Buyuan Yang

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Assistant Professor, since July 2023
School of International Trade and Economics
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Faculty profile (in Chinese) SSRN Google Scholar

Research fields

The economics of artificial intelligence, the economics of knowledge, economic growth, and international competition in science and technology.

Education

2019–2023	Ph.D. in Economics, Tsinghua University. Field: theoretical economics. Advisor: Danxia Xie.
Jan.–Sep. 2022	Visiting Scholar, Harvard Law School, Harvard University. Faculty advisor: Richard B. Freeman.
2016–2019	M.A. in Economics, Central University of Finance and Economics. Field: world economy. Advisor: Zhesong Jin.
2012–2016	B.E. in Measurement and Control Technology and Instrumentation, Southeast University.

Other research experience

2021–2022	Research assistant to Keyu Jin, London School of Economics and Political Science. Research in international economics.
2021	Assistant Research Fellow, Digital Currency Research Institute, People's Bank of China.
2018–2019	Assistant Research Fellow, Financial Research Center, Tencent.

Languages and computing

Chinese (native), English (working proficiency). Python, MATLAB, Mathematica, R, and C++.

Journal articles in English

1. Danxia Xie and **Buyuan Yang**. Information Carrier Technology and Growth. *The Scandinavian Journal of Economics* 127(4), 912–944 (2025). Co-first and corresponding author.
2. Richard B. Freeman, **Buyuan Yang**, and Baitao Zhang. Data Deepening and Nonbalanced Economic Growth. *Journal of Macroeconomics* 75, 103503 (2023). Co-first author.
3. Tiantian Dai, Shenyi Jiang, Tao Jin, and **Buyuan Yang**. Language and Segregation: Evidence from Housing Markets in the United States. *Applied Economics* 55(11), 1157–1183 (2023). Co-first and corresponding author.

Journal articles in Chinese

1. 杨补园、谢丹夏、赵魏一、张庆全：《土地产权制度、房价结构与财富不平等》，《经济学报》，2026 年，第 13 卷第 1 期，第 157–175 页。

   Buyuan Yang, Danxia Xie, Weiyi Zhao, and Qingquan Zhang. Property Rights System of Land, Housing Price Structure and Wealth Inequality. *China Journal of Economics* 13(1), 157–175 (2026).

2. 杨补园、谢丹夏：《双边市场理论视角下的平台动态定价策略研究》，《经济科学》，2025 年，第 47 卷第 2 期，第 32–49 页。

   Buyuan Yang and Danxia Xie. Dynamic Pricing Strategies of Platforms from the Perspective of Two-Sided Market Theory. *Economic Science* 47(2), 32–49 (2025).

3. 谢丹夏、杨补园、李尧、熊鸿儒：《双边市场排他性协议研究——基于非对称平台竞争的经济学分析》，《经济学（季刊）》，2024 年，第 24 卷第 6 期，第 1938–1956 页。

   Danxia Xie, **Buyuan Yang**, Yao Li, and Hongru Xiong. Exclusive Agreements in Two-Sided Markets: An Economic Analysis of Asymmetric Platform Competition. *China Economic Quarterly* 24(6), 1938–1956 (2024).

4. 谢丹夏、赵魏一、刘培林、杨补园：《公共卫生体系改革的经济学分析——预防和治疗资源最优配置的机制与政策设计》，《经济学报》，2024 年，第 11 卷第 2 期，第 377–408 页。杨补园为通讯作者。

   Danxia Xie, Weiyi Zhao, Peilin Liu, and **Buyuan Yang**. Economic Analysis of the Public Health Reform—The Mechanism and Policy Design for the Optimal Resource Allocation between Prevention and Treatment. *China Journal of Economics* 11(2), 377–408 (2024). Corresponding author.

Book

杨补园：《信息载体技术、双层创新与内生经济增长》，北京：中国财政经济出版社，2026 年 6 月。ISBN 978-7-5223-4787-5。

Buyuan Yang. *Information Carrier Technology, Two-Tier Innovation, and Endogenous Economic Growth* [title translated from Chinese]. Beijing: China Financial and Economic Publishing House, June 2026. ISBN 978-7-5223-4787-5.

Working papers

1. Codifying Expertise: AI Agents and Apprenticeship. **Buyuan Yang**. SSRN, 2026.
2. Artificial Intelligence, Automation, and the Demographic Foundations of Innovation. Wenshi Wei, Danxia Xie, and **Buyuan Yang**. SSRN, 2026.
3. Artificial Intelligence and the Boundary of Human Work. C. Bao, **Buyuan Yang**, and X. Zhang. Manuscript, 2026.
4. Preserving and Disseminating Ideas: The Information Carrier Trap and the Rise of the Industrial Revolution. Danxia Xie and **Buyuan Yang**. SSRN, 2026.
5. Artificial Intelligence, Household Production, and the Allocation of Time. Shanqin Ding, Danxia Xie, **Buyuan Yang**, and Zhanhe Zhang. SSRN, 2026.
6. The Economics of Artificial Consciousness. Danxia Xie, **Buyuan Yang**, and Xinyu Zhang. SSRN, 2026.
7. Join or Wait? Seller Capability Development and Dynamic Platform Pricing. Kevin Mi, Danxia Xie, **Buyuan Yang**, and Hanzhe Zhang. SSRN, 2026. Earlier version: *Digital Villages* (2025). The original draft, by Danxia Xie and Buyuan Yang, circulated as *Platform Dynamics and Economic Development*.
8. Who Creates and Who Captures? Generative AI, Copyright Infringement, and Optimal Policy. Hongwei Kou, Ke Rong, Danxia Xie, and **Buyuan Yang**. SSRN, 2026.
9. Artificial Intelligence and the Brain: Is Innovation Getting Easier? Kevin Mi, Danxia Xie, **Buyuan Yang**, and Hanzhe Zhang. SSRN, 2025.
10. Optimal Privacy Protection in Central Bank Digital Currency. Chaofeng Bao, Eric Chiang, Hao Sun, and **Buyuan Yang**. SSRN, 2025.
11. How Does Digital Product Trade Liberalization Affect Carbon Emissions? Evidence from the Expansion of Information Technology Agreement. Wenjing Bi, Yuhan Song, **Buyuan Yang**, and Tenglong Zhong. SSRN, 2025.
12. Solow to Becker-Lucas. Chaofeng Bao, Danxia Xie, **Buyuan Yang**, and Xiaotao Zhang. SSRN, 2025.

13. Artificial Intelligence, Knowledge Spillovers, and Growth. Chaofeng Bao, **Buyuan Yang**, Xiaotao Zhang, and Tenglong Zhong. SSRN, 2024.
14. 杨补园、张晓涛、陈丽媛、包朝峰：《人工智能、专家形成与经济增长：一个知识代际传承理论》。工作论文。
    Buyuan Yang, Xiaotao Zhang, Liyuan Chen, and Chaofeng Bao. *Artificial Intelligence, Expert Formation, and Economic Growth: A Theory of Knowledge Transmission Across Generations*. Working paper in Chinese.
15. 贾鹏飞、杨补园、何明欣：《央行数字货币与宏观经济政策创新》。工作论文。
    Pengfei Jia, **Buyuan Yang**, and Mingxin He. *Central Bank Digital Currency and Macroeconomic Policy Innovation*. Working paper in Chinese.

Selected conference presentations

2026	Allied Social Science Associations Annual Meeting, Philadelphia. *Artificial Intelligence and the Brain: Is Innovation Getting Easier?* and *Artificial Intelligence, Knowledge Spillovers, and Growth*.
2025	World Congress of the Econometric Society, Seoul, and Academy of Management Annual Meeting, Copenhagen. *Artificial Intelligence Generated Content, Intellectual Property Rights, and Digital Tax*. Conference abstract.
2025	Seventh Annual Conference of Government and Economics, Beijing, and Seventh International Conference on European Economics and Politics, Milan. Artificial Intelligence, Knowledge Spillovers, and Growth.
2024	RCEA International Conference in Economics, Econometrics, and Finance, London, and 47th Eurasia Business and Economics Society Conference, Berlin. *Endogenous Information Carrier Technology*.
2021–2022	Asian Meeting of the Econometric Society, China Meeting of the Econometric Society, and Annual Conference in Digital Economics. Platform Dynamics and Economic Development.
2019	China Meeting of the Econometric Society, Guangzhou. Solow to Becker-Lucas.

Research funding

Principal investigator and fellowship recipient

2025–2027	National Natural Science Foundation of China, Young Scientists Fund, grant 72403265. Artificial Intelligence and Human Cognition: A Theoretical Study of Innovation and Growth.
2023–2026	China Postdoctoral Science Foundation, 75th General Program, grant 2024M753813. Artificial Intelligence and Original Innovation: An Endogenous Growth Model.
2023–2025	National Postdoctoral Researcher Program, 2024 Category C award, GZC20242117. Received Tier 3 funding in the 2025 postdoctoral research performance assessment.

Collaborative projects

2026–2028	National Natural Science Foundation of China, special project under the Guideline-Guided Original Exploration Program. The Architecture, Evolution, and Development of Markets for Data as a Factor of Production: Theory and an Evaluation Framework.
2025–2027	National Social Science Fund of China, Major Project. Changes in Global Economic and Trade Rules: Implications and Policy Responses for China's High-Level Opening Up.
2025–2027	Central University of Finance and Economics, Eighth Young Research Innovation Team Program. International Trade and Global Environmental and Climate Governance: A Quantitative Trade Perspective.
2024–2026	National Natural Science Foundation of China, General Program. Economic Growth and Population Dynamics in the Digital Age.

2020–2023	National Natural Science Foundation of China, General Program. Digital Platform Dynamics, Social Welfare, and Financial Stability: Theory and Empirical Evidence.
2015–2016	National Undergraduate Innovation and Entrepreneurship Training Program. Time-of-Day Pricing for High-Speed Rail: A Multiobjective Optimization Model for the Beijing–Shanghai and Shanghai–Nanjing Routes. Final evaluation: Excellent.

Professional service

Referee for *China Economic Quarterly*, *Canadian Journal of Economics*, *Journal of Macroeconomics*, *Economic Modelling*, *Humanities and Social Sciences Communications*, *Journal of Banking & Finance*, and *Journal of Management World*.

Teaching

Graduate	Central University of Finance and Economics. Economic Theory and Practice (domestic and international graduate programs) and Global Supply Chain Operations and Management (domestic graduate program).
Undergraduate	Central University of Finance and Economics. Investments and Portfolio Management, China–Australia undergraduate program, spring terms 2024–2026.
Fall 2023	Central University of Finance and Economics. International Financial Markets and Business Economics.
2019–2021	Teaching assistant, Tsinghua University. Principles of Economics II, Law and Economics, Macroeconomic Analysis of China, Intermediate Macro: Economic Science Policy, and Model Innovation for Economic Science & Policy.

Selected honors

2026	第五届国际商务专业学位研究生案例竞赛教学型案例三等奖。获奖案例：《科技赋能，“玩”转全球：优迪智能的出海之路》。作者：杨补园、张晓涛、蒙双、王铁军、綦欣。 Third Prize, Teaching Case Category, Fifth National MIB Graduate Case Competition. *Technology at Play: UDIRC's Path to Global Markets*. Buyuan Yang, Xiaotao Zhang, Shuang Meng, Tiejun Wang, and Xin Qi.
2024	Best Paper Award, 47th Eurasia Business and Economics Society Conference, Berlin, for *Endogenous Information Carrier Technology*, with Danxia Xie.
2024	中国信息经济学会学术年会（2024）会议优秀论文奖。《人工智能、知识产权与最优政策设计》。作者：寇宏伟、戎珂、谢丹夏、杨补园。 Outstanding Paper Award, 2024 Annual Conference of the China Information Economics Society, for the paper presented as Artificial Intelligence, Intellectual Property Rights, and Optimal Policy Design. The award announcement lists the English title as *AIGC, Intellectual Property Rights and Digital Tax*. Hongwei Kou, Ke Rong, Danxia Xie, and Buyuan Yang.
2023	Yatu Scholarship, School of Social Sciences, Tsinghua University, March 2023.
2022	Comprehensive Graduate Scholarship, Second Class, Tsinghua University.
2021	第十九届（2021 年度）中国法经济学论坛优秀论文奖。《双边市场排他性协议研究——基于非对称平台竞争的经济学分析》。 Excellent Paper Award, 19th China Law and Economics Forum, for Exclusive Agreements in Two-Sided Markets: An Economic Analysis of Asymmetric Platform Competition.
2019	Outstanding Graduate, Beijing Municipal Commission of Education.