Last Update: March 24, 2024

Kaiji Motegi, Ph.D.

CONTACT INFORMATION

Graduate School of Economics
Kobe University
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EMPLOYMENT

Associate professor, Graduate School of Economics, Kobe University, Kobe, Hyogo, Japan

April 2020 – present.

Tenure-track associate professor, Graduate School of Economics, Kobe University, Kobe, Hyogo, Japan

October 2016 – March 2020.

Assistant professor (without tenure), Faculty of Political Science and Economics, Waseda University, Tokyo, Japan

April 2015 – September 2016.

Research associate, Faculty of Political Science and Economics, Waseda University, Tokyo, Japan

June 2014 – March 2015.

EDUCATION

Department of Economics, University of North Carolina at Chapel Hill, North Carolina

Doctor of Philosophy in Economics, May 2014

- Dissertation topic: "Granger causality in mixed frequency time series"
- Advisor: Eric Ghysels
- Committee members: Michael Aguilar, Saraswata Chaudhuri, Neville Francis, Jonathan B. Hill

Graduate School of Economics, Waseda University, Tokyo, Japan

M.A. in Economics, March 2009

- Highest GPA out of 16 students

School of Political Science and Economics, Waseda University, Tokyo, Japan

B.A. in Economics, March 2008

- Highest GPA out of 1079 students

RESEARCH INTERESTS

- Econometrics
- Time series analysis

BOOKS

- H. Yamashita, T. Takizawa, J. Inaida, H. Uesu, Y. Okuda, S. Kanagawa, S. Shimizu, H. Chung, K. Shinkai, M. Tomita, E. Tsuda, K. Nagashima, Y. Hashiguchi, K. Motegi, and M. Morioka "Fuzzy Theory" (2010). Tokyo: Kyoritsu Shuppan Co., Ltd., in Japanese.
  Received *2011 Outstanding Book Award*, Japan Society for Fuzzy Theory and Intelligent Informatics.

Accepted Papers

1. E. Ghysels, J. B. Hill, and K. Motegi. "Testing for Granger causality with mixed frequency data". **Journal of Econometrics**, vol. 192, May 2016, pp. 207-230.
2. K. Motegi and A. Sadahiro. "Sluggish private investment in Japan's Lost Decade: Mixed frequency vector autoregression approach". **North American Journal of Economics and Finance**, vol. 43, January 2018, pp. 118-128.
3. J. B. Hill and K. Motegi. "Testing the white noise hypothesis of stock returns". **Economic Modelling**, vol. 76, January 2019, pp. 231-242.
4. S. Hamori, K. Motegi, and Z. Zhang. "Calibration estimation of semiparametric copula models with data missing at random". **Journal of Multivariate Analysis**, vol. 173, September 2019, pp. 85-109.
5. E. Ghysels, J. B. Hill, and K. Motegi. "Testing a large set of zero restrictions in regression models, with an application to mixed frequency Granger causality". **Journal of Econometrics**, vol. 218, October 2020, pp. 633-654.
   – Received **the 33rd JSS Ogawa Award**.
6. J. B. Hill and K. Motegi. "A max-correlation white noise test for weakly dependent time series". **Econometric Theory**, vol. 36, October 2020, pp. 907-960.
7. K. Motegi, X. Cai, S. Hamori, and H. Xu. "Moving average threshold heterogeneous autoregressive (MAT-HAR) models". **Journal of Forecasting**, vol. 39, November 2020, pp. 1035-1042.
8. S. Hamori, K. Motegi, and Z. Zhang. "Copula-based regression models with data missing at random". **Journal of Multivariate Analysis**, vol. 180, November 2020, article #104654.
9. C. Ai, O. Linton, K. Motegi, and Z. Zhang. "A unified framework for efficient estimation of general treatment models". **Quantitative Economics**, vol. 12, July 2021, pp. 779-816.
10. K. Motegi and Y. Iitsuka. "Inter-regional dependence of J-REIT stock prices: A heteroscedasticity-robust time series approach". **North American Journal of Economics and Finance**, vol. 64, January 2023, article #101840.
11. K. Motegi and S. Woo. "A note on the exponentiation approximation of the birthday paradox". **Communications in Statistics - Theory and Methods**, DOI: 10.1080/03610926.2023.2245086

Submitted Papers

1. J. W. Dennis and K. Motegi (2022). "Asymptotic properties of spurious regression and random walks with generalized drifts". *Revised and resubmitted.*
2. K. Motegi, J. W. Dennis, and S. Hamori (2022). "Conditional Threshold Autoregression (CoTAR)". *Submitted.*
3. K. Motegi and J. W. Dennis (2022). "Midastar: Threshold autoregression with data sampled at mixed frequencies". *Submitted.*
4. K. Motegi and S. Hamori (2023). "Conditional threshold effects of stock market volatility on crude oil market volatility". *Submitted.*
5. K. Motegi and S. Hayashi (2023). "A groupwise approach to the birthday paradox". *Submitted.*
6. K. Motegi and J. W. Dennis (2024). "An over-rejection puzzle of bootstrap average tests for the no-threshold-effect hypothesis". *Submitted.*

Book Reviews

1. K. Motegi (2019). Keizaigaku no karisuma teki shidosha ni yoru nyumonsho. [Review of the book *Keizai Sugaku Nyumon no Nyumon*, by H. Tanaka]. *AΣTEION*, vol. 90, pp. 224-228, edited by Suntory Foundation and AΣTEION Editorial Board.

Honors and Awards

- Third Hosoya Prize, Graduate School of Economics and Management, Tohoku University, November 2021.
- Best Young Researcher Award, Kobe University, January 2020.
- 33rd JSS Ogawa Award, the Japan Statistical Society, September 2019.
- Best Poster Presentation Award, 11th Spring Meeting of the Japan Statistical Society, March 2017.

- Best Poster Presentation Award, 10th Spring Meeting of the Japan Statistical Society, March 2016.
- Waseda University Teaching Award, Spring 2015.
  Introduction to Microeconomics (Undergraduate).
- JJSM Competition Session Presentation Award, 2015 Japanese Joint Statistical Meeting.
- JJSM Competition Session Best Presentation Award, 2014 Japanese Joint Statistical Meeting.
- Department's Best TA in a Graduate Level Course Award, Department of Economics, UNC Chapel Hill, 2014.
- Outstanding Book Award, Japan Society for Fuzzy Theory and Intelligent Informatics, 2011.

Research Grants and Scholarship

- JSPS KAKENHI, Grant-in-Aid for Challenging Research (Exploratory), Grant Number 23K17555, June 2023–March 2026.
  "Modelling and testing threshold effects with mixed frequency data".
- Research Grant, The Murata Science Foundation, August 2023–July 2024.
  "Modelling and forecasting the volatility of energy prices".
- Research Grant, Japan Securities Scholarship Foundation, October 2022–September 2023.
  "Modelling and testing threshold effects in mixed frequency time series".
- Grants for Social Science, Nomura Foundation, October 2022–September 2024.
  "Time series prediction of economic and COVID-19 statistics".
- Research Grant, Ishii Memorial Securities Research Promotion Foundation, August 2020–March 2022.
  "Modelling threshold effects in financial time series".
- Grant-in-Aid for Research, Zengin Foundation for Studies on Economics and Finance, April 2020–March 2022.
  "Time series analysis on the regional spillover effects of REIT prices".
- JSPS KAKENHI, Grant-in-Aid for Early-Career Scientists, Grant Number 19K13670, April 2019–March 2022.
  "An innovative approach for unifying causal inference, missing data analysis, and copula models".
- Research Grant, Nihon Hoseigakkai Foundation, April 2018–March 2019.
  "Analysis of the interdependence of financial variables based on new copula models".
- Research Grant, Japan Center for Economic Research (JCER), April 2018–March 2020.
  "Unifying copula models, missing data analysis, and treatment effects".
- Grant for Research, Mitsubishi UFJ Trust Scholarship Foundation, April 2017–March 2018.
  "A new approach for predicting economic time series".
- Research Grant, Kikawada Foundation, April 2017–March 2019.
  "A new approach for predicting economic time series".
- Grants for Social Science, Nomura Foundation, April 2017–March 2019.
  "A new approach for predicting economic time series".
- JSPS KAKENHI, Grant-in-Aid for Young Scientists (B), Grant Number 16K17104, April 2016–March 2019.
  "Statistical analysis of mixed frequency data: Theory and macroeconomic applications".
- Suntory Foundation Grant for Young Researchers, Suntory Foundation, April 2016–March 2017.
  "Statistical analysis of mixed frequency data".
- Yoshida Scholarship (Overseas Study Program for Japanese Students), Yoshida Scholarship Foundation, 2010–2013.
- Fulbright Scholarship (Graduate Study), Institute of International Education and Japan-U.S. Educational Commission, 2009–2014.

Conferences, Seminars, Workshops (Selected)

- 99th Annual Conference, WEAI, virtual session, June 2024.
- International Conference on Time Series Econometrics (ICTSE), Kobe University, March 2024 (organizer, chair, and speaker).

- EcoSta 2023, Waseda University, August 2023 (scientific program committee member and speaker).
- 98th Annual Conference, WEAI, Zoom Webinar, July 2023.
- 17th International Conference, WEAI, Zoom Webinar, April 2023.
- 7th Annual International Conference on Applied Economics in Hawaii, Zoom Webinar, November 2022 (organizer and speaker).
- 2022 Asian Meeting of the Econometric Society in East and South-East Asia, Keio University and University of Tokyo, August 2022.
- 16th International Symposium on Econometric Theory and Applications (SETA2022), Zoom Webinar, July 2022.
- EcoSta 2022, Zoom Webinar, June 2022 (session organizer and speaker).
- 6th Annual International Conference on Applied Econometrics in Hawaii, Zoom Webinar, November 2021 (organizer and speaker).
- The Third Hosoya Prize Lecture, Graduate School of Economics and Management, Tohoku University, Miyagi, Japan, November 2021.
- Departmental seminar, Department of Economics, University of Essex, Colchester, U.K., September 2019.
- **Memorial lecture for the 33rd JSS Ogawa Award**, 2019 Japanese Joint Statistical Meeting, Shiga University, Japan, September 2019.
- SETA 2019, Osaka University, June 2019.
- 15th International Conference, WEAI, Keio University, Tokyo, March 2019.
- Essex Centre for Macro and Financial Econometrics Seminar Series, Department of Economics and Business School, Colchester, U.K., January 2019.
- Presidential session, 88th Annual Meeting of Southern Economic Association, Washington DC, November 2018.
- UNC Econometrics Workshop, Department of Economics, University of North Carolina at Chapel Hill, NC, October 2018.
- Departmental seminar, Institute of Statistics and Big Data, Renmin University of China, Beijing, China, August 28, 2018.
- Departmental seminar, Department of Statistics and Actuarial Science, University of Hong Kong, Hong Kong, June 2018.
- EcoSta 2018, The City University of Hong Kong, Hong Kong, June 2018 (session organizer and speaker).
- Economics and Economic Growth Centre Seminar Series, School of Social Sciences, Nanyang Technological University, January 2018.
- 3rd Annual International Conference on Applied Econometrics in Hawaii, Honolulu, Hawaii, September 2017.
- 4th Annual Conference of the International Association for Applied Econometrics, Sapporo, Hokkaido, Japan, June 2017.
- EcoSta 2017, The Hong Kong University of Science and Technology, Hong Kong, June 2017 (session organizer and speaker).
- 50th Anniversary Seminar, Department of Statistics and Actuarial Science, University of Hong Kong, Hong Kong, June 2017.
- 11th Spring Meeting of the Japan Statistical Society, National Graduate Institute for Policy Studies, Tokyo, March 2017.
  – Received **Best Poster Presentation Award**.
- UNC Econometrics Workshop, Department of Economics, University of North Carolina at Chapel Hill, NC, February 2017.
- NBER-NSF Time Series Conference, Columbia University, New York, September 2016.
- Asian Meeting of the Econometric Society, Doshisha University, Kyoto, August 2016.
- 10th Spring Meeting of the Japan Statistical Society, Tohoku University, Miyagi, March 2016.
  – Received **Best Poster Presentation Award**.

- Recent Developments in Time Series and Related Fields, Tohoku University, December 2015.
- 2015 Japanese Joint Statistical Meeting, Okayama University, Japan, September 2015.
  – Selected as **JJSM Competition Session Presentation Award Winner 2015**.
- 11th World Congress of Econometric Society, Palais des Congrès de Montréal, August 2015.
- SETA 2015, Hitotsubashi University, May 2015.
- 25th $(EC)^2$ Conference, Universitat Pompeu Fabra, December 2014.
- NBER-NSF Time Series Conference, Federal Reserve Bank of St. Louis, MO, September 2014.
- 2014 Japanese Joint Statistical Meeting, University of Tokyo, Japan, September 2014.
  – Selected as **JJSM Competition Session Best Presentation Award Winner 2014**.
- NBER-NSF Time Series Conference, Federal Reserve Board, Washington D.C., September 2013.
- North American Summer Meeting of the Econometric Society, University of Southern California, CA, June 2013.

Editorial Services

- Associate Editor, *Singapore Economic Review*, January 2018–present.
- Reviewer Board Member, *Journal of Risk and Financial Management*, January 2021–present.

Courses Taught

Econometrics B (Master's) — Fall 2023, Kobe University

Analysis of Stationary Time Series (Master's) — Fall 2022, Kobe University

Analysis of Nonstationary Time Series (Master's) — 3^{rd} Quarter, 2021, Kobe University
Econometrics (Undergraduate) — 1^{st} Quarter, 2021, Kobe University

Analysis of Stationary Time Series (Master's) — 3^{rd} Quarter, 2020, Kobe University
Fresh-start Seminar (Undergraduate) — 1^{st} & 2^{nd} Quarters, 2020, Kobe University
Econometrics (Undergraduate) — 1^{st} Quarter, 2020, Kobe University

Analysis of Nonstationary Time Series (Master's) — 3^{rd} Quarter, 2019, Kobe University
Analysis of Stationary Time Series (Master's) — 1^{st} Quarter, 2019, Kobe University

Analysis of Nonstationary Time Series (Master's) — 3^{rd} Quarter, 2018, Kobe University
Analysis of Stationary Time Series (Master's) — 1^{st} Quarter, 2018, Kobe University

Analysis of Nonstationary Time Series (Master's) — 3^{rd} Quarter, 2017, Kobe University
Analysis of Stationary Time Series (Master's) — 1^{st} Quarter, 2017, Kobe University

Time Series Analysis (Master's) — 3^{rd} Quarter, 2016, Kobe University
Time Series Analysis (Master's) — Spring 2016, Waseda University
Fresh-Start Seminar (Undergraduate) — Spring 2016, Waseda University
Introduction to Microeconomics (Undergraduate) — Spring 2016, Waseda University

Macroeconomics I (Master's) — Fall 2015, Waseda University
Economic Statistics II (Master's) — Fall 2015, Yokohama City University
Introduction to Macroeconomics (Undergraduate) — Fall 2015, Waseda University
Introduction to Microeconomics (Undergraduate) — Fall 2015, Waseda University

Time Series Analysis (Master's) — Spring 2015, Waseda University
Economic Statistics I (Master's) — Spring 2015, Yokohama City University
Fresh-start Seminar (Undergraduate) — Spring 2015, Waseda University
Introduction to Macroeconomics (Undergraduate) — Spring 2015, Waseda University
Introduction to Microeconomics (Undergraduate) — Spring 2015, Waseda University

– *Received Waseda University Teaching Award*

OTHER RESEARCH AND EDUCATIONAL ACTIVITIES

Program committee member, 2022 Japanese Joint Statistical Meeting September 2022
Japanese Federation of Statistical Science Associations

Invited article, "Why does the infection status of COVID-19 differ between Japan and the U.S.?"
January 15, 2022, *Weekly Toyo Keizai Magazine*, pp. 78-79

Program committee member, 2021 Japanese Joint Statistical Meeting September 2021
Japanese Federation of Statistical Science Associations

Invited special article as the 33rd JSS Ogawa Award Winner, "Mixed frequency vector autoregressive (MF-VAR) models and Granger causality tests"
September 2020, *Nihon Toukei Gakkaishi*, vol. 50 (1), pp. 191-204

Invited article, "On unifying copula models, missing data analysis, and causal inference"
November 2019, *Kokumin-keizai Zasshi*, vol. 218 (5)

Invited article, "Introduction to Monte Carlo experiments in econometrics" January 2018
For Learning Economics and Business Administration, first half of FY2018

Invited speaker, Interdisciplinary Cross Talk, 1st issue of WA September 2017
Yoshida Scholarship Foundation

Invited speaker, Summer Seminar July 2016
Waseda University Honjo Senior High School

Invited speaker, Summer Seminar July 2015
Waseda University Honjo Senior High School

Resource person, Pre-Departure Orientation for 2015 Japanese Fulbright Grantees June 2015
Japan-US Educational Commission

Invited speaker, Orientation for 2015 Yoshida Scholarship Grantees March 2015
Yoshida Scholarship Foundation

Invited blog article, Studying at U.S. graduate schools (written in Japanese) October 2014
Yoshida Scholarship Foundation

Resource person, Pre-Departure Orientation for 2014 Japanese Fulbright Grantees June 2014
Japan-US Educational Commission

Resource person, Orientation on Studying in the U.S. May 2014
Japan-US Educational Commission