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 an Computation* (*EC '20*).

3. **Which Random Matching Markets Exhibit a Stark Effect of Competition?**
   - Under review (with Yash Kanoria and Seungki Min).

2. **Blind Dynamic Resource Allocation in Closed Networks via Mirror Backpressure**
   - Under review (with Yash Kanoria).
   - An earlier version appeared in *ACM Conference on Economics an 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
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Omar Besbes
Vikram S. Pandit Professor
Columbia Business School
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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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