Xiao Lei

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Research Interests online marketplaces, revenue management and pricing, video game analytics, social operations management, customer choice modelling

EDUCATION

### Columbia University

New York, NY

Ph.D. Candidate in Operations Research

(expected) Jun 2022

• Advisor: Adam Elmachtoub

M.S. in Operations Research

Feb 2018

### University of International Business and Economics

Beijing, China

B.S. in Financial Engineering

Jun 2016

RESEARCH PAPERS "Loot Box Pricing and Design", with Ningyuan Chen, Adam Elmachtoub and Michael Hamilton. Management Science (2021).

- Third Prize, Chinese Scholars Association for Management Science and Engineering (CSAMSE) Best Paper Award 2021.
- First Place, 2019 IBM Best Student Paper Award (INFORMS Service Science).
- Accepted to The 21th ACM Conference on Economics and Computation (EC'20).
- Invited to present at the Federal Trade Commission (FTC) Workshop on Consumer Issues Related to Loot Boxes, 2019 (one of four research papers selected).

"Price Discrimination with Fairness Constraints", with Maxime Cohen and Adam Elmachtoub. Management Science, forthcoming.

- Spotlight presentation at INFORMS RMP Conference 2021.
- Accepted to The ACM Conference on Fairness, Accountability, and Transparency (FAccT'21).
- Oral presentation at The 4th Workshop on Mechanism Design for Social Good (MD4SG'20).

"Herding, Learning and Incentives for Online Reviews", with Rajeev Kohli and Yeqing Zhou. Rejected with invitation to resubmit at MSOM.

"Matchmaking Strategies for Maximizing Player Engagement in Video Games", with Mingliu Chen and Adam Elmachtoub. Major revision at Operations Research.

### PRE-PHD **PUBLICATIONS**

"Pricing of Reusable Resources under Ambiguous Distributions of Demand and Service Time with Emerging Applications", joint with Vinh Xuan Doan and Sigian Shen. European Journal of Operational Research (2020).

"Dynamic Pricing and Learning with Competition: Insights from the Dynamic Pricing Challenge at the 2017 INFORMS RM & Pricing Conference", with Ruben van de Geer, Arnoud V. den Boer, Christopher Bayliss, Christine S. M. Currie, Andria Ellina, Malte Esders, Alwin Haensel, Kyle D. S. Maclean, Antonio Martinez-Sykora, Asbjørn Nilsen Riseth, Fredrik Ødegaard and Simos Zachariades. Journal of Revenue and Pricing Management (2019).

"Stochastic Maximum Flow Interdiction Problems under Heterogeneous Risk Preferences", with Siqian Shen and Yongjia Song. *Computers & Operations Research* (2018).

### Honors and Awards

Third Prize, Chinese Scholars Association for Management Science and Engineering (CSAMSE) Best Paper Award, 2021

Cheung-Kong Innovation Doctoral Fellowship (for research in new economy), 2021

Columbia Deming Doctoral Fellowship (for data-driven research), 2020

First Place, IBM Best Student Paper Award (INFORMS Service Science), 2019

First Place, Dynamic Pricing Challenge of INFORMS RMP Conference, 2017

### TEACHING EXPERIENCE

### Columbia University

Instructor

• Graph Theory by Example, Columbia Science Honors Program: Fall 2020, Spring 2021

### Teaching Assistant

- IEOR 4701 Stochastic Models for Financial Engineering (core course for MS in Financial Engineering): Spring 2021
- IEOR 4650 Business Analytics (core course for MS in Business Analytics): Fall 2020
- IEOR 4004 Optimization Models and Methods (core course for MS in Operations Research): Fall 2018.
- DROM 8816 Quantitative Pricing and Revenue Analytics (elective for MBA): Fall 2018.

### Professional Experience

# Activision Blizzard Data Science Intern

New York, NY Summer 2020

## **KPMG** Consulting

Beijing, China

Consultant

Summer 2018

### ACADEMIC SERVICES

Ad-hoc reviewer for Management Science, Operations Research, Manufacturing & Service Operations Management, European Journal of Operational Research.

Program Committee Member for Fairness, Accountability, and Transparency (FAccT) (2022).

### INVITED TALKS

### Matchmaking Strategies for Maximizing Player Engagement in Video Games

• Riot Games, virtual	Nov 2021
• Activision, Santa Monica, CA	Nov 2021
• NetEase Games (Thunder Fire UX Research Center), Hangzhou, China	Jul 2021
• ByteDance (Nuverse Games), Beijing, China	May 2021

### Loot Box Pricing and Design

• CSAMSE Annual Conference	Jul 2021
• INFORMS Revenue Management & Pricing Conference	Jun 2021
• MSOM Annual Conference	Jun 2021
• Trans-Atlantic Doctoral Conference, London Business School	May 2021
• The 21th ACM Conference on Economics and Computation (EC'20)	Jul 2020
• Tsinghua University, School of Economics and Management, Beijing, China	Dec 2019

• INFORMS Annual Conference, Seattle, WA	Oct 2019
Price Discrimination with Fairness Constraints	
• INFORMS Revenue Management & Pricing Conference	$\mathrm{Jun}\ 2021$
• MSOM Annual Conference	$\mathrm{Jun}\ 2021$
• POMS Annual Conference	Apr 2021
• Tsinghua University, School of Economics and Management, Beijing, China	Mar 2021
• The 4th ACM Conference on Fairness, Accountability, and Transparency (FAccT'21)	Mar 2021
• INFORMS Annual Conference, virtual	Nov 2020
• The 4th Workshop on Mechanism Design for Social Good (MD4SG'20)	Aug 2020
• INFORMS Annual Conference, Seattle, WA	Oct 2019
A Choice Modelling Framework for Service Time Windows	
• INFORMS Annual Conference, Seattle, WA	Oct 2019
• MSOM Annual Conference, Singapore	Jul 2019
• INFORMS Revenue Management & Pricing Conference, Palo Alto, CA	Jun 2019
	May 2019
• INFORMS Annual Conference, Phoenix, AZ	Nov 2018
• Scientific Computing: R, Python, Matlab.	
• Software and Tools: Gurobi, CPLEX.	
• Others: Latex, HTML, SQL.	

### References

COMPUTER SKILLS

### Omar Besbes

Vikram S. Pandit Professor Columbia University ob2105@gsb.columbia.edu

### Maxime Cohen

Professor

McGill University maxime.cohen@mcgill.ca

### Ningyuan Chen

Assistant Professor University of Toronto, Mississauga ningyuan.chen@utoronto.ca

### Adam Elmachtoub

Associate Professor Columbia University adam@ieor.columbia.edu