Curriculum Vitae

Last update: December 9, 2022

Katsumasa Nishide

Contact Information:

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Personal Information:

Sex: Male Date of Birth: April 15, 1969 Citizenship: Japan

Current Position: Professor, Graduate School of Economics, Hitotsubashi University

Research Interests:

Finance, Financial Economics, Mathematical Finance, Financial Engineering

Academic Positions Held:

Professor, Graduate School of Economics, Hitotsubashi University, April 2016 – present.

Professor, Department of Economics, Yokohama National University, April 2015 – March 2016.

Associate Professor, Department of Economics, Yokohama National University, April 2010 – March 2015.

Externally Funded Staff (Assistant Professor), Interdisciplinary Research Center, Yokohama National University, November 2007 – March 2010.

Associate Professor of Daiwa Securities Group Chair, Graduate School of Economics, Kyoto University, April 2006 – October 2007.

Assistant Professor, Faculty of Accounting and Finance, Nagoya University of Commerce and Business, April 2005 – March 2006.

Other Employments:

NLI Research Institute, March 2003 – March 2005. Bank of Tokyo-Mitsubishi, April 1992 – November 1997.

Education:

Ph.D. in Economics, Kyoto University, 2006.

M.A. in Economics, Kyoto University, 2003.

B.A. in Economics, Kyoto University, 2001.

B.A. in Law, Hitotsubashi University, 1992.

Publications:

(Refereed Journal Articles)

- 19. Ebina, T., Y. Kumakura and K. Nishide (2022) "Hostile Takeovers and Friendly Mergers? Real Options Analysis, *Journal of Corporate Finance*, **77**, 102292.
- Ebina, T., N. Matsushima and K. Nishide (2022), "Demand Uncertainty, Product Differentiation, and Entry Timing under Spatial Competition," *European Journal* of Operational Research, 303(1), 286–297.
- Nishide, K. and Y. Tian (2022), "Brokered versus Dealer Markets: Impact of Proprietary Trading with Transaction Fees," *International Review of Financial Analysis*, 81, 101371.
- Arai, T., T. Asano and K. Nishide (2019), "Optimal Initial Capital Induced by Optimized Certainty Equivalent," *Insurance: Mathematics and Economics*, 85, 115–125.
- Goto, M., K. Nishide and R. Takashima (2017), "Leaders, Followers, and Equity Risk Premiums in Booms and Busts," *Journal of Banking and Finance*, 81, 207–220.
- Elliott, R.J., K. Nishide and C-J. U. Osakwe (2016), "Heston-Type Stochastic Volatility with a Markov Switching Regime," *Journal of Futures Markets*, 36(9), 902–919.
- Nishide, K. and K. Yagi (2016), "Investment under Regime Uncertainty: Impact of Competition and Preemption," *International Journal of Industrial Organization*, 45, 47–58.
- Elliott, R.J. and K. Nishide (2014), "Pricing of Discount Bonds with a Markov Switching Regime," Annals of Finance, 10(3), 509–522.
- 11. Ishii, R. and K. Nishide (2013), "Concentrated Equilibrium and Intraday Patterns in Financial Markets," *Applied Mathematical Finance*, **20**(1), 50–68.
- Nishide, K. and L.C.G. Rogers (2011), "Market Selection: Hungry Misers and Bloated Bankrupts," *Mathematics and Financial Economics*, 5(1), 47–66.
- Kijima, M., K. Nishide and A. Ohyama (2011), "EKC-Type Transitions and Environmental Policy under Pollutant Uncertainty and Cost Irreversibility," *Journal of Economic Dynamics and Control*, 35(5), 746–763.
- Nishide, K. and L.C.G. Rogers (2011), "Optimal Time to Exchange Two Baskets," Journal of Applied Probability, 48(1), 21–30.

- Nishide, K. and Y. Tian (2011), "Compensation Measures for Alliance Formation: A Real Options Analysis," *Economic Modelling*, 28(1-2), 219–228.
- Kijima, M., K. Nishide and A. Ohyama (2010), "Economic Models for the Environmental Kuznets Curve: A Survey," *Journal of Economic Dynamics and Control*, 34(7), 1187–1201.
- Kijima, M., A. Maeda and K. Nishide (2010), "Equilibrium Pricing of Contingent Claims in Tradable Permit Markets," *Journal of Futures Markets*, 30(6), 559–589.
- Nishide, K. and A. Ohyama (2009), "Using Real Options Theory to Countries' Environmental Policy: Considering the Economic Size and Growth," *Operational Research: An International Journal*, 9(3), 229–250.
- 3. Nishide, K. and E.K. Nomi (2009), "Regime Uncertainty and Optimal Investment Timing," *Journal of Economic Dynamics and Control*, **33**(10), 1796–1807.
- 2. Nishide, K. (2009), "Insider Trading with Correlation between Liquidity Trading and a Public Signal," *Quantitative Finance*, **9**(3), 297–304.
- 1. Nishide, K. (2005), "Price Formation in a Competitive Market When the Payoff of an Asset Depends on the Market Price," *Kyoto Economic Review*, **74**(1), 143–161.

 $\langle {\rm Referred} \ {\rm Conference} \ {\rm Proceedings} \rangle$

- Nishide K. (2009), "The Impact of Momentum Trading on the Market Price and Trades," Recent Advances in Financial Engineering: Proceedings of the 2008 Daiwa International Workshop on Financial Engineering, 135–159.
- Fujiwara, H., M. Kijima and K. Nishide (2009), "Estimation of the Local Volatility of Discount Bonds Using Market Quotes for Coupon Bond Options," *Recent* Advances in Financial Engineering: Proceedings of the 2008 Daiwa International Workshop on Financial Engineering, 49–69.

 $\langle {\rm Working \ Papers} \ / \ {\rm Work \ in \ Progress} \rangle$

- Nishide, K., T. Suzuki, and K. Yagi, "Default Contagion and Systemic Risk in the Financial Market with Credit Default Swap," SSRN Working Paper Series #2853258.
- Hayashi, T. and K. Nishide, "Strategic Liquidity Provision in High Frequency Trading," SSRN Working Paper Series #2853277.
- Ebina, T. and K. Nishide, "Dynamic Model of Repositioning with a Markov-Switching Regime," work in progress.
- Hayashi, T. and K. Nishide, "Competition in High Frequency Market Making," work in progress.

• "Money Supply, Asset Prices and Interest Rates within a General Equilibrium Framework," work in progress (with H. Morita).

 $\langle \mathrm{Books} \rangle$

- 2. Birge, J.R. and V. Linetsky eds, M. Kijima trans. supervised, (2009), *Handbooks* in Operations Research and Management Science: Financial Engineering, Asakura Shoten (translating into Japanese).
- 1. Konno, H., T. Kariya, and M. Kijima eds. (2004), *Encyclopedia on Financial Engineering*, Asakura Shoten (in Japanese).

 $\langle Other publications \rangle$

- 14. Nishide, K. (2021), "Economy and Financial Markets during the COVID-19 Crisis: Overview," *Securities Analysts Journal (Japan)*, **59**(10), 2–5 (in Japanese).
- Nishide, K. (2020), "Japanese Financial Market Reaction to COVID-19," Securities Analysts Journal (Japan), 58(10), 53–57 (in Japanese).
- Nishide, K. (2018), "Definition and Identification of High Frequency Traders," Securities Analysts Journal (Japan), 56(10), 53–56 (in Japanese).
- Nishide, K. (2016), "A Survey on High Frequency Trading," Securities Analysts Journal (Japan), 54(11), 53–58 (in Japanese).
- Nishide, K. (2015), "Credit Risk Evaluation in the Presence of Cross-Holdings of Claims and Debts," Discussion Paper Series 2015-J-6, *Bank of Japan* (in Japanese).
 - 9. Nishide, K. (2013), "Wrong Way Risk in the CVA Evaluation," *NLI Research Institute* (in Japanese).
 - 8. Nishide, K. (2011), "A Note on Trade Regulations," *Kojin Kinyu* Yu-Cho Foundation (in Japanese).
 - Nishide, K. (2011), "On the Evaluation of Risk Premium of CAT Bonds," NLI Research Institute (in Japanese).
 - Nishide, K. (2011), "On the Market Selection Hypothesis," Keizai Ronso (Kyoto University), 185(1), 103–112 (in Japanese).
 - 5. Nishide, K. (2005), "Portfolio Optimization with Resampling Method," *NLI Research Institute* (in Japanese).
 - Nishide, K. (2004), "On the No Trade Theorem," Keizai Ronso (Kyoto University), 174(1), 50–66 (in Japanese).

- 3. Nishide, K. (2004), "On the Structure of Securities Exchange? Auction Markets vs. Dealer Markets," *NLI Research Institute* (in Japanese).
- 2. Nishide, K. (2004), "Japan's New Inflation-Indexed Government Bonds," *NLI Research Institute* (in Japanese).
- Nishide, K. (2003), "Analysis of a Kyle-Type Model Using Linear Filtering and Calculus of Variations," *Keizai Ronso Bessatsu Chosa To Kenkyu (Kyoto* University), 27, 53–58 (in Japanese).

Oral Presentations:

 $\langle Overseas \rangle$

- 2022 International Society for the Advancement of Financial Economics conferences: "Strategic Liquidity Provision in High Frequency Trading," December 2022, *Ho Chi Minh City, Vietnam.*
- Quantitative Methods in Finance Conference 2019: "Strategic Liquidity Provision in High Frequency Trading," December 2019, Sydney, Australia.
- International Conference on Science, Social Science and Economics (IC3SE): "Strategic Liquidity Provision in High Frequency Trading," November 2019, Bangkok, Thailand.
- 2019 INFORMS Annual Meeting (poster presentation): "Hostile Takeovers or Friendly Mergers?: A Real Options Analysis," October 2019, *Seattle, USA*.
- 2019 China International Risk Forum: "Default Contagion and Systemic Risk with Cross-Ownership of Equities, Debts, and Financial Derivatives," July 2019, *Tianjin, China.*
- Australia and New Zealand Business and Social Science Research Conference 2018: "Brokered versus Dealer Markets: Impact of Proprietary Trading with Transaction Fees," December 2018, *Auckland, New Zealand*.
- 4th International Conference on Social Sciences Economics and Finance: "Default Contagion and Systemic Risk in the Presence of Credit Default Swaps," August 2018, *Montreal, Canada*.
- Annual International Conference on Macroeconomic Analysis and International Finance 2018: "Auction versus Dealership Markets: Impact of Proprietary Trading with Transaction Fees," March 2018, *Rethymno, Greece*.
- World Business and Social Sciences Research Conference: "Default Contagion and Systemic Risk in the Presence of Credit Default Swaps," December 2017, *Bangkok, Thailand.*

- Mathematics of Risk MATRIX 2017 Conference: "Default Contagion and Systemic Risk in the Presence of Credit Default Swaps," October 2017, *Creswick, Australia*.
- 8th Global Business and Finance Research Conference: "Default Contagion and Systemic Risk in the Presence of Credit Default Swaps," October 2017, *Taipei, Taiwan ROC*.
- International Academic Conference on Management, Economics and Marketing in Vienna 2017: "Default Contagion and Systemic Risk in the Presence of Credit Default Swaps," August 2017, *Vienna, Austria*.
- The Fifth Asian Quantitative Finance Conference: "Default Contagion and Systemic Risk in the Presence of Credit Default Swaps," April 2017, Seoul, Korea.
- International Conference on Business, Finance and Economics 2017: "Monopolistic Dealer versus Broker: Impact of Proprietary Trading with Transaction Fees," March 2017, Singapore, Singapore.
- 6th Global Business and Finance Research Conference: "Money Supply, Asset Prices and Interest Rates within a General Equilibrium Framework," October 2016, *Taipei, Taiwan ROC*.
- Ninth World Congress of Bachelier Finance Society: "Money Supply, Asset Prices and Interest Rates within a General Equilibrium Framework," July 2016, New York, USA.
- AJRC and HIAS Joint Conference on Recent Issues in Finance and Macroeconomics (invited): "Monopolistic Dealer versus Broker: Impact of Proprietary Trading with Transaction Fees," March 2016, *Canberra, Australia*.
- University of Michigan Math Seminar: "Heston-Type Stochastic Volatility with a Markov Switching Regime," August 2015, Ann Arbor, United States.
- The 27th European Conference on Operational Research: "Heston-Type Stochastic Volatility with a Markov Switching Regime," July 2015, *Glasgow, United Kingdom*.
- The 7th International IFABS Conference : "Monopolistic Dealer versus Broker: Impact of Proprietary Trading with Transaction Fees," June 2015, *Hangzhou*, *China*.
- Fourth IMS-FPS workshop 2014: "Monopolistic Dealer versus Broker: The Impact of Proprietary Trading with Transaction Fees," July 2014, *Sydney, Australia*.
- Eighth World Congress of Bachelier Finance Society: "Heston-Type Stochastic Volatility with a Markov Switching Regime," June 2014, *Brussels, Belgium*.

- Quantitative Methods in Finance Conference 2013: "The Pricing Model of Corporate Securities under Cross-Holdings of Equities and Debts," December 2013, Sydney, Australia.
- The 25th European Conference on Operational Research: "Competition and Bad News Principle in a Real Options Framework," July 2012, Vilnius, Lithuania.
- Seventh World Congress of Bachelier Finance Society: "Irreversible Investment under Competition with Markov Switching Regime," June 2012, Sydney, Australia.
- Quantitative Methods in Finance Conference 2011: "Market Selection: Hungry Misers and Bloated Bankrupts," December 2011, Sydney, Australia.
- International Conference on Mathematical Finance and Economics: "Market Selection: Hungry Misers and Happy Bankrupts," July 2011, Istanbul, Turkey.
- Sixth World Congress of Bachelier Finance Society: "Optimal Investment Timing with Linearly Additive Geometric Brownian Motions: The General Case," June 2010, *Toronto, Canada*.
- Quantitative Methods in Finance Conference 2009: "Concentrated Equilibrium and Intraday Patterns in Financial Markets," December 2009, Sydney, Australia.
- Russia-Japan Symposium on Stochastic Analysis of the Advanced Statistical Models: "On the Environmental Kuznets Curve: A Real Options Analysis," September 2009, *Moscow, Russia*.
- The 15th International Conference on Computing in Economics and Finance: "Equilibrium Pricing of Contingent Claims in Tradable Permit Markets," July 2009, Sydney, Australia.
- The 23rd European Conference on Operational Research: "Equilibrium Pricing of Contingent Claims in Tradable Permit Markets," July 2009, Bonn, Germany.
- The 39th ASTIN Colloquium: "Equilibrium Pricing of Contingent Claims in Tradable Permit Markets," June 2009, *Helsinki, Finland*.
- Quantitative Methods in Finance Conference 2008: "Equilibrium Pricing of Contingent Claims in Tradable Permit Markets," December 2008, Sydney, Australia.
- Fifth World Congress of Bachelier Finance Society: "Regime Uncertainty and Optimal Investment Timing," July 2008, London, UK.
- International Workshop on Applied Probability: "Equilibrium Pricing of Contingent Claims in Tradable Permit Markets," July 2008, *Compiegne, France*.

- Quantitative Methods in Finance Conference 2007: "Regime Uncertainty and Investment Strategy," December 2007, Sydney, Australia.
- The 21st European Conference on Operational Research: "Regime Uncertainty and Investment Strategy," July 2007, *Prague, Czech*.
- Stanford-Tsukuba WCQF (Western Consortium in Quantitative Finance) Joint Workshop: "Regime Uncertainty and Investment Strategy," March 2007, *Stanford*, USA.
- Quantitative Methods in Finance Conference 2006: "Insider Trading with Imperfectly Competitive Market Makers," December 2006, Sydney, Australia.
- The 21st European Conference on Operational Research: "The Impact of Correlation on Insider Trading with Information Leakage," July 2006, *Reykjavik, Iceland.*
- The Third Conference of the Asia-Pacific Association of Derivatives: "Estimation of the Local Volatility of Discount Bonds Using the Market Prices of Coupon Bond Options," June 2006, *Busan, Korea*.
- The 10th International Conference on Computing in Economics and Finance: "Price Reaction to Momentum Trading and Market Equilibrium," July 2004, *Amsterdam, the Netherlands.*
- The 16th Australasian Finance Conference: "Price Reaction to Momentum Trading and Market Equilibrium," December 2003, *Sydney, Australia*.

 $\langle In Japan \rangle$

- Nippon Finance Association the 4th Fall Conference of: "A Dynamic Model of Repositioning with a Markov-Switching Regime," November 2022, Nagoya University of Commerce and Business, Nagoya.
- RIMS Workshop on Financial Modeling and Analysis 2022: "A Dynamic Model of Repositioning with a Markov-Switching Regime," September 2022, *Doshisha University, Kyoto.*
- The 2022 Fall National Conference of Operations Research Society of Japan: "Strategic Liquidity Provision in High Frequency Trading," September 2022, Toki Messe Niigata Convention Center, Niigata.
- Workshop on Financial Market Microstructure: "Competition in High Frequency Market Making," March 2022, Osaka University, Osaka.
- The 2020 Spring Semiannual Meeting of Japanese Economic Association: "Strategic Liquidity Provision in High Frequency Trading," May 2020, Online Conference.

- Nippon Finance Association the 1st Fall Conference of: "Strategic Liquidity Provision in High Frequency Trading," July 2019, Osaka University, Toyonaka.
- Workshop Applied Macro/Micro-Economics and Econometrics 2019: "Strategic Liquidity Provision in High Frequency Trading," July 2019, *Hokkaido University*, Sapporo.
- Econometrics Workshop: "Default Contagion and Systemic Risk with the Cross-Ownership of Equities, Debts, and Financial Derivatives," November 2018, *Keio University, Tokyo*.
- RIMS Workshop on Financial Modeling and Analysis 2018: "Optimal Initial Capital Induced by the Optimal Certainty Equivalent," November 2018, Kyoto University, Kyoto.
- The 2018 Spring Semiannual Meeting of Japanese Economic Association: "Optimal Initial Capital Induced by the Optimal Certainty Equivalent," June 2018, the University of Hyogo, Kobe.
- RIMS Workshop on Financial Modeling and Analysis 2017: "Default Contagion and Systemic Risk in the Presence of Credit Default Swaps," November 2017, *Kyoto University, Kyoto.*
- The 2017 Spring Semiannual Meeting of Japanese Economic Association: "Default Contagion and Systemic Risk in the Presence of Credit Default Swaps," June 2017, *Ritsumeikan University, Kusatsu.*
- The 2017 Spring National Conference of Operations Research Society of Japan: "Pricing of Credit Default Swaps with CIR-Type Default Intensities," March 2017, Okinawa Prefecture Municipal Center, Naha.
- Winter Workshop on Operations Research, Finance and Mathematics 2017: "Default Contagion and Systemic Risk in the Presence of Credit Default Swaps," February 2017, *Jozankei View Hotel, Sapporo.*
- RIMS Workshop on Financial Modeling and Analysis 2016: "Money Supply, Asset Prices and Interest Rates within a General Equilibrium Framework," November 2016, *Kyoto University, Kyoto,*.
- Faculty Seminar at Shinshu University: "Money Supply, Asset Prices and Interest Rates within a General Equilibrium Framework," September 2016, *Shinshu University, Matsumoto*.
- The 2016 Fall National Conference of Operations Research Society of Japan: "Money Supply, Asset Prices and Interest Rates within a General Equilibrium Framework," September 2016, Yamagata University, Yamagata.

- The 2016 Spring Semiannual Meeting of Japanese Economic Association: "Money Supply, Asset Prices and Interest Rates within a General Equilibrium Framework," June 2016, Nagoya University, Nagoya.
- The 2015 Fall National Conference of Operations Research Society of Japan: "Monopolistic Dealer versus Broker: Impact of Proprietary Trading with Transaction Fees," September 2015, Kyushu Institute of Technology, Kitakyushu.
- ORJS Summer School in Hokkaido: "Money Supply, Asset Prices, and Interest Rates within a General Equilibrium Framework," *Wakkanai Sogo-Bunka Center, Wakkanai*.
- The 2015 Spring Semiannual Meeting of Japanese Economic Association: "Monopolistic Dealer versus Broker: Impact of Proprietary Trading with Transaction Fees," May 2015, *Niigata University, Niigata*.
- The 6th Conference on Mathematical Analysis in Economic Theory: "Heston-Type Stochastic Volatility with a Markov Switching Regime," January 2015, January 2015, *Keio University, Tokyo*.
- The 2014 Fall Semiannual Meeting of Japanese Economic Association: "Heston-Type Stochastic Volatility with a Markov Switching Regime," October 2014, *Seinan Gakuin University, Fukuoka*.
- Okayama U. and YNU Joint Workshop on Economics: "Monopolistic Dealer versus Broker: The Impact of Proprietary Trading with Transaction Fees," June 2014, Okayama University, Okayama.
- Akita Finance Workshop 2014: "Heston-Type Stochastic Volatility with a Markov Switching Regime," May 2014, Akita Prefectural University, Akita.
- Workshop on Financial Market Microstructure: "Monopolistic Market Making with Brokerage Fees," February 2014, Osaka University, Osaka.
- Winter Workshop on Finance 2014: "Competition and the Bad News Principle in a Real Options Framework," February 2014, *Hokkaido University, Sapporo*.
- Autumn Workshop on Finance 2013: "Estimation of the ACD Model with EM Algorithm," October 2013, *Hokkaido University, Sapporo.*
- The 2013 Spring Semiannual Meeting of Japanese Economic Association: "Competition and the Bad News Principle in a Real Options Framework," June 2013, *Toyama University, Toyama*.
- Akita Finance Workshop 2013: "The Pricing Model of Corporate Securities under Cross-Holdings of Equities and Debts," April 2013, Akita Prefectural University, Akita.

- Winter Workshop on Finance 2013: "Heston-Type Stochastic Volatility with a Markov Switching Regime," February 2013, *Hokkaido University, Sapporo.*
- KIER Workshop on Securities Market Analysis: "Pricing of Discount Bonds with a Markov Switching Regime," February 2013, *Kyoto University, Kyoto*.
- Nanzan-YNU Joint Finance Workshop: "Competition and the Bad News Principle in a Real Options Framework," November 2012, *Nanzan University, Nagoya*.
- The 2012 National Conference of Japan Association of Real Options and Strategy (invited): "Competition and the Bad News Principle in a Real Options Framework," November 2012, Waseda University, Tokyo.
- The 2012 Fall Semiannual Meeting of Japanese Economic Association: "Pricing of Discount Bonds with a Markov Switching Regime," October 2012, Kyushu Sangyo University, Fukuoka.
- The 2012 Fall National Conference of Operations Research Society of Japan: "Pricing of Discount Bonds with a Markov Switching Regime," September 2012, *Winc Aichi, Nagoya*.
- ORSJ Summer School in Hokkaido: "Theoretical Analysis on Financial Markets with Asymmetric Information," August 2012, *Jozankei View Hotel, Sapporo*.
- Winter Workshop on Finance 2012: "Pricing of Discount Bonds with a Markov Switching Regime," February 2012, *Hokkaido University, Sapporo*.
- Research Seminar of Nippon Finance Association (Kenkyu Kanbokai): "Theoretical and Empirical Results on Market Microstructure," *National Center* of Sciences Building, Tokyo (with Professor W. Ohta).
- The 2011 Autumn Meeting of Japan Association for Applied Economics: "Irreversible Investment under Competition with Markov Switching Regime," November 2011, *Keio University, Tokyo*.
- Hitotsubashi ICS Faculty Seminar: "Market Selection: Hungry Misers and Bloated Bankrupts," June 2011, *Hitotsubashi University, Tokyo*.
- TMU Finance Seminar: "Market Selection: Hungry Misers and Bloated Bankrupts," June 2011, *Tokyo Metropolitan University, Tokyo*.
- The 2011 Fall Semiannual Meeting of Japanese Economic Association: "Market Selection: Hungry Misers and Happy Bankrupts," May 2011, *Kumamoto Gakuen University, Kumamoto*.
- The 19th Annual Conference of Nippon Finance Association: "Market Selection: Hungry Misers and Happy Bankrupts," May 2011, Waseda University, Tokyo.

- The 2010 Fall National Conference of Operations Research Society of Japan: "On the Market Selection Hypothesis," September 2010, *Fukushima University*, *Fukushima*.
- Summer Workshop on Economic Theory 2010: "On the Market Selection Hypothesis," August 2010, Otaru University of Commerce, Sapporo.
- The 2010 Spring Semiannual Meeting of Japanese Economic Association: "Optimal Investment Timing with Linearly Additive Geometric Brownian Motions: The General Case," June 2010, *Chiba University, Chiba*.
- The 18th Annual Conference of Nippon Finance Association: "Optimal Investment Timing with Linearly Additive Geometric Brownian Motions: The General Case," May 2010, *Sophia University*, *Tokyo*.
- Workshop on Applied Macro/Micro-Economics and Econometrics: "Concentrated Equilibrium and Intraday Patterns in Financial Markets," February 2010, *Hokkaido University, Sapporo.*
- Research Seminar of Operations Research Society of Japan: "On the Environmental Kuznets Curve: A Real Options Analysis," October 2009, *Akihabara Daibiru, Tokyo.*
- The 2009 Fall National Conference of Operations Research Society of Japan: "Endogenous Liquidity Provision in a Market with Asymmetric Information," September 2009, *Nagasaki University, Nagasaki*.
- CSFI Seminar: "Endogenous Liquidity Provision in a Market with Asymmetric Information," July 2009, Osaka University, Toyonaka.
- The 17th Annual Conference of Nippon Finance Association: "Endogenous Liquidity Provision in a Market with Asymmetric Information," May 2009, *Aoyama Gakuin University, Tokyo.*
- Nanzan-YNU Joint Finance Workshop: "Compensation Measures for Alliance Formation: A Real Options Analysis," November 2008, *Nanzan University*, *Nagoya*.
- The 2008 Fall Semiannual Meeting of Japanese Economic Association: "Equilibrium Pricing of Contingent Claims in Tradable Permit Markets," September 2008, *Kinki University, HigashiOsaka*.
- The 2008 Fall National Conference of Operations Research Society of Japan: "Regime Uncertainty and Investment Strategy," September 2008, Sapporo Convention Center, Sapporo.

- Daiwa International Workshop on Financial Engineering: "Compensation Measures for Alliance Formation: A Real Options Analysis," August 2008, *Sankei Plaza, Tokyo*.
- The 2008 Spring Semiannual Meeting of Japanese Economic Association: "Regime Uncertainty and Investment Strategy," May 2008, *Tohoku University, Sendai*.
- The 2008 Spring National Conference of Operations Research Society of Japan: "On the Pricing of Contingent Claims in Tradable Permit Markets," March 2008, *Kyoto School of Computer Science, Kyoto.*
- Daiwa Young Researchers' International Workshop on Finance: "On the Pricing of Contingent Claims in Tradable Permit Markets," March 2008, *Kyoto University, Kyoto.*
- YNU-Nanzan Joint Finance Workshop: "Insider Trading with Correlation between Liquidity Trading and a Public Signal," February 2008, *Pacifico Yokohama, Yokohama*.
- The 2007 Fall National Conference of Operations Research Society of Japan: "Timing an Environmental Policy Optimally under Economic Considerations," September 2007, National Graduate Institute for Policy Studies, Tokyo.
- The 15th Annual Conference of Nippon Finance Association: "Insider Trading with Imperfectly Competitive Market Makers," June 2007, *Keio University, Tokyo.*
- The 2007 Spring National Conference of Operations Research Society of Japan: "Insider Trading with Imperfectly Competitive Market Makers," March 2007, *Tottori University, Tottori.*
- The 2006 Fall Semiannual Meeting of Japanese Economic Association: "Insider Trading with Imperfectly Competitive Market Makers," October 2006, Osaka City University, Osaka.
- Daiwa International Workshop on Financial Engineering: "Insider Trading with Imperfectly Competitive Market Makers," September 2006, *Tsukuba University*, *Tokyo*.
- Daiwa International Workshop on Financial Engineering: "The Impact of Correlation on Insider Trading with Information Leakage," July 2005, Kyoto University, Kyoto.
- The 13th Annual Conference of Nippon Finance Association: "Insider Trading with Information Leakage When the Liquidation Value, Noise Trades, and Public Signal Are Correlated," June 2005, Yokohama National University, Yokohama.

- The 2004 Spring Semiannual Meeting of Japanese Economic Association: "Price Reaction to Momentum Trading and Market Equilibrium," June 2004, Okayama University, Okayama.
- The 12th Annual Conference of Nippon Finance Association: "Price Reaction to Momentum Trading and Market Equilibrium," March 2004, *Chuo University, Tokyo*.
- The 2003 Fall National Conference of Operations Research Society of Japan: "Price Reaction to Momentum Trading and Market Equilibrium," September 2003, *Fukuoka University, Fukuoka*.
- The 2002 Fall National Conference of Operations Research Society of Japan: "Market Equilibrium of Continuous-Time Securities Trading under Asymmetric Information," September 2002, *Future University-Hakodate, Hakodate.*

Research Grants:

- Grand in Aid for Scientific Research (C) #20K01742 by the Japanese MEXT, April 2020 March 2023.
- Grand in Aid for Scientific Research (A) #20H00088 by the Japanese MEXT, April 2020 – March 2025 (Co-investigator).
- Grand in Aid for Scientific Research (B) #18H01652 by the Japanese MEXT, April 2018 – March 2021 (Co-investigator).
- Grand in Aid for Scientific Research (C) #17K03797 by the Japanese MEXT, April 2017 March 2020.
- Ishii Memorial Securities Research Promotion Foundation, October 2016 March 2018.
- Grand in Aid for Scientific Research (B) #15H02965 by the Japanese MEXT, April 2013 – March 2018 (Co-investigator).
- Grand in Aid for Scientific Research (C) #26380390 by the Japanese MEXT, April 2014 – March 2017.
- Grand in Aid for Scientific Research (A) #25245046 by the Japanese MEXT, April 2013 – March 2019 (Co-investigator).
- Grand in Aid for Scientific Research (B) #23310098 by the Japanese MEXT, April 2011 March 2014 (Co-investigator).
- Grand in Aid for Scientific Research (C) #23530362 by the Japanese MEXT, April 2011 March 2014.

- The Zengin Foundation for Studies on Economics and Finance, January 2011 December 2011.
- Grand in Aid for Scientific Research (B) #18310104 by the Japanese MEXT, April 2006 March 2008 (Co-investigator).

Membership of Academic Societies:

- Japanese Economic Association
- Nippon Finance Association
 - Director for June 2018 May 2022
 - Auditor for June 2012 May 2016
- Operations Research Society of Japan
 - -Journal associate editor for April 2006 March 2010
- Securities Analysts Association of Japan
 - -Journal associate editor for November 2014 October 2022

Referee Experiences:

Annals of Finance, Applied Stochastic Models in Business and Industry, Asia-Pacific Financial Markets, Behaviormetrika, Economic Theory, Energy Economics, Environment and Development Economics, Environmental Economics and Policy Studies, Environmental and Resource Economics, Environmental Modelling and Software, European Journal of Finance, Insurance: Mathematics and Economics, International Review of Financial Analysis, Japan Journal of Industrial and Applied Mathematics, Japanese Economic Review, Journal of Commodity Markets, Journal of Economic Dynamics and Control, Journal of Financial Intermediation, Journal of Financial Markets, Journal of Futures Markets, Journal of Mathematical Economics, Journal of the Operational Research Society of Japan, Journal of Public Economics, Journal of Real Options and Strategy, Journal of the Royal Society Interface, Kyoto Economic Review, Mathematical Finance, Operations Research, Quantitative Finance, SIAM Journal of Financial Mathematics, Stochastics, Transactions of the Operational Research Society of Japan.

Lectures:

 $\langle \mathrm{Graduate} \rangle$

Financial Economics A, B	Hitotsubashi University	2016 - 2021
Financial Engineering	Yokohama National University	2010 - 2015
(Quantitative Finance)		
Financial Market Analysis	Yokohama National University	2011 - 2015
Special Issue on Economic Information I	Hokkaido University	2013
Stochastic Calculus with Application to Finance	Yokohama National University	2008, 2009
Investment Theory	Tokyo Metropolitan University	2006
Market Microstructure Analysis	Kyoto University	2006, 2007
Derivatives	Nagoya University of Com- merce and Business	2005

$\langle Undergraduate \rangle$

Principles of Financial Engineering	Hitotsubashi University	2021
Introduction to Statistics	Hitotsubashi University	2016 - 2020
Financial Engineering	Tokyo Metropolitan University	2011, 2016 - 2018, 2020 - 2021
Computational Finance	Hokkaido University	2014, 2015, 2017, 2019
Basic Seminar	Yokohama National University	2008, 2009, 2011, 2014, 2015
Introduction to Macroeconomics	Yokohama National University	2011, 2015
Quantitative Finance	Yokohama National University	$2010, \ 2012 \\ - \ 2014$
Mathematics for Business Management	Seijo University	2013
Applied Finance	Hokkaido University	2011
International Financial Strategy	Nagoya University of Com- merce and Business	2005
Corporate Finance	Nagoya University of Com- merce and Business	2005
Introduction to International Finance	Nagoya University of Com- merce and Business	2005