Yifei Ren
Department of Economics
Princeton University
Email: yr2692@princeton.edu
Phone: 6092554935

February 11, 2026

Dear Members of the Selection Committee,

I am writing to apply for the NBER Innovation Research Boot Camp (Summer 2026). I am currently a PhD student in Economics at Princeton University, and I am eager to participate in this program to deepen my understanding of innovation, technological change, and their implications for economic growth and policy.

My research interests lie at the intersection of macroeconomics, production networks, and innovation. In my current work, I study how technological adoption, learning, and firm behavior shape productivity dynamics and aggregate fluctuations. Through both theoretical modeling and empirical analysis, I aim to better understand how new technologies—particularly digital and AI-related innovations—affect firm organization, market structure, and economic resilience. My interest in these topics has been further strengthened by coursework and research experience at Princeton, as well as recent exposure to frontier research in digital economics.

The Innovation Research Boot Camp offers a unique opportunity to engage closely with leading scholars and peers working on innovation-related topics. I am particularly excited about the program's emphasis on rigorous research design, data analysis, and the exchange of ideas across fields. I believe this environment would be invaluable for refining my research agenda and developing new projects related to innovation and technology diffusion.

I am highly motivated, collaborative, and committed to pursuing an academic career in economics. I am confident that my strong quantitative training, research experience, and enthusiasm for innovation economics would allow me to contribute actively to the Boot Camp while benefiting greatly from the program.

My complete contact information is provided above. A confidential letter of recommendation will be submitted on my behalf by Professor Ernest Liu.

Thank you very much for considering my application. I would be honored to participate in the NBER Innovation Research Boot Camp and look forward to the opportunity to learn from and contribute to this community.

Sincerely,
Yifei Ren

Yifei Ren

(+1) 6092554935

yr2692@princeton.edu

EDUCATION

Fudan University	**Bachelor of Economics (Honor Student)**	**Finance**	2016-2020
GPA: 3.93/4.0	**Ranking in School of Economics: 1**/305	**Major Ranking：1**/79	
University of California, Berkeley	**Exchange Student**	**Economics**	**GPA: 4.0**/4.0 2018
Tsinghua University	**Master of Economics**	**GPA:3.97**/4.0	**Ranking: 1**/35 2020-2024
Princeton University	**Visiting Student**		2023-2024
Princeton University	**Ph.D. Student**		2024-

WORKING PAPERS

1. "The Bullwhip: Time-to-Build and Sectoral Fluctuations", with Leng, Yan and Liu, Ernest and Tsyvinski, Aleh, NBER Working paper 33638, April, 2025.

   Conference Presentations (* presented by coauthors):

   ASSA Meetings ISIR Session (2026), NBER Disaggregated National Accounts: Measurement and Application* (2025), NBER International Trade and Investment Program Meeting* (2025), Chinese Economists Society 2025 North America Annual Conference (2025), 3rd Conference 'Trade, value chains and financial linkages in the global economy' (2024)
2. "Fiscal Policy through Fintech Platforms", with Keyu Jin and Tao Jin, Working paper, London School of Economics and Political Science, October 2022.
3. "Qing or Qin", with Keyu Jin and Tao Jin, Working paper, London School of Economics and Political Science, October 2023.
4. "Quantitative Measurement of Monetary Policy—Relationship between Central Bank Shrinking Balance Sheet and "Monetary Loosening", with Xianshuang Wang and Jinfan Zhang, Working paper, October 2021

   Conference Presentations (* presented by coauthors):

   18th Chinese Finance Annual Meeting* (2021), 7th National Economics Postgraduate Academic Annual Conference* (2021)

   Award:

   First Prize of Excellent Paper in the 7th National Economics Postgraduate Academic Annual Conference in 2021

WORK IN PROGRESS

1. "Option Implied Innovation Uncertainty", with Shubo Kou and Xuan Tian

   Conference Presentations (* presented by coauthor):

   AsianFA* (2023), Xinyuan Workshop, PBCSF* (2023)
2. "Investment-Led Growth", with Xiaodong Zhu, Wenlan Luo and Wen Yao

RESEARCH ASSISTANT

- RA to Professor Jiang Wang (MIT), Professor Grace Xing Hu (Tsinghua) 2022

- Contribute to the book "2022 Capital China Market Yearbook"

TEACHING ASSISTANT

1. Advanced Econometrics II (Tsinghua, PBCSF) 2023
2. Advanced Theory of Capital Markets (Tsinghua, PBCSF) 2022
3. Advanced Microeconomics II (Tsinghua, PBCSF) 2021

HONORS & AWARDS

Alfred P. Sloan Summer School Studentship, Sloan-Cambridge Mesoeconomics 2024
Graduate Fellowship, Princeton University 2024-2029
National Scholarship 2018, 2022
Liu Hongru Special Scholarship 2021
Shanghai Outstanding Graduates 2020
WuYingfan Elite Scholarship 2019
CFA Scholarship 2019
First Prize in China Undergraduate Mathematical Contest in Modeling 2019
International Youth Leadership Finance Summit Second Prize 2019
Wangdao Scholar: *How Shadow Banking Influences Chinese Real Estate Market* 2018

SOCIAL PRACTICE

Director of Academic Department of Student Union of School of Economics 2018.3-2018.9

- Has successfully held several lectures on financial innovation in Shanghai Free Trade Zone, Game theory

Deputy Secretary, Graduate Students Committee of PBC School of Finance Tsinghua University, the Communist Youth League 2021.6-2022.6

- Establish Tsinghua University Student Anti-Financial Fraud Association

EXPERIENCES

Exchange student in King's College of London (KCL) 2017.7-2017.8

- Study international business and has achieved outstanding academic performance.

An Intern in Advisory – Deals Practice with PwC China, Shanghai Office 2019.1-2019.2

- Software developer of Dimensional Wizard Version 3.0, use the python-pandas and tkinter package to process data and UI design to improve efficiency

An Intern in Shanghai Financial Court 2019.6-2019.8

- Lead Coordinator in Financial Trial Theory Professional Committee 2019 Academic Symposium; Member of drafting group of the Implementation Opinions on Serving and Safeguarding the Establishment of STAR market and the Pilot of Registration-based System, do meeting records and write summaries

An Intern in CuraInvestment 2020.5-2020.8

- Complete the liquidation of a 4 billion fund, establish a project calculation model to improve the overall working efficiency, and participate in the issuance of a 2.5 billion fund

An Intern in China National Clearing Center 2022.7-2022.9

- Deeply participated in the project "Epidemic Prevention and Control, Production Network and Macroeconomy", "Liquidity Risk of Small and Medium-sized Banks" and "Payment System in the Yuan Universe", participated in the 2021 Annual Project Exchange Meeting and completed the proposal report

PROGAMMING SKILL

Python、R、Excel、PowerQuery

SPECIALTY: Piano、International Style of Ballroom Dancing、Chinese Calligraphy、Table Tennis

COURSEWORK

Macroeconomics:
Macroeconomic Theory I – Sastry & Grigsby
Macroeconomic Theory II – Kiyotaki & Violante
Advanced Macroeconomic Theory – Sastry & Grigsby
Financial and Monetary Economics – Payne & Brunnermeier
Introduction to Macro-Finance – Mian
Macroeconomic Perspectives on Inequality – Violante

Econometrics:
Econometric Theory I – Watson & Kolesar
Econometric Theory II – Plagborg-Møller & Mueller
Advanced Econometrics: Time Series Models – Watson & Plagborg-Møller

Microeconomics:
Microeconomic Theory I – Ortoleva & Gul
Microeconomic Theory II – Chassang & Mu
Behavioral Economics – Ortoleva & Bénabou

Finance / Asset Pricing:
Asset Pricing – Lenel & Yogo
Financial Modeling – Ait-Sahalia & Chen
Corporate Finance – Xiong & Irie

International Economics:
International Trade I – Grossman & Becko
International Trade II – Liu & Morales
International Monetary Theory and Policy – Aguiar & Lenel

Other:
Research Ethics in Economics – Kastl

Research Statement and Motivation

Yifei Ren

My research focuses on understanding how technological change, learning, and innovation shape firm behavior, production networks, and aggregate economic dynamics. I am particularly interested in how new technologies—especially digital and AI-based tools—affect productivity, market structure, and resilience in modern economies. Using a combination of theoretical modeling and empirical analysis, my work aims to provide rigorous foundations for evaluating the economic consequences of innovation and technological adoption.

My current research agenda centers on two related themes. First, I study how firms adapt to shocks and uncertainty through inventory management, time-to-build decisions, and technology adoption within production networks. In ongoing work, I develop dynamic models in which firms choose how to allocate resources across vintages of intermediate inputs and learning technologies, capturing trade-offs between short-run efficiency and long-run capability building. These projects highlight how technological choices interact with network structure to amplify or dampen aggregate fluctuations.

Second, I examine how information and learning technologies influence firm decision-making. In recent work, I explore how access to AI-based tools affects pricing, forecasting, and investment behavior, emphasizing the role of endogenous learning and strategic interactions among firms. This line of research aims to clarify when AI enhances productivity and when it may crowd out human skill accumulation, with important implications for long-run growth and inequality.

Looking ahead, I plan to build an integrated research agenda that combines these themes to study how innovation diffuses through interconnected firms and markets. A central objective of my future work is to quantify how emerging technologies, such as artificial intelligence and digital platforms, reshape organizational structures, competitive dynamics, and aggregate productivity. I am particularly interested in developing models and empirical strategies that can guide policy discussions on innovation incentives, data governance, and competition in high-tech industries.

I am eager to attend the NBER Innovation Research Boot Camp because it offers a unique opportunity to engage intensively with leading researchers working at the frontier of innovation economics. The program's emphasis on research design, model construction, and interaction across fields aligns closely with my goal of producing high-quality academic research. I am especially interested in learning from faculty and peers about best practices in studying technological change using both micro-level data and structural frameworks.

Participating in the Boot Camp would help me refine my existing projects and develop new research ideas at an early stage of my career. I believe that the feedback, mentorship, and collaborative environment of the program would be invaluable for shaping my dissertation and long-term research agenda. In turn, I hope to contribute actively to the Boot Camp community through my technical training, research experience, and strong interest in innovation and digital economics.

PRINCETON UNIVERSITY

Ernest Liu
Associate Professor of Economics
Department of Economics

February 12, 2026

Recommendation for Yifei Ren

Dear Committee,

I am writing this letter with my strong support for Yifei Ren's application to participate in the NBER Innovation Research Boot Camp 2026. Yifei is a very strong second-year economics PhD student at Princeton. She was originally a PhD student at Tsinghua University in China; she spent a year visiting Princeton and impressed me so much that I encouraged her to restart her PhD in Princeton. Since then, we coauthored a paper and have a few ongoing projects together. Innovation is one of her primary interests. She is technically capable and has very original ideas.

Yifei is very dedicated to academic research and is very active in the department. Based on the many excellent things I have heard about the Boot Camp from past participants, I believe Yifei would be an ideal participant of the program.

Please do not hesitate to contact me if you need additional information regarding Yifei.

Best regards,
Ernest Liu