

Pengyu Qian

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EDUCATION

Graduate School of Business, Columbia University, New York, NY

Ph.D. in Operations Research (*Advisor*: Yash Kanoria)

2015 - 2021 (expected)

Peking University, China

B.Sc. in Mathematics

2011 - 2015

RESEARCH INTERESTS

My research studies networked marketplaces with an emphasis on online decision-making in such marketplaces, using tools from applied probability and modern optimization. I am interested in foundational theoretical models motivated by problems in revenue management and pricing, and matching markets. My research emphasizes algorithms/mechanisms that not only have good theoretical guarantees, but also are simple, robust, and hence practical for real-world systems.

PUBLICATIONS

4. **Price Discovery and Efficiency in Waiting Lists: A Connection to Stochastic Gradient Descent**

- Journal version in preparation (with Itai Ashlagi, Jacob Leshno, and Amin Saberi).
- An earlier version appeared in *ACM Conference on Economics and Computation (EC '20)*.

3. **Which Random Matching Markets Exhibit a Stark Effect of Competition?**

- To be submitted to *Operations Research* (with Yash Kanoria and Seungki Min).
- An earlier version will appear in *ACM-SIAM Symposium on Discrete Algorithms (SODA '21)*.

2. **Blind Dynamic Resource Allocation in Closed Networks via Mirror Backpressure**

- Under review at *Management Science* (with Yash Kanoria).
- An earlier version appeared in *ACM Conference on Economics and Computation (EC '20)*.

1. **Dynamic Assignment Control of a Closed Queueing Network under Complete Resource Pooling**

- Major revision submitted to *Operations Research* (with Siddhartha Baneerjee and Yash Kanoria).
- An earlier version appeared in *ACM SIGMETRICS '18*.

HONORS AND AWARDS

Deming Doctoral Research Fellowship 2018

The Paul and Sandra Montrone Doctoral Fellowship 2017

Doctoral Fellowship, Columbia Business School 2015-2021

First Prize 'Mingde' Scholarship (4 year full scholarship) 2011-2015

Ranked 1/300,000 at the National College Entrance Exam in Guangdong Province, China 2011

TEACHING EXPERIENCE

Teaching Assistant, *Columbia GSB*

B5101: Business Analytics (EMBA Core) Spring 2019

B6100: Managerial Statistics (MBA Core) Fall 2018

B6100: Managerial Statistics (MBA Core) Spring 2018

B9119: Foundations of Stochastic Modeling (PhD) Spring 2017

B6100: Managerial Statistics (MBA Core) Fall 2016

INVITED TALKS & PRESENTATIONS

Price Discovery and Efficiency in Waiting Lists: A Connection to Stochastic Gradient Descent

ACM Conference on Economics and Computation (EC) 2020

Blind Dynamic Resource Allocation in Closed Networks via Mirror Backpressure

Kellogg-Wharton OM Workshop 2020

ACM Conference on Economics and Computation (EC) 2020

INFORMS Annual Meeting 2019

INFORMS Applied Probability Society Conference 2019

MSOM Annual Conference 2019

ACM Conference on Economics and Computation (EC) Tutorial 2019

Marketplace Innovation Workshop 2019

Dynamic Assignment Control of a Closed Queueing Network under Complete Resource Pooling

INFORMS Applied Probability Society Conference 2019

Information Theory and Applications Workshop (ITA), San Diego, CA 2019

INFORMS Annual Meeting 2017, 2018

MSOM Annual Conference 2018

Marketplace Innovation Workshop 2018

ACM SIGMETRICS Conference 2018

PROFESSIONAL SERVICE

Reviewer for *Operations Research*, *Management Science*, *Mathematics of Operations Research*, *Stochastic Systems* journals, and *ACM Conference on Economics and Computation (EC)*.

REFERENCES

Yash Kanoria (advisor)
Sidney Taurel Associate Professor
Columbia Business School
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Omar Besbes
Vikram S. Pandit Professor
Columbia Business School
obesbes@columbia.edu

Itai Ashlagi
Associate Professor
Stanford University, Dept. of MS&E
iashlagi@stanford.edu

Siddhartha Banerjee
Assistant Professor
Cornell University, School of ORIE
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