Yixuan Max Wang

7W Uris, Colubmia Business School, 3022 Broadway, New York, NY 10027
maxwang@gsb.columbia.edu | 857-529-2673 | www.ymaxwang.com

EDUCATION

Columbia Business School, Columbia University — New York, NY
Ph.D., Candidate in Management – Strategy Track — 2024 (*expected*)

Graduate School of Arts and Sciences, Columbia University — New York, NY
M.A., Economics — 2016

Rutgers University — New Brunswick, NJ
B.A., Mathematics, Economics — 2015

WORKING PAPERS

- Alcacer J, et al. (2021) Relay Experiments
- Guzman J, Wang YM (2021) Measuring the Markets for Acquisitions
- Perotte R, Wang YM (2021) Health care production and management in hospitals
- Kogut B, Wang YM (2021) Knowledge Network and Organizational Structure
- Bloom N, et al. (2018) Does Management Matter? Evidence from 11 Countries. *Management and Organizational Practices Survey*, U.S. Census Bureau Working Project.

COMPLETED PHD COURSES

Columbia Business School: Strategy I, II; Organizational Theory I, II; Organizational Behavior I; Research Methods.
Columbia Department of Statistics: Applied Statistics I.
Columbia Department of Economics: Microeconomic Theory I, II, III; Macroeconomic Theory I, II; Econometric Theory I, II, III; Mathematical Methods for Economics; Public Economics.
Rutgers Department of Mathematics: Theory in Linear Programming; Probability Theory and Combinatorics; Advanced Calculus in Engineering.

FELLOWSHIPS AND GRANTS

Paul and Sandra Montrone Doctoral Fellowship — 2019-2021
Columbia Business School Graduate Research Fellowship — 2019-2021

CONFERENCE, PRESENTATIONS AND INVITED WORKSHOPS

2021 AI in Strategy workshop, Center for the Future of Management, NYU Stern, New York, NY
2020 Columbia DSI Financial & Business Analytics Center Poster Session, New York, NY
2020 Empirical Management Conference, Ithaca, NY
2020 NBER Economics of Artificial Intelligence Conference, Cambridge, MA
2019 Empirical Management Conference, Washington, D.C.
2018 Empirical Management Conference, Boston, MA.

OTHERS

Programming Language — R, Python, Matlab, Unix Shell
Software & Tools — Stata, Maple, Latex, SQL, GitHub
Languages — English and Chinese

REFERENCES

Bruce Kogut
bk2263@gsb.columbia.edu
212-854-9050

Jorge Guzman
jag2367@gsb.columbia.edu
212-854-2820

Raffaella Sadun
rsadun@hbs.edu
617-495-6190

Max Wang
7W Uris Hall, Columbia Business School, 3022 Broadway, New York, NY 10027
+1(857)529-2673
maxwang@gsb.columbia.edu

Mar 21, 2021

The National Bureau of Economic Research

NBER Entrepreneurship Research Boot Camp 2021

Dear Admission Committee:

My name is Yixuan (Max) Wang. I am a second year PhD student in Management-Strategy at Columbia Business School, Columbia University.

My research area is in the intersection of economics and management, where I am particularly interested in the interactions among entrepreneurial decision, organizational structure and market efficiency. This bootcamp offers an unparallel opportunity for me to be exposed to the frontier and expertise in my research area, such as but not limited to Stern and Lerner on startup strategy, Bloom and Haltiwanger on productivity differentiation and its driving forces, and Bernstein and Kerr on entrepreneurial ecology.

My application package includes this cover letter, a most recent curriculum vitae, as well as a brief essay describing my recent and future research directions and how they can benefit from the bootcamp. Information about my references are listed below at the end of the page. Thank you for your time and I eagerly look forward to hearing from the program.

Sincerely,

Max Wang

Jorge Guzman
711 Uris Hall
Columbia Business School
3022 Broadway, New York, NY 10027
jag2367@columbia.edu

Raffaella Sadun
Morgan Hall 215
Soldiers Field Road, Boston, MA 02163
rsadun@hbs.edu

In this essay, I will briefly summarize my past research experience, current projects and future directions in the context of how they posit me as a candidate to the NBER bootcamp.

The first reason that supports my candidacy is the overlaps I have in research with the speakers of the bootcamp. In particular, with Nick Bloom, I have worked on the managerial performances of firms and cross-national heterogeneity during my research assistantship under Raffaella Sadun. Meanwhile, since the beginning of my doctoral program, I have had the opportunity to coauthor with Jorge Guzman on projects that extend Scott Stern's earlier work on startup ecosystem. Both Professor Sadun and Professor Guzman are my letter writers in this application. Therefore, I am familiar with the works done by the speakers in the series, which can help me more quickly integrate into the bootcamp and intellectually interact with the speakers and my cohort.

My current research has two arms. First, as aforementioned, I am studying entrepreneurial ecosystems under Guzman with a focus on the measurement of startup performance and local market efficiency. Using data from the Small Business Innovation Research (SBIR), we seek to understand the characteristics of startup companies who succeed through mergers and acquisitions. By implementing a novel machine learning approach, we are able to break down the details of innovative projects and use them to predict the underlying `acquirability' of startups. We find some preliminary evidence suggesting a causal relationship between firms' acquirability and where they come from (e.g., the size and average startup quality of their local innovation ecosystems). This pipeline of my research touches upon the subareas of innovation and economic geography within the field of entrepreneurial economics, where the speakers in this bootcamp contribute densely.

My second research focus is on the relationship between organizational structure and performance. The question I pose at the moment is about the tradeoffs between hierarchical and flatter organizational structures, and I study them in the contexts of management and innovation. In particular, existing literature examines intensively the benefits of different structural forms subject to their varying costs. Little attention is attributed to the underlying mechanism that driving these differences, however. My research intends to fill this gap by treating structures as means to build networks among people. I believe understanding this puzzle helps address the fundamental question of why entrepreneurs succeed or fail as organizations, while it can also have policy implications. Because most research tapping on this type of questions are theoretical,

I try to follow the tradition while also supplement it with simulation results. Preliminary evidence from a combinatorial model confirms existing findings such as more targeted innovations under hierarchies and more radical innovations under flat structures. This branch of my research is guided by my advisors at Columbia. It is inspired by the works done by the speakers of this bootcamp on topics such as who innovate and where they are located.

My future research direction will likely center around entrepreneurial strategy and innovations. In particular, I am always passionate towards the differential performance of individuals, firms and non-market organizations. Shai Bernstein's research on public firms' innovation dynamic clearly have strong implications in this area, and it would be great to listen to what he has to say given we are in the middle of an economic shock caused by the pandemic. While my research interest is influenced by the "knowledge-based view" of the firm, I tend to think of innovations as processes of people creating knowledge and ideas. Bill Kerr's work on human capital and knowledge networks shed lights on this school of thinking. It must be exciting to learn about his new research findings in migration and economic clustering. Without any doubt, there are more ways than I can imagine that how my future research can benefit from the opportunities offered by the bootcamp.

The brevity of this essay prevents me from fully conveying my eagerness to join the NBER Entrepreneurship bootcamp. Nevertheless, I am hopeful the reasoning I present serves to enhance my candidacy. In the end, I look forward to hearing back from the program soon.

Columbia Business School
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Jorge Guzman
Assistant Professor of Management
www.jorgeguzman.co

Re: **Recommendation letter for Max Wang at the NBER Entrepreneurship Boot Camp**

Dear colleagues,

Max Wang, a 2nd year PhD student at the Columbia Business School Management Division, is applying to the NBER Entrepreneurship Boot Camp this summer, and asked me to write him a recommendation letter. I've known Max for the two years he has been in our program, and I am the faculty he works closest with. Even though Max has been mostly focused on his core coursework so far, he has shown several indications of promise, and I feel being part of the NBER boot camp at this juncture would help him advance his interests and give him direction, ultimately providing a good foundation to succeed as a budding entrepreneurship scholar.

Allow me to give you a sense of his possibilities by telling you a little bit about Max.

Max came to Columbia after two years as an RA working for the World Management Survey team with Rafaella Sadun, Nick Bloom, and John van Reenen. He also had a prior one-year stint in the economics PhD at Columbia, and had served as an RA for Juan Alcacer. Thus, he understands well the innovation and entrepreneurship community and seems clear that he wants to be part of it in the future. Overall, my understanding from these faculty is that he was an outstanding collaborator—and he came strongly recommended by them--with meaningful promise. I continue to see this promise in his work.

Max is currently working on the early stages of two projects. The first project is a collaboration with me which is preliminarily titled Measuring the Market for Acquisitions. The idea is to develop systematic measurements of the differential likelihood of individual firms to be acquired (or not) and the locational characteristics that vary this likelihood or the residual location effect. Max has been developing some useful machine learning models to estimate the underlying 'acquirability' of firms, and conversely the residual differences across locations. He has been excited about the idea, and developed new skills in the process. Even though the project is still in its early stages (and the exact application is not defined), I think it is a great project with potential to be applied to some key questions of entrepreneurial strategy.

Max's second project is a project with Bruce Kogut on organizational design and its role in mediating company innovation and internal product creation. The idea of how organizational hierarchy shapes innovation is a long-standing question in innovation and organization economics. I am not deeply embedded in this paper, but my sense is that it represents a sort of interesting ideas which may ultimately have potential.

While he has a passion for the area of entrepreneurship, Max has lacked a formal class on this topc at Columbia, or an opportunity to see consistent top research. If accepted, I think the boot camp may be quite useful in shaping his understanding of the field, much like they have also been for Jean Oh, a student I advise who was in the boot camp last year.

Thank you so much for considering her application. If you have any questions, please don't hesitate to write to me.

Jorge Guzman



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RAFFAELLA SADUN |
PROFESSOR OF BUSINESS ADMINISTRATION

Boston, March 29, 2021

Recommendation Letter for Yixuan Wang (Max)

Dear David:

I am writing to support Yiuxuan's (Max) application to the NBER Entrepreneurship Bootcamp.

I have known Max since July 2017, when he started working for me as a Research Assistant. Max is now a second-year PhD candidate in the Management-Strategy Program at Columbia Business School.

Max is a fantastic candidate for the bootcamp, for several reasons. First, the topics explored in the bootcamp are a perfect fit for his research interests. He is currently studying entrepreneurial ecosystems with Jorge Guzman, and he working with me on a cross country project using micro Census data on management practices. He is also developing solo-projects at the intersection between organizational structure and innovation, and is extremely interested in exploring new ways to measure typically unobserved firm-level determinants of performance, using both new data and new empirical methodologies. He is at a point in his PhD studies in which he would benefit immensely from being exposed to rigorous economics research in these areas. The Bootcamp will give him tools to discipline his interests into a successful job market paper.

Second, I do not know any student that is more passionate than Max in learning about these topics. Since his early days as my RA, he has always been one of the most enthusiastic, curious and hard-working

student I have worked with. I know that, if accepted, Max will treasure every class and interaction with students and professors he will be exposed to.

Finally, Max will no doubt be a wonderful contributor to the broader community that is built through the Bootcamp. I still work with him, and I have seen him interacting with my other RAs and PhD students. He has always been a true team-player, giving advice generously and listening to others with respect. He will be a fantastic addition to the Bootcamp community.

Based on all these considerations, my sense is that Max will be a great candidate for the bootcamp. Please do not hesitate to contact me should you need any additional information.

Yours faithfully,

Raffaella Sadun 
Professor of Business Administration, Harvard Business School