

JUSSI KEPPO
Department of Analytics & Operations
NUS Business School
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ACADEMIC POSITIONS

2023-present **National University of Singapore**, Singapore
Provost's Chair in NUS Business School

2023-present **National University of Singapore**, Singapore
Head of Department of Analytics & Operations in NUS Business School

2022 **National University of Singapore**, Singapore
Acting Head of Department of Analytics & Operations in NUS Business School

2021-present **National University of Singapore**, Singapore
Professor in NUS Business School

2019-present **National University of Singapore**, Singapore
Research Director, Institute of Operations Research and Analytics

2013-2021 **National University of Singapore**, Singapore
Associate Professor (with Tenure) in NUS Business School

2019-2021 **National University of Singapore**, Singapore
Dean's Chair in NUS Business School

2013-2019 **National University of Singapore**, Singapore
Co-Director, NUS Business Analytics Center and Master of Science in Business Analytics Program

2008-2012 **University of Michigan**, Ann Arbor, MI
Associate Professor (with Tenure) in Industrial and Operations Engineering Department

2000-2008 **University of Michigan**, Ann Arbor, MI
Assistant Professor in Industrial and Operations Engineering Department

2011-2012 **Aalto University**, Espoo, Finland
Visiting Professor in Department of Economics

Summer 2011 **Simon Fraser University**, Vancouver, Canada
Visiting Professor in Finance Department at the Beedie School of Business

Summer 2007 **Norwegian University of Science and Technology**, Trondheim, Norway
Visiting Professor in Department of Industrial Economics and Technology Management

Summers 2001-2003 **Aalto University**, Espoo, Finland
Visiting Professor in Systems Analysis Laboratory

1998-2000 **Columbia University**, New York, NY
Postdoctoral Researcher in Department of Statistics

CONSULTING AND INDUSTRY PROJECTS

Agri-Food and Veterinary Authority of Singapore, Alfred Berg ABN AMRO, ANZ, Applifier, ArrowStreet Capital, AXA Insurance, Bank of Finland, Bayer Health Care, Capgemini, CD Financial Technology Ltd., ConocoPhillips, Cyber Intelligence House, DBS Bank, Dimension Data, Dow Chemicals, DTE Energy Trading, EigenValue Ltd., Eli Lilly and Company, Empauwer, Facebook, Finnish Options Exchange, Fortum Power and Heat, Gaia Group, Gojek, Google, Grab Holdings, Helsinki Energy, Institute for Infocomm Research, Integrys Energy Services, Julius Baer, Kulicke & Soffa, Maplewood Ltd., Merit Network, NCS Pte. Ltd., Necessity & Chance LLC, NTUC First Campus Co-operative, OCBC Bank, Palantir Technologies Inc., Pickupp Ltd., Postipankki Ltd., Precision Executive Search360 Ltd., Reefknot Investments, ResMed, R-Klinik, Roche, Singapore Airlines, Unilever, University Financial Associates LLC, Xerox, XOPA Artificial Intelligence, and WorldQuant

EDUCATION

1995-1998 **Aalto University**, Espoo, Finland
Dr.Tech in Applied Mathematics

1992-1995 M.Sc. in Applied Mathematics, B.Sc. in Industrial Economics

TEACHING EXPERIENCE AND COURSE DEVELOPMENT

Causal Inference in Precision Medicine, graduate course at NUS Yong Loo Lin School of Medicine
Topics: Causal identification, randomized controlled trials

Leading with Big Data Analytics & Machine Learning, executive education open program and customized programs at NUS Business School (program director and instructor)
Topics: Big data analytics, data-driven opportunities, analytics strategy roadmap, disruptive innovation, and change management

Competing on Big Data and Machine Learning, executive education at Cheung Kong Graduate School of Business
Topics: Big data, predictive analytics, and data-driven business models

Practical Decision Making Using Data Science, online executive education open program at NUS Business School (program director and instructor)

Topics: Analytics challenges and opportunities, analytics maturity and quality, evaluation metrics for different business use cases, data science personnel and analytics infrastructure, causal and predictive analytics

General Management Program, executive education open program and customized programs at NUS Business School

Topics: Corporate strategy, marketing, human resources, finance, accounting, and operations

Business Analytics for Strategic Decisions, online executive education open program at NUS Business School (program director and instructor)

Topics: Analytics challenges and opportunities, analytics maturity and quality, evaluation metrics for different business use cases, data science personnel and analytics infrastructure, causal and predictive analytics

Leveraging Fintech for Business, executive education open program at NUS Business School (program co-director and instructor)

Topics: Digital transformation, digital payments, cryptocurrencies, fraud analytics, blockchain, cybersecurity, and business model innovation

Analytics in Managerial Economics, graduate course at NUS Business School

Topics: Monopoly and market power, oligopolistic markets, causal identification, technological change, and network industries

Leading with Analytics, graduate course at NUS Business School

Topics: Analytics challenges and opportunities, analytics maturity and quality, evaluation metrics for different business use cases, data science personnel and analytics infrastructure, causal and predictive analytics

Business Analytics Capstone Module, graduate course at NUS Business School

Topics: Different practical instruments for exercising business analytics in enterprises, identifying analytics opportunities, detecting critical information sources, data collection and analysis; this course includes three-month capstone project with industry partners

Quantitative Risk Management, graduate course at the University of Michigan, Norwegian University of Science and Technology, and at NUS Business School

Topics: Basic concepts and risk measures, multivariate models, financial time series, copulas and dependency, aggregate risk, Extreme Value Theory, and credit risk management

Analytical Tools for Consulting, undergraduate course at NUS Business School

Topics: Decision trees, regression modeling, simulation, and optimization

Ethics, Regulation and Managerial Economics in Precision Medicine, graduate course at NUS Yong Loo Lin School of Medicine

Topics: Ethics and regulation, basic concepts of microeconomics and decision making under uncertainty, and predictive models

Field Action Project, graduate course at the University of Michigan

Topic: Faculty advised industry projects

Financial Engineering Practitioners Seminar, graduate seminar series at the University of Michigan

Topic: Seminar talks by visitors from financial industry

Financial Engineering II, graduate course at the University of Michigan

Topics: Interest rate models (short rate and forward rate), LIBOR and SWAP market models, portfolio optimization, fair pricing, derivative pricing under transaction costs and jump-diffusion processes

Financial Engineering I, graduate course at the University of Michigan

Topics: Introduction to stochastic calculus, hedging and arbitrage in continuous-time, Black-Scholes model, incomplete markets, and foreign exchange rate options

Capital Budgeting, undergraduate course at the University of Michigan

Topics: Net present value, capital asset pricing model, mean-variance portfolio optimization, real options, Modigliani-Miller Theorem, short term financial planning and cash management

Derivative Instruments, undergraduate course at the University of Michigan

Topics: Futures and forward contracts, swaps, option pricing with binomial trees, Black-Scholes model, hedging, and value-at-risk

Numerical Methods, graduate course at Simon Fraser University

Topics: Finite difference methods, Monte Carlo Simulation, lattice models, and model calibration

Introduction to Stochastic Differential Equations, graduate course at Aalto University

Topics: Brownian motion, stochastic integral, Itô Formula, Martingale Representation Theorem, stochastic differential equations, Dynkin Formula, Feynman-Kac Formula, Girsanov Theorem, applications to optimal stopping and stochastic control

Introduction to Stochastic Processes, graduate course at Aalto University

Topics: Markov chains, optimal stopping, martingales, renewal processes, Brownian motion, and stochastic integration

STIPENDS, GRANTS, AND AWARDS

2024-2026 “Optimising Maritime Network Line Design using Reinforcement Learning” (PI: H. M. Tan, Co-PIs: J. Keppo, Q. Sun), Research Collaboration with CMA CGA

2023-2025 “AI Smart Data Centre Management Application” (PI: J. Keppo), AI Singapore and NCS Pte Ltd

2022-2024	“Data Driven pricing and facility network optimisation for Pickupp's two-sided logistics platform” (PI: Y. Feng, Co-PIs: J. Keppo, C. P. Teo), Research Collaboration with Pickupp Pte Ltd
2022-2025	“Smart Manufacturing through Predictive Process Monitoring using Machine Learning” (PI: J. Keppo), AI Singapore and Kulicke & Soffa Industries
2021-2024	“Learning by Doing in the Age of Big Data” (PI: S.-F. Cheng, Co-PIs: S. Agarwal, B. Charoenwong, and J. Keppo), MOE Social Science Research Thematic Grant, Singapore
2021-2022	“AI Singapore 100 Experiments for Research - Project collaboration with ResMed” (PI: J. Keppo), AI Singapore, Singapore
2020-2025	“SIA-NUS Digital Aviation Corp Lab” (PI of one work package: J. Keppo), National Research Foundation, Singapore
2020	“Early Detection of Field Quality Signals” (PI: J. Keppo), ResMed, Singapore
2019	Research Award, Foundation for the promotion of security markets in Finland
2019-2021	“Application of Machine Learning for Smart Manufacturing” (PI: J. Keppo), Kulicke & Soffa Industries, Inc., Singapore
2018-2023	“N-CRiPT: <u>NUS</u> <u>C</u> entre for <u>R</u> esearch <u>i</u> n <u>P</u> rivacy <u>T</u>
2018-2023	“AI- and Data-driven Financial Management and Analytics” (PI: B. C. Ooi, Co-PIs: Y. M. Chee, J. Keppo, R. Kimmel, E. B. A. Lim, T. Q. Phan, and X. Xiao), Ministry of Education, Singapore
2018-2020	“Models and algorithms for risk-aware stochastic games” (PI: J. Keppo), Institute of Operations Research and Analytics, National University of Singapore
2017-2019	“Digital Economy” (PI: B. Ke, Co-PIs: J. Chu and J. Keppo), Ng Teng Fong Charitable Foundation, Hong Kong
2016-2017	“Taxes and Financial Distress: Evidence from Credit Registry and Twins Data from Finland” (PI: S. Agarwal, Co-PI: J. Keppo), National University of Singapore
2013-2016	“Learning and Incentives” (PI: J. Keppo), National University of Singapore
2013-2016	“Unintended Consequences of Financial Regulation” (PI: J. Keppo), Risk Management Institute, National University of Singapore
2012	“The Value of Tax Payers' Put Option,” BIS Research Fellowship
2010	“Credit Rating” (PIs: J. Keppo and H. Li), Rackham Graduate School Spring/Summer Research Grant, University of Michigan
2009-2012	“Behavior-based contract optimization” (PI: J. Keppo), Xerox Foundation Grant
2008-2009	“Pricing and Managing Risks in Global Manufacturing Enterprise” (PI: R. Saigal, Co-PI: J. Keppo), National Science Foundation
2006-2009	“A Global Theory of Information and its Nonconcavity, with Economics and Social Applications” (PI: L. Smith, Co-PI: J. Keppo), National Science Research Award, Foundation for the promotion of security markets in Finland
2007	“Integrated Risk Management in Operations and Global Supply Chain Management: Risk Contracts and Insurance” (PI: V. Babich, Co-PIs: G. Aydin and J. Keppo), National Science Foundation
2005-2006	Rackham Grant and Fellowship, University of Michigan (PI: J. Keppo)
2002-2003	Fortum Power and Heat Ltd (PI: J. Keppo)
2001-2002	Fortum Power and Heat Ltd (PI: J. Keppo)
2000-2001	Ivo Foundation (PI: J. Keppo)
2000	Finnish Cultural Foundation (PI: J. Keppo)
1999-2000	The Fund of Emil Aaltonen (PI: J. Keppo)

1998-2000	The Academy of Finland (PI: J. Keppo)
1998-1999	Research Foundation of Säästöpankki (PI: J. Keppo)
1997	The Fund of Jenny and Antti Wihuri (PI: J. Keppo)
1996	Master's Thesis Award, Foundation for the promotion of security markets in Finland
1994	Excellent Academic Achievement, Aalto University

JOURNAL PUBLICATIONS, CONFERENCE PROCEEDINGS, AND BOOK CHAPTERS

“R&D Data Sharing in New Product Development,” (co-authored with Z. Chen), *Manufacturing and Service Operations Management*, 2025, forthcoming

“Information Salience and Vehicle Idling Behavior: Evidence from Taxis in Singapore,” (co-authored with S. Agarwal, S.-F. Cheng, L. Wang, and Z. Yang), *Review of Economics and Statistics*, 2025. DOI link: <https://doi.org/10.1162/REST.a.1632>

“CroCoDai: A Stablecoin for Cross-Chain Commerce,” (authors: with D. Reijsergen, B. Hajek, T. T. Anh Dinh, J. Keppo, H. F. Korth, A. Datta), *Distributed Ledger Technologies: Research and Practice*, 2025, 4, pp. 1 - 30. DOI link: <https://doi.org/10.1145/3702247>

“The Crowdfunding Effects on Venture Capital Investment,” (co-authored with M. Hu and Y. Jin), *Management Science*, 2024. DOI link: <https://doi.org/10.1287/mnsc.2022.00994>

“Bonus Caps and Bankers' Risk-Taking,” (co-authored with E. Jokivuolle and X. Yuan), *Journal of Risk*, 2024. DOI link: <https://doi.org/10.21314/JOR.2024.012>

“Dynamic Contracting in Asset Management under Investor-Partner-Manager Relationship,” (co-authored with N. Touzi and R. Zuo), *Operations Research*, 2024. DOI link: <https://doi.org/10.1287/opre.2021.0031>

“Evaluating the Relative Predictive Validity of Measures of Self-Referential Processing for Depressive Symptom Severity,” (authors: E. S. E. Tan, H. M. Tan, K. V. Fong, C. W. Ho, C. Teo, Z. Y. Tan, R. Ong, J. Yu, M. Lee, A. R. Teo, S. K. Ong, X. Y. Lim, J. L. Kee, N. Rane, S. Y. X. Tey, J. Keppo, G. C.-Y. Tan), *Frontiers in Psychiatry*, 2024. Link: <https://www.frontiersin.org/journals/psychiatry/articles/10.3389/fpsyg.2024.1463116/abstract>

“Instant3D: Instant Text-to-3D Generation,” (authors: M. Li, P. Zhou, J.-W. Liu, J. Keppo, M. Lin, S. Yan, X. Xu), *International Journal of Computer Vision*, 2024. DOI link: <https://doi.org/10.1007/s11263-024-02097-5>

“Exocentric-to-Egocentric Video Generation,” (authors: J.-W. Liu, W. Mao, Z. Xu, J. Keppo, M. Z. Shou), Thirty-Eighth Conference on Neural Information Processing Systems (NeurIPS), 2024. Link: https://proceedings.neurips.cc/paper_files/paper/2024/hash/f5a8b5e5d007e66c929b971c2bc21d76-Abstract-Conference.html

“DynVideo-E: Harnessing Dynamic NeRF for Large-Scale Motion- and View-Change Human-Centric Video Editing,” (authors: J.-W. Liu, Y.-P. Cao, J. Z. Wu, W. Mao, Y. Gu, R. Zhao, J. Keppo, Y. Shan, M. Z. Shou), IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2024, pp. 7664-7674. DOI link: <https://doi.org/10.1109/CVPR52733.2024.00732>

“MotionDirector: Motion Customization of Text-to-Video Diffusion Models,” (authors: R. Zhao, Y. Gu, J. Z. Wu, D. J. Zhang, J.-W. Liu, W. Wu, J. Keppo, M. Z. Shou), European Conference on Computer Vision (ECCV), 2024, pp. 273-290. Link: https://link.springer.com/chapter/10.1007/978-3-031-72992-8_16

“X- Adapter: Universal Compatibility of Plugins for Upgraded Diffusion Model,” (authors: L. Ran, X. Cun, J.-W. Liu, R. Zhao, S. Zijie, X. Wang, J. Keppo, M. Z. Shou), IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2024, pp. 8775-8784. DOI link: <https://doi.org/10.1109/CVPR52733.2024.00838>

“DR-FER: Discriminative and Robust Representation Learning for Facial Expression Recognition,” (authors: M. Li, H. Fu, S. He, H. Fan, J. Liu, J. Keppo, M. Z. Shou), *IEEE Transactions on Multimedia*, 2023. DOI link: <https://doi.org/10.1109/TMM.2023.3347849>

“Transdiagnostic Clustering of Self-Schema from Self-Referential Judgements identifies subtypes of healthy Personality and Depression,” (authors: G. C. Tan, Z. Wang, R. J. M. Ong, D. Lee, N. Rane, S. Y. X. Tey, S. Y. Chua, N. S. E. Goh, G. W. Lam, A. Chakraborty, A. K. L. Yew, S. K. Ong, J. L. Kee, X. Y. Lim, N. Hashim, S. H. Lu, M. J. Meaney, S. Tolomeo, C. L. Asplund, H. M. Tan, J. Keppo), *Frontiers in Neuroinformatics*, 2023. Link: <https://www.frontiersin.org/articles/10.3389/fninf.2023.1244347/abstract>

“Comparing feature selection and machine learning approaches for predicting CYP2D6 methylation from genetic variation,” (authors: W. J. Fong, H. M. Tan, R. Garg, H. Pan, V. Gupta, B. Krishna, Z. H. Chen, N. Y. Purwanto, F. Yap, K. H. Tan, K. Y. Chan, S.-Y. Chan, N. Goh, N. Rane, M. Han, M. J. Meaney, D. Wang, J. Keppo, G. C. Tan), *Frontiers in Neuroinformatics*, 2023. Link: <https://www.frontiersin.org/articles/10.3389/fninf.2023.1244336/abstract>

“HOSNeRF: Dynamic Human-Object-Scene Neural Radiance Fields from a Single Video,” (authors: J.-W. Liu, Y.-P. Cao, T. Yang, Z. Xu, J. Keppo, Y. Shan, X. Qie, M. Z. Shou), Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV), 2023, pp. 18483-18494. Link: https://openaccess.thecvf.com/content/ICCV2023/html/Liu_HOSNeRF_Dynamic_Human-Object-Scene_Neural_Radiance_Fields_from_a_Single_Video_ICCV_2023_paper.html

“STPrivacy: Spatio-Temporal Privacy-Preserving Action Recognition,” (authors: M. Li, X. Xu, H. Fan, P. Zhou, J. Liu, J.-W. Liu, J. Li, J. Keppo, M. Z. Shou, S. Yan), Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV), 2023, pp. 5106-5115. Link: https://openaccess.thecvf.com/content/ICCV2023/html/Li_STPrivacy_Spatio-Temporal_Privacy-Preserving_Action_Recognition_ICCV_2023_paper.html

“Bayesian Herd Detection for Dynamic Data,” (co-authored with V. Satopää), *International Journal of Forecasting*, 2023. DOI link: <https://doi.org/10.1016/j.ijforecast.2023.03.001>

“Evaluation of a new antiresistisic strategy to manage antibiotic resistance,” (co-authored with S. Chen, A. Lall, and H. M. Tan), *Journal of Global Antimicrobial Resistance*, 2023. DOI link: <https://doi.org/10.1016/j.jgar.2023.03.006>

“Gender Animus Can Still Exist Under Favorable Disparate Impact: a Cautionary Tale from Online P2P Lending,” (authors: X. Shen, T. Tan, T. Phan, J. Keppo), Proceedings of 2023 ACM Conference on Fairness, Accountability, and Transparency (FAccT '23), 2023. DOI link: <https://doi.org/10.1145/3593013.3594042>

“DeVRF: Fast Deformable Voxel Radiance Fields for Dynamic Scenes,” (authors: J.W. Liu, Y.P. Cao, W. Mao, W. Zhang, D.J. Zhang, J. Keppo, Y. Shan, X. Qie, M. Z. Shou), Thirty-sixth Conference on Neural Information Processing Systems (NeurIPS), 2022. Link: <https://openreview.net/pdf?id=Pu-QtT0h2E>

“Herding in Probabilistic Forecasts,” (co-authored with Y. Jia and V. Satopää), *Management Science*, 2022. DOI link: <https://doi.org/10.1287/mnsc.2022.4487>

- Runner-up for INFORMS Decision Analysis Society 2020 Student Paper Award (Yanwei Jia)

“Learning Manipulation Through Information Dissemination,” (co-authored with M. J. Kim and X. Zhang), *Operations Research*, 2022. DOI link: <https://doi.org/10.1287/opre.2021.2209>

- Finalist for INFORMS Decision Analysis Society 2022 Student Paper Award (Xinyuan Zhang)

“The Impact of Ride-Hail Surge Factors on Taxi Bookings,” (co-authored with S. Agarwal, B. Charoenwong, and S.-F. Cheng), *Transportation Research Part C: Emerging Technologies*, 2022, 136. DOI link: <https://doi.org/10.1016/j.trc.2021.103508>

“Microbanks in Online Peer-to-Peer Lending: A Tale of Dual Roles,” (co-authored with T. Q. Phan and T. Tan), Innovative Technology at the interface of Finance and Operations, Volume II (edited by V. Babich, J. Birge, and G. Hilary), Springer Series in Supply Chain Management, Springer, 2022. Link: https://link.springer.com/chapter/10.1007/978-3-030-81945-3_9

“Data Sharing in Innovations,” (co-authored with Z. Chen), Foundations and Trends® in Technology, Information and Operations Management, Volume 15 (edited by P. Kouvelis), now publishers, 2022. DOI link: <http://dx.doi.org/10.1561/0200000102-3>

“Are Monthly Market Returns Predictable?” (co-authored with T. Shumway and D. Weagley), *Review of Asset Pricing Studies*, 2021. DOI link: <https://doi.org/10.1093/raps/raab010>

“Discrete dividend payments in continuous time,” (co-authored with M. Reppen and H. M. Soner), *Mathematics of Operations Research*, 2021. DOI link:

<https://doi.org/10.1287/moor.2020.1081>

“Preferences of public transit commuters: Evidence from smart card data in Singapore,” (co-authored with S. Agarwal, M. Diao, and T. F. Sing), *Journal of Urban Economics*, 2020, 120. DOI link: <https://doi.org/10.1016/j.jue.2020.103288>

“Project IDentif.AI: Harnessing Artificial Intelligence to Rapidly Optimize Combination Therapy Development for Infectious Disease Intervention,” (authors: A. Abdulla, B. Wang, F. Qian, T. Kee, A. Blasiak, Y. H. Ong, L. Hooi, F. Parekh, R. Soriano, G. G. Olinger, J. Keppo, C. L. Hardesty, E. K. Chow, D. Ho, X. Ding), *Advanced Therapeutics*, 2020. DOI link: <https://doi.org/10.1002/ADTP.202000034>

“The Role of Financial Literacy in Online Peer-to-Peer Lending: An Empirical Approach,” (co-authored with X. Ran, T. Tan, and T. Q. Phan), in Proceedings of the 40th International Conference on Information Systems (ICIS 2019), Munich, Germany, December 15-18, 2019. Link:

https://aisel.aisnet.org/icis2019/blockchain_fintech/blockchain_fintech/15/

“Opaque Bank Assets and Optimal Equity Capital,” (co-authored with M. Dai and S. Huang), *Journal of Economic Dynamics and Control*, 2019, 100, pp. 369-394. DOI link: <https://doi.org/10.1016/j.jedc.2019.01.005>

“Implied Efficiency Curves from Analysis of Operational Patterns,” (co-authored with S. Brelin, M.A. Lien, S.-E. Fleten., and A. Pichler) in Proceedings of the 6th International Workshop on Hydro Scheduling in Competitive Electricity Markets (edited by A. Helseth), Springer, 2019. DOI link: https://doi.org/10.1007/978-3-030-03311-8_9

“Risk-Aversion and B2B Contracting under Asymmetric Information: Evidence from Managed Print Services,” (co-authored with J. Ning, V. Babich, and J. Handley), *Operations Research*, 2018, 66, pp. 392-408. DOI link: <https://doi.org/10.1287/opre.2017.1673>

“Risk Targeting and Policy Illusions - Evidence from the Announcement of the Volcker Rule,” (co-authored with J. Korte), *Management Science*, 2018, 64, pp. 215-234. DOI link: <https://doi.org/10.1287/mnsc.2016.2583>

“Hiring, Firing, and Relocation under Employment Protection,” (co-authored with M. Dai and T. Maull), *Journal of Economic Dynamics and Control*, 2015, 56, pp. 55-81. DOI link: <https://doi.org/10.1016/j.jedc.2015.04.005>

“What is the true cost of active management? A comparison of hedge funds and mutual funds,” (co-authored with A. Petäjistö), *Journal of Alternative Investments*, 2014, 17, pp. 9-24. DOI link: <https://doi.org/10.3905/jai.2014.17.2.009>

“The Credits that Count: How Credit Growth and Financial Aid Affect College Tuition and Fees,” (co-authored with K. Best), *Education Economics*, 2012, pp. 1-25. DOI link: <https://doi.org/10.1080/09645292.2012.687102>

“Risk Management in Electric Utilities,” (co-authored with S.-E. Fleten and E. Näsäkkälä) in *Handbook of Integrated Risk Management in Global Supply Chains* (edited by O.

Boyabatli, L. Dong, P. Kouvelis, and R. Li), John Wiley & Sons, 2012. DOI link: <https://doi.org/10.1002/9781118115800.ch18>

“Risk, Financing and the Optimal Number of Suppliers,” (co-authored with V. Babich, G. Aydin, P-Y. Brunet, and R. Saigal) in Supply Chain Disruptions (edited by H. Gurnani, A. Mehrotra, and S. Ray), Springer-Verlag, 2010. DOI link: https://doi.org/10.1007/978-0-85729-778-5_8

“Unintended Consequences of the Market Risk Requirement in Banking Regulation,” (co-authored with L. Kofman and X. Meng), *Journal of Economic Dynamics and Control*, 2010, 34, pp. 2192-2214. DOI link: <https://doi.org/10.1016/j.jedc.2010.06.006>

“Optimal Consumption and Portfolio Decisions with Partially Observed Real Prices,” (co-authored with A. Bensoussan and S.P. Sethi), *Mathematical Finance*, 2009, 19, pp. 215-236. DOI link: <https://doi.org/10.1111/j.1467-9965.2009.00362.x>

“Hydropower with Financial Information,” (co-authored with E. Näsäkkälä), *Applied Mathematical Finance*, 2008, 15, pp. 1 – 27. DOI link: <https://doi.org/10.1080/13504860701852494>

“Optimal Electoral Timing: Exercise Wisely and You May Live Longer,” (co-authored with L. Smith and D. Davydov), *Review of Economic Studies*, 2008, 75, pp. 597-628. DOI link: <https://doi.org/10.1111/j.1467-937X.2008.00493.x>

“The demand for information: more heat than light,” (co-authored with G. Moscarini and L. Smith), *Journal of Economic Theory*, 2008, 138, pp. 21-50. DOI link: <https://doi.org/10.1016/j.jet.2007.03.003>

“A Computational Scheme for the Optimal Strategy in an Incomplete Market,” (co-authored with X. Meng and M. G. Sullivan), *Journal of Economic Dynamics and Control*, 2007, 31, pp. 3591-3613. DOI link: <https://doi.org/10.1016/j.jedc.2006.12.006>

“Optimal bank capital with costly recapitalization,” (co-authored with S. Peura), *Journal of Business*, 2006, 79, pp. 2163-2201. DOI link: <http://dx.doi.org/10.1086/503660>

“Pricing of point-to-point bandwidth contracts,” *Mathematical Methods of Operations Research*, 2005, 61, pp. 191-218. DOI link: <https://doi.org/10.1007/s001860400401>

“Electricity load pattern hedging with static forward strategies,” (co-authored with E. Näsäkkälä), special issue on Energy Pricing and Risk Management, *Managerial Finance*, 2005, 6, pp. 115-136. DOI link: <https://doi.org/10.1108/03074350510769721>

“Pricing of Swing Options,” *Journal of Derivatives*, 2004, 11, pp. 26-43. DOI link: <https://doi.org/10.3905/jod.2004.391033>

“Modeling Electricity Forward Curve Dynamics in the Nordic Market,” (co-authored with N. Audet, P. Heiskanen, and I. Vehviläinen) in Modeling Prices in Competitive Electricity Markets (edited by D. W. Bunn), Wiley Series in Financial Economics, 2004. ISBN: 978-0-470-84860-9

“Timing of investments in oligopoly under uncertainty: A framework for numerical analysis,” (co-authored with P. Murto and E. Näsäkkälä), *European Journal of Operational Research*, 2004, 157, pp. 486-500. DOI link: [https://doi.org/10.1016/S0377-2217\(03\)00234-0](https://doi.org/10.1016/S0377-2217(03)00234-0)

“Real Options and a Large Producer: the Case of Electricity Markets,” (co-authored with H. Lu), *Energy Economics*, 2003, 25, pp. 459-472. DOI link: [https://doi.org/10.1016/S0140-9883\(03\)00048-3](https://doi.org/10.1016/S0140-9883(03)00048-3)

“Optimality with telecommunications network,” *IMA Journal Management Mathematics*, 2003, 13, pp. 211-224. DOI link: <https://doi.org/10.1093/imaman/13.3.211>

“Managing electricity market price risk,” (co-authored with I. Vehviläinen), *European Journal of Operational Research*, 2003, 145, pp. 136-147. DOI link: [https://doi.org/10.1016/S0377-2217\(01\)00399-X](https://doi.org/10.1016/S0377-2217(01)00399-X)

“Option pricing for large agents,” (co-authored with M. Jonsson), *Applied Mathematical Finance*, 2002, 9, pp. 261-272. DOI link: <https://doi.org/10.1080/1350486022000025471>

“Optimality with hydropower system,” *IEEE Transactions on Power Systems*, 2002, 3, pp. 583-589. DOI link: <https://doi.org/10.1109/MPER.2002.4312286>

“A Game Model of Irreversible Investment under Uncertainty,” (co-authored with P. Murto), *International Game Theory Review*, 2002, 4, pp. 127-140. DOI link: <https://doi.org/10.1142/S0219198902000604>

“The impact of delivery lags on irreversible investment under uncertainty,” (co-authored with L. Alvarez), *European Journal of Operational Research*, 2002, 136, pp. 173-180. DOI link: [https://doi.org/10.1016/S0377-2217\(01\)00057-1](https://doi.org/10.1016/S0377-2217(01)00057-1)

“Optimal portfolio hedging with nonlinear derivatives and transactions costs,” (co-authored with S. Peura), *Computational Economics*, 1999, 13, pp. 117-145. DOI link: <https://doi.org/10.1023/A:1008651416896>

“Pricing of electricity tariffs in competitive markets,” (co-authored with M. Räsänen), *Energy Economics*, 1999, 21, pp. 213-223. DOI link: [https://doi.org/10.1016/S0140-9883\(99\)00005-5](https://doi.org/10.1016/S0140-9883(99)00005-5)

“Calling for the true margin,” *Applied Financial Economics*, 1997, 7, pp. 207-212. DOI link: <https://doi.org/10.1080/096031097333781>

SELECTED WORKING PAPERS (available at <https://jussikeppo.com/>)

“Incentive Design and Pricing under Limited Inventory,” (with Ruiting Zuo and Tinglong Dai)

“The Impact of Volcker Rule on Bank Profits and Default Probabilities,” (with Sohyun Chung and Xuchuan Yuan)

OTHER PUBLICATIONS AND COMMENTS (available at <https://jussikeppo.com/>)

“How to change bankers' bonuses to curb excessive risk-taking,” The Straits Times, 2017

“Why employment regulations sometimes have unintended effects on workers,” Business Times, 2016

“Having a knack for market timing,” Business Times, 2015

“The Volcker Rule's Unintended Consequences,” SUERF - The European Money and Finance Forum, 2015

“Reducing risk-taking by regulating bonuses: EU vs US Dodd-Frank,” (co-authored with E. Jokivuolle and X. Yuan), VoxEU, 2015

“Review of George M. von Furstenberg's Contingent Convertibles — From an Academic Perspective,” (co-authored with X. Yuan), Global Credit Review, 2015, 5, pp. 67-76

“Compliance with risk targets - will the Volcker Rule be effective?” (co-authored with J. Korte), VoxEU, 2014

“College Tuition: Explaining the Increases,” Seeking Alpha, 2009

“The Effects of Oil Speculation,” Seeking Alpha, 2008

“Pricing options,” (co-authored with J. Lassila), *Telecomscapacity*, 2001, 4, pp. 30-32.

JOURNAL SERVICE

Associate Editor, Operations Research, 2024-present

Associate Editor, Management Science, 2018-present

Editorial Board Member, Journal of Risk, 2015-present

Associate Editor, Mathematics of Operations Research, 2009-2020

Editorial Board Member, Journal of Energy Markets, 2008-2015

Area Editor of Operations Research Letters, 2009-2013

Editorial Review Board, Production and Operations Management, 2003-2010

Associate Editor of Operations Research Letters, 2002-2005

CONFERENCE PRESENTATIONS AND INVITED TALKS

2025: Google (Zurich), ESMT Berlin, Asian Quantitative Finance Conference (plenary talk), INFORMS Manufacturing and Service Operations Management Conference,

INFORMS Applied Probability Society Conference, INFORMS Annual Meeting (Smith Prize Keynote), Chinese University of Hong Kong (Shenzhen)

2024: POMS-HK International Conference, Hong Kong University of Science and Technology, Chinese University of Hong Kong, NUS N-CRiPT Technical Workshop, Annual POMS Conference, Duke Fuqua School of Business, Boston University Questrom School of Business, NYU Tandon School of Engineering, Commodity and Energy Markets Association Annual Conference, INFORMS Manufacturing and Service Operations Management Conference, INFORMS Revenue Management and Pricing Section Conference, SMU Operations Management Summer Camp, INFORMS Conference on Financial Engineering and FinTech (Hong Kong Polytechnic University, plenary talk), UBC Sauder School of Business

2023: City University of Hong Kong, Chinese University of Hong Kong, Hong Kong University of Science and Technology, Hong Kong University, Frankfurt School of Finance & Management, IESE Business School, INSEAD, London Business School, Imperial College Business School, INFORMS Revenue Management and Pricing Section Conference, Workshop on Recent Advances in Optimization (The Fields Institute, University of Toronto), INFORMS Annual Meeting

2022: Hong Kong University, USC Marshall School of Business, McCombs School of Business (University of Texas at Austin), Carey Business School (Johns Hopkins University), NYU Stern School of Business, Boston University Questrom School of Business, MIT (Institute for Data, Systems, and Society), INFORMS Annual Meeting, Rotman School of Management (University of Toronto), Weatherhead School of Management (Case Western Reserve University), Heinz College of Information Systems and Public Policy (Carnegie Mellon University), Hong Kong University of Science and Technology

2021: National University of Singapore (School of Computing), NUS-Tsukuba Joint-Online-Workshop on Sustainable Management and Data Sciences

2020: MIT (Institute for Data, Systems, and Society), McDonough School of Business (Georgetown University), INFORMS Annual Meeting, Essec Business School

2019: Chinese University of Hong Kong (Shenzhen), HSBC Business School (Peking University, Shenzhen), INSEAD, INFORMS Revenue Management & Pricing, Fifth Marketplace Innovation Workshop (Stanford), University of Michigan, MSOM, INFORMS Applied Probability Society Conference, Workshop on Fintech and Machine Learning (Risk Management Institute, NUS), INFORMS Annual Meeting, AI and Data Privacy Risk Management (SGInnovate)

2018: MIT (Institute for Data, Systems, and Society), Aalto University, Tsinghua University, NUS Institute of Operations Research and Analytics, UBC Sauder School of Business, Bank of Finland, INFORMS Annual Meeting

2017: 5th NUS Workshop on Risk & Regulation, National University of Singapore (Department of Statistics and Department of Economics), Hong Kong University of Science and Technology, Fifth Asian Quantitative Finance Conference, 2017 Supply Chain

Finance & Risk Management Workshop (Olin Business School, Washington University in St. Louis), 11th Annual Risk Management Conference (RMI, NUS), INFORMS Applied Probability Society Conference, INFORMS Healthcare Conference, Bank of Finland, ETH (Zurich), INFORMS Annual Meeting, Leeds School of Business (University of Colorado Boulder), DeGroote School of Business (McMaster University), Rotman School of Management (University of Toronto), UBC Sauder School of Business

2016: Hong Kong University of Science and Technology, AACSB Data Analytics Seminar, Aalto University, Bank of Finland, National Institute for Health and Welfare (Finland), Loughborough University, IFABS 2016 Barcelona Conference, University of Michigan (Computer Science), University of Michigan (IOE Department), University of Michigan (Department of Mathematics), Ross School of Business (University of Michigan), INFORMS Annual Meeting, Harvard Business School

2015: Paris - Southeast Asia Conference in Mathematical Finance, Hong Kong University of Science and Technology, Berlin-Princeton-Singapore Workshop on Quantitative Finance, SUERF/Bank of Finland Conference

2014: Second NUS Workshop on Risk and Regulation, Hong Kong University of Science and Technology, Aalto University, Bank of Finland, International Symposium on Financial Engineering and Risk Management, 8th Annual Risk Management Conference (RMI, NUS), POMS International Conference, National University of Singapore (Department of Economics), Financial Research Workshop (IIM Calcutta)

2013: Chinese University of Hong Kong, First Asian Quantitative Finance Conference, IMS-FPS Workshop (NUS), iFORM SIG 2013 Conference, 7th Annual Risk Management Conference (RMI, NUS), Asian Meeting of the Econometric Society

2012: Aalto University, Bank of Finland, NUS-Stanford Workshop on Risk and Regulation, INSEAD, University of Turku, National University of Singapore, INFORMS Annual Meeting

2011: Simon Fraser University - Beedie School of Business, University of British Columbia - Sauder School of Business, Norwegian University of Science and Technology, PURELEC Workshop (Oslo), Bank for International Settlements (BIS, Basel), Aalto University, Hong Kong University of Science and Technology, National University of Singapore

2010: McCombs School of Business (University of Texas at Austin), Sixth World Congress of the Bachelier Finance Society, INFORMS Annual Meeting

2009: iFORM SIG 2009 Conference, INFORMS Annual Meeting, University of Michigan (Mathematics Department)

2008: INFORMS Annual Meeting

2007: Energy Forum (London), INFORMS Annual Meeting, Commodities Finance Centre Conference (Birkbeck College, University of London), Norwegian University of Science and Technology, Trondheim Business School, Convergence between Finance and Industry Conference (University of Texas at Dallas), 4th Mini-Conference on Integrated Risk

Management in Operations and Global Supply Chains (Olin School of Business), 14th INFORMS Applied Probability Society Conference

2006: Birkbeck College (University of London), NSF Risk Management in Operations and Global Supply Chain Management, Integrated Finance & Operation Management Workshop (University of Michigan), Workshop on Integrated Finance and Operations Management (Carnegie Mellon University), INFORMS Annual Meeting

2005: American Finance Association Meeting, University of California–Santa Cruz, Morningstar, North Carolina State University, NSF/NBER/CEME Decentralization Conference, Second Mini-conference on Integrated Risk Management in Operations and Global Supply Chain Management (Olin School of Business), Kaupthing Bank, 13th INFORMS Applied Probability Society Conference, INFORMS Annual Meeting, Duke University-The Fuqua School of Business

2004: New York University - Leonard N. Stern School of Business, Integrated Risk Management in Operations and Global Supply Chain Management, 12th INFORMS Applied Probability Society Conference, ChinaAMC Global Equity Select Fund (Shanghai), Bank of Communications (Shanghai), Third World Congress of the Bachelier Finance Society, Helsinki Finance Summer Seminar (Helsinki School of Economics), INFORMS Annual Meeting, 11th Annual CAP Workshop on Derivative Securities and Risk Management, Stockholm School of Economics

2003: Midwest Finance Association 52nd Annual Meeting, Finnish Operations Research Society Meeting, European Financial Management Association Annual Meeting, Georgia Institute of Technology, INFORMS Annual Meeting, DTE Energy Trading

2002: AMS Central Section Meeting (University of Michigan), Workshop on Stochastic Analysis and Finance (University of Jyväskylä), Conference on Stochastic Networks (Stanford University, poster), 28th Conference on Stochastic Processes and Their Applications, 24th European Meeting of Statisticians, INFORMS Annual Meeting, Purdue University

2001: Aalto University, INFORMS International Meeting, IBM Zurich Research Center, 11th INFORMS Applied Probability Society Conference, INFORMS Annual Meeting

2000: Columbia University, Princeton University, University of Michigan, Aalto University

DOCTORAL STUDENTS

Ruiting Zuo, graduated in 2022, Assistant Professor at *Hong Kong University of Science and Technology* (Guangzhou)

Hong Ming Tan, graduated in 2021, Lecturer and Research Fellow at *National University of Singapore*

Shan Huang, graduated in 2018, *United Overseas Bank*

Katharina Ley, graduated in 2013, *RAND Corporation*

Jie Ning, graduated in 2013, Assistant Professor at *Weatherhead School of Management, Case Western Reserve University*

Tim Maull, graduated in 2012, *Ford Motor Company*

Aniket Gune, graduated in 2007, *Amazon*

Xu Meng, graduated in 2005, *Trumpet Trading*

Dohyun Pak, graduated in 2005, Associate Professor at Business School, *Gachon University*