry.</li> </ul>
RESEARCH GRANTS	<ul style="list-style-type: none"> <li>• NSERC Discovery Grant (<i>Principal Investigator</i>) Apr. 2025–Mar. 2031</li> <li>• SSHRC Insight Grant (<i>Co-Principal Investigator</i>) Apr. 2022–Mar. 2028</li> </ul>