Xugan Chen

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February 2, 2026

Dear Committee Members,

I am writing to apply for the NBER Innovation Research Boot Camp in July 2026. As a fourth-year Ph.D. student in financial economics at the Yale School of Management, I am eager to deepen my understanding and contribute to the field of innovation and its intersection with finance.

My research has focused on the intersection of innovation and finance, with a focus on how scientific and financial institutions shape innovative activity, firm growth, and economic development. The boot camp offers me a unique opportunity to broaden my knowledge and develop new ideas. I am particularly excited about the prospect of interacting with leading experts and fellow participants in this field.

Enclosed with this letter, you will find the following application materials:

1. A current curriculum vitae
2. A list of all current and completed Ph.D. courses
3. An essay that describes my research and the reasons for wanting to attend the boot camp

Additionally, you should be receiving a recommendation letter on my behalf directly from Song Ma, Professor of Finance and Entrepreneurship at the Yale School of Management (song.ma@yale.edu).

Thank you for your consideration.

Sincerely,
Xugan Chen

February 2026

Xugan Chen (陈栩淦)

199 Whitney Avenue Ph.D. Suite, New Haven, CT 06511

Email: xugan.chen@yale.edu | *Web:* https://www.xuganchen.com

EDUCATION

2022-Present **Yale School of Management**, New Haven, CT, USA
- Ph.D. in Financial Economics

2016-2020 **Zhejiang University**, Hangzhou, Zhejiang, China
- Chu Kochen Honors College
- B.S. in Mathematics and Applied Mathematics, with *Highest Honors*
- B.A. in Finance, with *Highest Honors*

2019 **Yale School of Management**, New Haven, CT, USA
- Visiting Undergraduate Researcher

WORKING PAPERS

[1] **"Banks' Image: Evidence from Advertising Videos"**, 2025
(with Allen Hu and Song Ma)

[2] **"Financing Risk and Startup Growth"**, 2025

[3] **"When Lenders Meet Venture Capitalists: Relationships in Venture Debt"**, 2025
(with Tianshu Lyu)

[4] **"The Economic Value of Science"**, 2024
(with Ernest Liu and Song Ma)

TEACHING EXPERIENCES

Yale School of Management

2024-2025 **Behavioral Finance**, Teaching Assistant for Professor Nicholas Barberis
- MBA/MMS course in Spring 2024; PhD course in Spring 2025

2024-2025 **Entrepreneurial Finance**, Teaching Assistant for Professor Song Ma
- MBA/EMBA/MMS course in Spring 2024, Summer 2024, Fall 2024

2024-2025 **Statistical Foundations**, Teaching Assistant for Professor Theis Jensen
- MBA/MMS course in Fall 2024, Fall 2025

2025 **Venture Capital and Private Equity**, Teaching Assistant for Professor Song Ma
- MBA/EMBA/MMS course in Fall 2025

CONFERENCES AND WORKSHOPS

Conferences and Seminars (including scheduled, * = by coauthors)

2026 AFA Poster Session, Revelio Labs Research Seminar, MFA × 2, EFA × 2, SWFA*, Columbia Private Equity Research Conference

2025 Young Scholars Finance Consortium*, HKU-TLV Summer Finance Conference*, Financial Intermediation in the 3rd Millennium: Perils and Pearls*, NBER Summer Institute (Big Data and High-Performance Computing for Financial Economics)*, FMA*, 2025 Community Banking Research Conference

Invited Workshops

2025 Summer School on Structural Estimation in Corporate Finance

2024 NBER Entrepreneurship Research Boot Camp

SCHOLARSHIPS AND FELLOWSHIPS

2026 Midwest Finance Association PhD Student Travel Grant

2025 American Finance Association Travel Grant

2022-2027 Ph.D. Fellowship, Yale University

2020 Outstanding Graduates of Zhejiang University (*Top 1%*), Zhejiang University

2017 National Scholarship (*Top 1%*), Ministry of Education, China
First-Class Scholarship for Outstanding Students, Zhejiang University

RESEARCH EXPERIENCES

2020-2022 **Pre-Doctoral Fellow**, Yale Economics / Tobin Center, Yale University

- Supervisors: Professors Barbara Biasi and Song Ma

2018-2020 **Undergraduate Research Training**, School of Economics, Zhejiang University

2018-2019 **Student Research Program**, School of Mathematical Sciences, Zhejiang University

SKILLS

Programming Python, Stata, R, SAS, SQL, MATLAB

Github https://github.com/xuganchen

List of Ph.D. Courses

Completed Ph.D. Courses

Yale University, Ph.D. in Financial Economics[1], 2022-Present

Spring 2024

- Corporate Finance (by Song Ma and Kelly Shue, Grade: H)
- Household Finance (by James Choi, Grade: HP)
- Financial Econometrics and Machine Learning (by Bryan Kelly, Grade: H)

Fall 2023

- Macro Finance (by Alp Simsek, Grade: H)
- Labor Economics (by Costas Meghir, Grade: HP)

Spring 2023

- Applied Empirical Methods (by Paul Goldsmith-Pinkham, Grade: H)
- Behavioral Finance (by Nicholas Barberis, Grade: H)
- Econometrics II (by Edward Vytlacil, Grade: H)
- General Economic Theory: Microeconomics II (by Johannes Horner and Ryota Iijima, Grade: HP)

Fall 2022

- Financial Economics I (by Stefano Giglio, Grade: H)
- Econometrics I (by Donald Andrews, Grade: H)
- General Economic Theory: Microeconomics I (by Larry Samuelson and Johannes Horner, Grade: HP)

[1] The grading system of Yale Graduate School of Arts and Sciences consists of Honors (H), High Pass (HP), Pass (P), and Fail (F).

Dear Committee Members,

I am a fourth-year Ph.D. student in Financial Economics at the Yale School of Management. My research sits at the intersection of innovation and finance, with a focus on how scientific and financial institutions shape the innovative activity and its real outcomes. I am applying to the NBER Innovation Research Boot Camp because it is the best venue to deepen my grounding in the economics of innovation and to engage with researchers whose work directly informs my agenda.

One of my current research projects, "The Economic Value of Science" (with Ernest Liu and Song Ma), explores the value of scientific discoveries for economic growth. Our goal is to quantify the value generated by science, understand the characteristics and dynamics of the fields that create it, and explore ways to unleash that value. We build an endogenous growth model that accommodates the innovation dynamics across various fields and value science through its full economic footprint, including knowledge spillovers and value creation in industry. Empirically, we combine global patents, academic publications, firm R&D expenditures, and scientific funding data. We construct a novel innovation network that captures knowledge flows across all industrial sectors and scientific fields by applying natural language processing to the full text of patents and scientific publications. This approach lets us characterize how scientific knowledge diffuses and how it maps into industrial innovation and growth over time, highlighting the long horizon of scientific impact.

A second pillar of my research examines how financing shapes innovation, especially for startups, where funding conditions are both volatile and first-order for innovative choices. In the paper "Financing Risk and Startup Growth," I study how financing risk, the forward-looking expectation of limited future funding availability, affects startups even absent binding current constraints. I develop a model of intertemporal investment under uncertainty and construct a novel text-based measure of financing risk from 4.1 million news articles. I then show that financing risk causally reduces innovation among recently funded startups, disproportionately cutting resource-intensive, exploratory, and novel innovation. In recent work, "When Lenders Meet Venture Capitalists: Relationships in Venture Debt" (with Tianshu Lyu), we study venture debt and show that lender-VC relationships shape contracting and shift post-deal innovation toward safer, more commercially salient projects, consistent with reduced information asymmetry. Together, these projects frame financing as an active determinant of the level and direction of innovation activity.

Looking ahead, I plan to study how breakthrough technologies reshape where firms innovate and the implications for productivity growth. The project asks how breakthroughs reorient innovation away from firms' existing knowledge stocks and how the resulting reallocation translates into aggregate growth, separating supply-side forces (e.g., changes in innovation costs and spillover propagation) from demand-side forces (e.g., changes in profitability through complementarity). I will develop a growth model of innovation direction that characterizes not only how much firms innovate, but also where they innovate in the technology space. Applying the framework to historical breakthrough episodes and modern AI, I will quantify how innovation reallocates after a breakthrough and the implied growth effects under plausible adoption and diffusion paths.

The boot camp is an ideal fit because it combines frontier content in innovation economics with a setting designed for intensive feedback and cross-field exchange. I am also excited about the opportunity to learn from and connect with participants working on related questions. I expect the program to sharpen how I connect finance-based questions to core innovation mechanisms and to accelerate my research agenda. I look forward to the possibility of participating in the boot camp.

Yale SCHOOL OF MANAGEMENT

SONG MA
Professor of Finance and Entrepreneurship

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courier
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Re: Recommendation Letter for Xugan Chen

Dear Admissions Committee,

I am writing to highly recommend Xugan Chen for the NBER Innovation Research Bootcamp. Xugan is a 4th-year PhD student at Yale University. He has broad interests in innovation economics, particularly its relationship to macroeconomic growth and development.

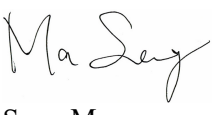
Xugan began as a predoctoral fellow at Yale under my supervision before continuing as a PhD student. Now I serve as the chair of Xugan's dissertation committee, and we meet regularly to talk about research. Over the years, I have been constantly impressed by his intellectual curiosity, ability to understand both theory and data, and work ethic. Xugan was instrumental in several of my research projects that were presented at NBER innovation meetings, like my work with Barbara Biasi on the education-innovation gap, and my work with Ernest Liu on the innovation network. Through the process, Xugan demonstrated his potential to contribute to the field of innovation economics.

He is now a coauthor of mine working on science and innovation related topics. He also began conducting independent research on innovation and universities.

I strongly encourage you to consider Xugan's application seriously: he has a genuine interest in the field of innovation; he has a ton of option value and the potential to do interesting work in this field; and he is a great colleague, and people around him like talking about research with him. Meanwhile, I think he will benefit a lot from learning from experts like you all and grow from this experience.

At last: thank you for organizing this wonderful camp again!

Sincerely,



Song Ma