Dandan Wang

dandanwangecon@gmail.com
Personal Website

Employment

Assistant Professor, Li Anmin Institute of Economic Research, Liaoning University, China — 2021–Present

Assistant Professor, Department of Statistics, Carlos III University of Madrid, Spain — 2017–2021

Tax Consultant, Schaeffler Group (China), China — 2006–2009

Education

Ph.D. in Economics, Cardiff University, U.K. — 2013–2017

Thesis: *Bias Assessment and Reduction for Limited Information Estimation in General Dynamic Simultaneous Equations Models*.

MRes in Economics, Cardiff University, U.K. — Distinction, highest grades — 2011–2013

Dissertation: *Labour Search and Matching Theory in Macroeconomics: The DSGE Framework*.

MSc in Financial Economics, Cardiff University, U.K. — Distinction, runner-up — 2010–2011

Dissertation: *Supply-Side Policy and Unemployment Rates in the UK*.

BSc in Economics and Business, Nantong University, China — Distinction — 2002–2006

Research Interests

Econometrics; Machine Learning; Economic Theory; Public Policy.

Publications

Machine Learning Methods in Agricultural Economics Research: Applications and Prospects (with Huanguang Qiu and Xinye Lv), Chinese Rural Economy(In Chinese), No. 4, pp. 186–208, 2026.

Prospects for the Application of Artificial Intelligence in Agricultural Economic Management (with Huanguang Qiu), Issues in Agricultural Economy(In Chinese), No. 10, pp. 4–7, 2025.

Carbon Meets Credit: Enhancing Corporate Ratings Using Principal Component Analysis and Gaussian Mixture Models (with Zhihui Ma), Digital Economy and Sustainable Development, 2024.

Digital Finance and Corporate Financialization: From the Perspective of Bank Competition and Economic Policy Uncertainty (with Da Yang, Hongyang Ma, and Ken C. Ho), Applied Economics Letters, 2024. DOI: 10.1080/13504851.2024.2363984.

Mixed Random Forest, Cointegration, and Forecasting Gasoline Prices (with Alvaro Escribano), International Journal of Forecasting, 37(3), 2021. DOI: 10.1016/j.ijforecast.2020.12.008.

Working Papers

Deep Learning in Dynamic General Equilibrium Models (with Daniel Pena), second-round R&R at The Annals of Statistics.

Bias Assessment and Reduction for the 2SLS Estimator in General Dynamic Simultaneous Equations Models (with Garry D. A. Phillips), R&R at Econometric Reviews.

Trade Diversion within the BRI Geo-Economic Network during the 2018–2019 U.S. Tariff Escalation (with Xiangjun Ma and Jiawen Ma), submitted.

Cold Days, Dirty Miles: Traffic and Heating in Urban Pollution (with Cheng Yang), submitted.

Digital Finance and Urban Innovation: From the Perspective of Innovative Small and Medium Enterprises (with Ken C. Ho, and Zhihui Ma), submitted.

Measuring the Learnable Oracle Gap in Dynamic Expert Selection (with Miaojie Yu), submitted.

"Rent-Purchase" Policy on the Housing Market (with Xiaodong Chen and Yifan Zhang), submitted.
Having a Second Child? The Hidden Role of Local Gender Norms (with Feng Chen), submitted.
Car Adoption: Gas or Electric (with Russell Cooper).
Optimal Transport Exposure Maps for Adaptive Network Experiments.
A Small-σ Approximation for LIML and FLIML to Estimation Bias in the Dynamic Simultaneous Equation Model (with Emma M. Iglesias and Garry D. A. Phillips).
A Comparison of Limited Information Estimators in Dynamic Simultaneous Equations Models (with Garry D. A. Phillips).
Bias Approximation and Reduction in the pth-Order Dynamic Reduced Form (with Garry D. A. Phillips).
Game of Trade: Navigating Subsidies, Tariffs, and Strategic Firms (with Miaojie Yu).
Environmental Macroeconomic Models as Constructive Games.
Beyond Barriers: Regulatory Coordination and Climate Adaptation Efficiency in Developing Countries (with Miaojie Yu).

Presentations

2026: 2026 Conference on Mechanism and Institution Design (CMID2026), University of York, U.K.; 2026 SMLE Annual Conference: Machine Learning in Economics, School of Economics, Peking University, July 11–12.
2025: Seminar, Department of Economics, Peking University, May; Econometrics Workshop, Dongbei University of Finance and Economics, June; Game Theory Conference, U.K., July; Seminar, School of Finance, Dongbei University of Finance and Economics, October; 5th International Workshop on Frontiers of Econometrics, International School of Economics and Management, December.
2024: National Development Forum, Liaoning University, China; 7th Renmin University of China / GLO Annual Conference on "Low Fertility and Population Ageing," Renmin University of China, China.
2023: WEAI Conference, San Diego, U.S.; Xi'an Jiaotong University, China.
2021: University of Amsterdam (online).
2020: Carlos III University of Madrid (online).
2019: IAAE Annual Conference, University of Cyprus; Workshop on Modelling Economic and Financial Time Series, Carlos III University of Madrid.
2018: MAF, Carlos III University of Madrid; Econometric Study Group Conference, University of Bristol, U.K.
2017: Econometric Study Group Conference, University of Bristol, U.K.; University of Münster; Nottingham Trent University; Shandong University.
2016: EEA–ESEM European Meeting, Geneva, Switzerland; Econometric Study Group Conference, University of Bristol, U.K.; 4th RCEA Time Series Econometrics Workshop, Rimini, Italy; Faculty Internal Seminar, Cardiff University, U.K.; University of Warwick, U.K.
2015: Royal Statistical Society Annual Conference, University of Exeter, U.K.; Frontiers of Theoretical Econometrics Conference in Celebration of Donald Andrews' 60th Birthday, University of Konstanz, Germany; Workshop on the Econometrics and Statistics of Efficiency Analysis, Lecce, Italy; Quantitative Economics Doctorate Jamboree, Cardiff University, U.K.; University of Alicante Seminar, Spain.

Teaching Experience

Liaoning University, China
Financial Econometrics (Master's)
Advanced Econometrics II (Ph.D.)

Advanced Econometrics I (Ph.D.)
Business Statistics (Undergraduate)
Artificial Intelligence (Postgraduate)
Artificial Intelligence (Undergraduate)
Machine Learning in Business (Undergraduate)

Carlos III University of Madrid, Spain
Causal Inference (Master's)
Time Series Analysis and Forecasting (Master's)
Statistics II (Master's)
Advanced Econometrics I (Ph.D.)
Econometrics II (Undergraduate)
Econometrics I (Undergraduate)

University of Warwick, U.K.
EC236: Topics in Applied Economics (Undergraduate)

Advising

Master's students: Jiaying Li; San Attarangsan; Vladimir Emelianov; Mingdi Chen; Ignacio Adana; Xiaoxiao Feng; Shiyan Zhuang; Mingyun Sheng.

Honors, Grants, and Awards

Principal Investigator of a Subproject, Key Program of the National Natural Science Foundation of China (2026–Present).
Basic Research Projects of the Liaoning Provincial Department of Education (2024).
Juan de la Cierva Funding in Economics, Spanish Ministry of Science and Innovation (2019–2021).
Teaching Awards, Carlos III University of Madrid (2019–2020).
Julia Hodge Scholarship (2011–2017).
Cathie Marsh Bursary, Royal Statistical Society (2015).
Summer School Scholarship, Cardiff University (2015).
MSc Dissertation Prize (2012).
MSc Total Score Runner-Up Prize (2011).

Professional Activities

Referee: *Journal of Time Series Analysis*; *Economics Letters*; *Journal of Applied Econometrics*; *Journal of Econometrics*; *The Annals of Statistics*; *Machine Learning*.
Organizer: Workshop on Modelling Economic and Financial Time Series, Carlos III University of Madrid (2019).
Service: Liaoning University Junior Hiring Committee (2022–2025).
Visiting Scholar: Capital University of Economics and Business (2018); IFS Centre, UCL (2016, 2017); University of Alicante (2013–2015).

Miscellaneous

Languages: Chinese (native), English (fluent), Spanish (basic).
Computer Skills: R, Python, Stata, MATLAB, Mathematica, C++, Bash.