RAN ZHUO

CONTACT INFORMATION

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PERSONAL INFORMATION

Nationality: Chinese
Gender: female

GRADUATE STUDIES

Harvard University, Cambridge, MA August 2017 – present
Ph.D. Candidate in Business Economics
Fields: Innovation, Industrial Organization
Graduate-level coursework: microeconomic theory (2 courses), macroeconomic theory (2 courses), econometrics (4 courses, including time series analysis and advanced topics in econometrics), industrial organization (2 courses), economics of innovation and digitization (2 courses).

UNDERGRADUATE STUDIES

Dartmouth College, Hanover, NH August 2013 – June 2017
B.A., summa cum laude, Economics with High Honors and Mathematics with High Honors, class valedictorian

RESEARCH INTERESTS RELATED TO AI

My research interests are innovation and industrial organization, especially in the context of digitization. I strive to understand the catalysts for innovation and the welfare impact of new technologies. I am also interested in a range of new policy questions that emerge due to diffusion of new technologies. AI, given its promise as a general purpose technology and its wide range of potential applications, naturally attracts my attention. I have recently investigated the impact of AI-based automation tools on the innovation process. Exploiting random successes of NIH-funded experiments that generated input data for AI tools used in protein research, I studied the impact of employing these tools on the productivity of scientific research and commercial innovation on the protein level. My other ongoing research projects look into the determinants of firms' choices between open source and proprietary web servers, the impact of the GDPR on the growth and interconnectedness of the Internet in Europe, and pricing behavior of online marketplaces. AI holds promise to transform many aspects of the digital space and regulation implications for such changes abound. As a budding researcher in the economics of innovation and digitization, I am therefore very curious about these implications and eager to learn from leading scholars how to approach AI-related research questions.

WORKS IN PROGRESS

Productivity and Quality of R&D: Evidence from Structural Biology Labs.

Technology Turnover in the Semiconductor Manufacturing Industry.

The Impact of Automation on Innovation: Evidence from Protein Research.

How Well Does Knowledge Spill over across Lines of Scientific Research?

Firm Investment in Web Servers, with Raviv Murciano-Goroff and Shane Greenstein.

WORKING PAPERS

"Unsung Software and Veiled Value Creation: Illustrations from Server Software Usage," with Raviv Murciano-Goroff and Shane Greenstein.

"Sniff Tests in Economics: Aggregate Distribution of Their Probability Values and Implications for Publication Bias," with Christopher Snyder. NBER Working Paper No. 25058.

"An Evolutionary Game-Theoretical Model of Disease Transmission with Imperfect Vaccination in Social Networks," with Feng Fu and Tommy Khoo.

JOURNAL PUBLICATIONS

"The Impact of the General Data Protection Regulation on Internet Interconnection," with Bradley Huffaker, kc claffy and Shane Greenstein, *Telecommunications Policy*, March 2021, vol. 45, no. 2, 102083.

"Do Low-Price Guarantees Guarantee Low Prices? Evidence from Competition between Amazon and Big-Box Stores," *Journal of Industrial Economics*, December 2017, vol. 65, no. 4, pp. 719–738.

TEACHING EXPERIENCE

2021 Spring	Econ 1123 Introduction to Econometrics (undergraduate), teaching fellow
2019 Fall	Econ 2120: Principles of Econometrics (1st year graduate), tutor

PRESENTATIONS

2021	TPRC48 main conference, American University (online due to COVID-19)
2020	Workshop on Internet Economics, CAIDA, UCSD (online due to COVID-19)
	WICK#8, Collegio Carlo Alberto, Turin, Italy (online due to COVID-19)
	IIOC regular session, Drexel University (canceled due to COVID-19)
2018	Berkeley Initiative for Transparency in the Social Sciences, UC Berkeley
2017	Department of Economics, Dartmouth College
	Department of Mathematics, Dartmouth College
2016	Columbia Business School
	Department of Mathematics Poster Session, Dartmouth College
2015	The Society for Mathematical Biology Annual Meeting, Atlanta, GA
	Department of Mathematics Poster Session, Dartmouth College
	Karen E. Wetterhahn Science Symposium, Dartmouth College

COMPUTER SKILLS

Stata, Python, Matlab, R, Java, LaTeX

OTHER PUBLICATIONS

Zhuo, Ran. 2015. "Ghost in the Shell," Hanover: Dartmouth College Library Collection; Dunedin: University of Otago, Special Collections. Letterpress print.

Zhuo, Ran. 2012. *John's Adventure in Englishland*. Hangzhou: Zhejiang Youth and Children's Publishing House.