Grace Chuan
Columbia University
gc2725@columbia.edu
973-818-8854

February 8, 2026

To: NBER Innovation Research Boot Camp

Dear Admissions Committee,
I am writing to apply for your summer bootcamp on the economics of innovation. Currently, I am a third-year economics PhD student interested in firm dynamics, macro-labor, macro-finance, and international trade. By attending this program, I hope to deepen my understanding of frontier research on innovation in economics and extend it to my own future research. Please find my application materials attached within this document.

Faculty Member Reference:
Conor A. Walsh
Assistant Professor
Columbia Business School – Business Economics Division
caw2226@columbia.edu

Thank you for your consideration of my application.

Sincerely,
Grace Chuan
PhD Student, Economics
Columbia University

Grace Chuan

665 W 130th St, New York, NY 10027 · gc2725@columbia.edu · https://www.linkedin.com/in/gracechuan/

Education

Columbia University, Department of Economics and Columbia Business School — New York, NY
Ph.D. Candidate in Economics — August 2023 - Present
M.A. in Economics — February 2025

Massachusetts Institute of Technology (MIT) — Cambridge, MA
B.S. in Computer Science, Economics, and Data Science and minor in Mathematics — June 2021

Research Interests

Macro-finance, firm dynamics, and international trade

Work and Industry Experience

Federal Reserve Board of Governors — Washington, D.C.
Senior Research Assistant in the Division of Financial Stability — July 2021 - July 2023

Federal Communications Commission (FCC) — Washington, D.C.
Economics and Technology Intern — June 2019 - August 2019

NERA Economic Consulting, Inc. — New York, NY
Anti-Trust Intern — January 2020

Credit Sights, Inc. — New York, NY
Municipal Bond Research Intern — June 2018- August 2018

Journal Publications

Contagion in Debt and Collateral Markets (with Jin-Wook Badalaw Chang)
Journal of Monetary Economics, 148, May 2024, [link]

Working Papers

Collateral Reuse and Financial Stability (with Jin-Wook Badalaw Chang)
FEDS Working Paper., May 2025, [link]

Works in Progress

Tariffs and Market Power (with Bo Cowgill, Andrea Prat, and Tommaso Valleti)

AI Disruption and Human Capital Accumulation (with Korok Dasgupta and Sanhitha Jugulum)

Presentations

July 2025: RISE Workshop at Waseda University, Advancing Economic Policy Tools for Modern Macroeconomic Challenges

Teaching Experience

Columbia University, Department of Economics
Money and Banking (Undergraduate) - Main Instructor, Rating: 4/5 May 2025 - July 2025

MIT, Department of Economics August 2021 - May 2022

1. Labor Economics (Graduate and Undergraduate) - Teaching Assistant
   Instructors: Professor Joshua Angrist and Professor Heather Sarsons
2. Econometrics (Graduate and Undergraduate) - Teaching Assistant
   Instructor: Professor Joshua Angrist

Non-Journal Publications

New Insights from N-CEN: Liquidity Management at Open-End Funds and Primary Market Concentration of ETFs
(with Fang Cai, Chaehee Shin, Kein Henry, and Tugkan Tuzun)
FEDS Notes. Washington: Board of Governors of the Federal Reserve System, January 2023, [link]

Tokenization: Overview and Financial Stability Implications
(with Francesca Carapella, Jacob Gerszten, Chelsea Hunter, Nathan Swem)
FEDS Working Paper. Washington: Board of Governors of the Federal Reserve System, September 2023, [link]

Completed Ph.D. courses:

- Macroeconomics I – Fall 2023
- Microeconomics I – Fall 2023
- Econometrics I – Fall 2023
- Macroeconomics II – Spring 2024
- Microeconomics II – Spring 2023
- Econometrics II – Spring 2023
- Applied Macrofinance – Fall 2024
- Frontiers of Macroeconomics – Fall 2024
- Political Economy – Fall 2024
- Industrial Organization – Fall 2024
- Topics in Industrial Organization – Spring 2025
- Advanced Macroeconomics – Spring 2025
- Topics in International Trade – Fall 2026

I am eager to attend the NBER Economics of Innovation Boot Camp to deepen my understanding of the theoretical and empirical tools used to study innovation-driven markets and to refine my own research agenda at the intersection of firm dynamics, labor markets, and technological change. My broader goal is to understand how micro-level responses to new technologies—by firms, workers, and institutions—aggregate into macroeconomic outcomes for productivity, inequality, and welfare, particularly in innovation-intensive sectors.

One of my current projects is joint work at an early stage, studying the impact of AI adoption on human capital accumulation and its implications for growth, welfare, and inequality. Recent work has begun to explore how AI's disruption of the allocation of tasks across occupations interacts with worker age and experience. These papers suggest that AI may be a seniority-biased technology that complements senior workers while displacing junior workers (Hosseini et al. 2025). In this context, we ask whether these declines in junior hiring affect human capital accumulation and workers' long-run employment trajectories. A key mechanism operates through the degree of substitutability between AI-affected workers across occupations and experience. In our framework, specialization generates asymmetries in substitutability across jobs. For instance, a displaced junior software engineer may be more easily substituted into lower-skill manual or general cognitive jobs than into highly specialized AI engineering roles that require substantial additional human capital investment. Because firms do not fully internalize workers' on-the-job human capital accumulation, reduced entry into high-skill occupations today may generate a future shortage of specialized workers, leading to productivity losses and slower growth.

In the past, I have also examined how micro-level firm interactions shape aggregate outcomes, with a particular focus on high-tech and innovation-intensive industries. In my second-year paper, I study how firms' simultaneous possession of labor market power and product market power can lead to strategic labor hoarding: firms hire more workers than they use in production in order to limit downstream competition. This mechanism is especially relevant in industries that rely on scarce, highly specialized talent where labor constraints are a central strategic consideration.

My work has been primarily focused on the behavior of firms and workers in face of technological change or within the context of high-tech markets. At the NBER Economics of Innovation Boot Camp, I am excited to learn more about the role of the public sector in fostering science, innovation, and growth. Understanding the economics of intellectual property, public R&D, and science policy would allow me to study the links between public-sector interventions and private-sector responses which are essential to innovation outcomes. Through interacting with a diverse array of experts and students from academia and policy, I expect the boot camp to directly inform my current projects and to shape future research.