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February 6, 2025
National Bureau of Economic Research

Dear Selection Committee,

I am writing to apply for the NBER Innovation Research Boot Camp 2025. As a researcher in the science of science and innovation, I am particularly interested in understanding global disparities in scientific knowledge transfer and how innovation spreads across different institutional and geographic contexts.

My primary motivation for attending the boot camp is to strengthen my theoretical and empirical understanding of innovation economics, particularly in how innovation policies shape economic and scientific outcomes globally. Attending this boot camp would be an invaluable opportunity to learn from leading scholars, as the work of Professors Pierre Azoulay and Heidi Williams largely influences my current research focus. This chance to engage with them and participate in the NBER Summer Institute Innovation Policy meeting would greatly benefit my current efforts to integrate more economic perspectives into my work.

I meet the eligibility criteria, having completed 2 years of PhD coursework in related fields including entrepreneurship, innovation, and science policy. My academic advisor, Professor Misha Teplitskiy (Assistant Professor at the University of Michigan School of Information) has agreed to provide a letter of recommendation on my behalf.

I am grateful for your consideration and look forward to the possibility of joining this research boot camp.

Sincerely,

Hong Chen

Research Statement

My research focuses on the science of science and innovation, with a particular emphasis on how technological, institutional, and social factors shape knowledge production and innovation. I study issues such as regional inequality, knowledge disparities, and technological barriers in science, aiming to understand how these factors shape innovation outcomes. My work integrates computational methods, causal inference, and large-scale data analysis to uncover mechanisms that drive disparities in scientific progress and to inform policies that promote more equitable and efficient innovation systems.

One of my recent projects examines how idea visibility differs across regions and how unequal access to knowledge influences researchers' publishing outcomes. By studying who successfully navigates the peer-review and resubmission process, my work provides empirical insights into how differential responses to rejection generate differential representation in not only published knowledge but also the "file drawer" of unpublished research.

Moving forward, my research will continue to examine global and regional patterns of innovation and scientific output, focusing on two key dimensions: (1) the impact of global talent flows on U.S. scientific innovation, and (2) the role of technology— specifically language tools—in shaping cross-country knowledge diffusion and innovation outcomes.

I have taken courses in entrepreneurship, public policy, and organizational studies for innovation-related studies. However, I have never had the chance to systematically learn the foundational theories and key perspectives that unify innovation as a distinct field of study. I have closely followed the work of almost every scholar listed here as a lecturer or panelist, particularly Pierre Azoulay and Heidi Williams, whose work has significantly shaped my research focus. The NBER Innovation Research Boot Camp is an ideal opportunity for me to formally engage with this field and connect with these leading scholars.

Additionally, I aim to integrate more economic perspectives into my work and engage more with the innovation literature—not only in the context of scientific innovation but also in technological advancements and policy implications. This boot camp would provide a crucial foundation for integrating these perspectives and advancing my research.

Hong CHEN

Contact Information

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Research Interests

Science of Science and Innovation, Computational Social Science, Natural Language Processing

Education

University of Michigan Ann Arbor, MI, USA 2022-Present
Ph.D., Information
Advisors: Prof. Misha Teplitskiy and Prof. David Jurgens

Carnegie Mellon University Pittsburgh, PA, USA 2019-2021
M.S., Electrical and Computer Engineering

Zhejiang University Hangzhou, Zhejiang, China 2015-2019
B.S., Mechatronic Engineering
Morningside Cultural China Scholar

Under Review & Revising

Geographical disparities in navigating rejection in science drive disparities in its file drawer
Hong Chen, Christopher Rider, David Jurgens, Misha Teplitskiy
Media Coverage: Nature

Engaging with the Past? Analyzing Citation Fidelity and Information Loss in Research
Hong Chen, Misha Teplitskiy, David Jurgens

Science resilience hinges on persistent collaboration
Hong Chen*, Yi Bu*, Lu Zhong, Caifan (Fan) Du, Eric Meyer, Ying Ding, Jianxi Gao (*Equal Contributions)

Selected Publications

Causally modeling the linguistic and social factors that predict email response
Yinuo Xu*, **Hong Chen***, Sushrita Rakshit*, Aparna Ananthasubramaniam*, Omkar Yadav*, Mingqian Zheng*, Michael Jiang*, Lechen Zhang*, Bowen Yi*, Kenan Alkiek*, Abraham Israeli*, Bangzhao Shu*, Hua Shen*, Jiaxin Pei*, Haotian Zhang*, Miriam Schirmer*, David Jurgens (*Equal Contributions)
NAACL 2025

Exploring Linguistic Style Matching in Online Communities: The Role of Social Context and Conversation Dynamics
Aparna Ananthasubramaniam*, **Hong Chen***, Jason Yan*, Kenan Alkiek*, Jiaxin Pei*, Agrima Seth*, Lavinia Dunagan*, Minje Choi*, Benjamin Litterer*, and David Jurgens (*Equal Contributions)
The 1st Workshop on Social Influence in Conversations, ACL 2023. (Best Paper)

Further divided gender gaps in research productivity and collaboration during the COVID-19 pandemic: Evidence from coronavirus-related literature
Liu, Meijun, Ning Zhang, Xiao Hu, Ajay Jaiswal, Jian Xu, **Hong Chen**, Ying Ding, and Yi Bu
Journal of Informetrics. 2022.

Teaching

Fall 2024 SI 670: Applied Machine Learning
Teaching with Grant Schoenebeck

Winter 2025 SI 507: Intermediate Programming
Teaching Assistant with Bobby Madamanchi

Research Experiences

Discovery Lab & Blablablab Lab , University of Michigan 2022-Present
Graduate Research Assistant with Misha Teplitskiy and David Jurgens

Department of Information Management, Peking University 2021-2022
Research Assistant with Yi Bu and Ying Ding

Human-Computer Interaction Institute, Carnegie Mellon University 2020-2021
Graduate Research Assistant with Hirokazu Shirado

Honors and Awards

Rackham Graduate Student Research Grant	2025
ICSSI Travel Award	2023-2024
UMSI Travel Award	2023-2024
Metascience 2023 Conference Travel Award, Center for Open Science	2023
First-Class Scholarship for Outstanding Merits	2019
First-Class Academic Scholarship of Cao Qizhen	2018-2019
Morningside Cultural China Scholarship	2018
First-class Undergraduate Academic Scholarship	2017-2018

Selected Courses

PhD (completed)
Entrepreneurship Research Seminar
Introduction to Science and Technology Policy Analysis
Experimental Methods
Research Seminar in Science of Science
Theory of Social and Technological Networks
Statistical Methods in Political Research
Research Methods
Doctoral Foundations Seminar

Conference and Workshops

2024
Strategy Science Doctoral Workshop (UM ROSS); 3rd International Conference on Science of Science and Innovation (ICSSI, DC)

2023
TOM PhD Summer School in Computational Organization Science (HBS); The Summer Institutes in Computational Social Science (SICSS, NYU); MetaScience Coference (DC); International Conference on Computational Social Science

Service

Reviewer
ACL Rolling Review; METSTI2024

Organizer
UMSI Computational Social Science Lunchtime Working Group 2024-2025

Skills and Languages

Programming skills: Python, R, Matlab, C, LaTeX
Languages: English(fluent), Chinese(native)

SCHOOL OF INFORMATION
UNIVERSITY OF MICHIGAN

Information changes everything.

Dear NBER selection committee,

I write to give my *strongest recommendation* to **Hong Chen**, who is applying for the NBER Innovation Research Boot Camp. I am Assistant Professor at the School of Information and the University of Michigan, where my research focuses on scientific innovation. Hong is now in the 3rd year of his PhD, co-advised by David Jurgens, who is a computer scientist and an NLP expert, and myself. Over that time we have worked with Hong on several projects, so I have gotten a good sense of his talents and interests. Hong came to Michigan with very good technical training, having received computing degrees from Zhejiang University and CMU. At Michigan, he has complemented that training with methods in econometrics and experimental design (including experiments with social networks). So, from a technical perspective, he is already quite sophisticated as a computational social scientist. Substantively, Hong has been working in scientific innovation, focusing on scientists' responses to rejection and scalable methods of measuring citation quality. His first paper is now under review at *PNAS Nexus*, and was featured by Nature (link). Hong led this project, deployed a variety of quantitative techniques (panel regression and ML) and a survey, and developed as a writer and social scientist. He will benefit a lot from exposure to the economics of innovation literature, and that will have long-term benefits for his scholarship and the community.

Please do not hesitate to contact me if I can be of more help,



Misha Teplitskiy
Assistant Professor
School of Information
University of Michigan