Qinyi Chen

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Education

Massachusetts Institute of Technology (MIT), Cambridge, MA 09/2020-05/2025 (Expected)
Ph.D. candidate in Operations Research, GPA: 5.0/5.0. Advisor: Prof. Negin Golrezaei
Research focus: Online Learning and Optimization, Fairness in AI/ML, Game Theory and Auction Theory, Approximation Algorithms, Revenue Management, Online Platforms and Marketplaces.

University of California, Los Angeles (UCLA), Los Angeles, CA 09/2016-03/2020
B.S. in Applied Mathematics, Specialization in Computing, GPA: 3.99/4.00.
Summa Cum Laude, College Honors, Departmental Honors, Phi Beta Kappa.

Research Experience

Massachusetts Institute of Technology (MIT), Cambridge, MA 09/2020-Present
Graduate Research Assistant, advised by Prof. Negin Golrezaei

- Designed and implemented fair and efficient online learning and optimization algorithms for various applications in online platforms/marketplaces, including multi-sided recommendation systems, assortment optimization, and ad bidding and pricing. Provided near-optimal theoretical guarantees to the proposed algorithms and validated their strength via real-world case studies.

University of California, Los Angeles (UCLA), Los Angeles, CA 04/2018-08/2020
Undergraduate Research Assistant, advised by Prof. Andrea Bertozzi, Prof. Mason Porter

- Conducted research on (i) devising subgraph matching algorithms on multiplex networks; (ii) formulating continuous-time SIR model on tie-decay networks; (iii) developing learning and optimization algorithms for online resource allocation. Research culminated in 3 journal publications and 2 conference publications.

Work Experience

eBay Inc., San Jose, CA 06/2023-08/2023
Applied Researcher Intern, Search & Monetization

- Developed innovative ad bidding and budget pacing algorithms for eBay's Promoted Listings Advanced (PLA) sponsored search program, which increased impressions/clicks received by PLA campaigns, elevated system smoothness, and maintained platform's revenue. This work is currently prepared for publication.

Publications & Preprints

8. "*Interpolating Item and User Fairness in Recommendation Systems*." **Q. Chen**, J.C.N. Liang, N. Golrezaei, and D. Bouneffouf, submitted. Preliminary version available at Arxiv: https://arxiv.org/abs/2306.10050.

7. "*Fair Assortment Planning*." **Q. Chen**, N. Golrezaei, and F. Susan, under review at Management Science. Preprint available at Arxiv: https://arxiv.org/abs/2208.07341.

- Accepted at 2022 Revenue Management & Pricing Conference, Spotlight Talk
- Accepted at 2022 MSOM Service Management SIG Conference (acceptance rate: 12%)
- Finalist, INFORMS IBM Service Science Best Student Paper Award
- Finalist, INFORMS Social Media Analytics Best Student Paper Competition
- Honorable Mention, INFORMS Minority Issue Forum Student Poster Competition

6. "*Non-Stationary Bandits with Auto-Regressive Temporal Dependency*." **Q. Chen**, N. Golrezaei and D. Bouneffouf, accepted at 37th Conference on Neural Information Processing Systems (**NeurIPS 2023**).

5. "*Epidemic Thresholds of Infectious Diseases on Tie-Decay Networks*." **Q. Chen**, M.A. Porter, Journal of Complex Networks, 10(1): cnab031, February, 2022.

4. "*Subgraph Matching on Multiplex Networks*." J.D. Moorman, T.K. Tu, **Q. Chen**, X. He, and A.L. Bertozzi, IEEE Transactions on Network Science and Engineering, 8(2): 1367-1384, February, 2021.

3. "*Inexact Attributed Subgraph Matching*." T.K. Tu, J.D. Moorman, D.Yang, **Q. Chen** and A.L. Bertozzi, 2020 IEEE International Conference on Big Data (Big Data), pages 2575-2582, December, 2020.

2. "*Online Learning and Matching for Resource Allocation Problems*." A. Boskovic, **Q. Chen**, D. Kufel, and Z. Zhou, SIAM Undergraduate Research Online (SIURO), 13: 207-230, October, 2020.

1. "*Filtering Methods for Subgraph Matching on Multiplex Networks*." J.D. Moorman, **Q. Chen**, T.K. Tu, Z.M. Boyd, A.L. Bertozzi, 2018 IEEE International Conference on Big Data (Big Data), pages 3980–3985, December, 2018.

Honors and Awards

1. Finalist, INFORMS IBM Service Science Best Student Paper Award 2022
2. Finalist, INFORMS Social Media Analytics Best Student Paper Competition 2022
3. Honorable Mention, INFORMS Minority Issue Forum Student Poster Competition 2022
4. Daus Scholarship in Mathematics (awarded to a top-ranked student in mathematics), UCLA 2020
5. Outstanding Poster Award, Joint Mathematics Meetings 2020

Selected Talks

"*Interpolating Item and User Fairness in Recommendation Systems*"
- 2023 INFORMS Annual Meeting

"*Fair Assortment Planning*"
- 2022/2023 INFORMS Annual Meeting
- 2023 POMS Annual Conference
- 2022 MSOM Service Management SIG Conference
- 2022 Revenue Management & Pricing Conference, Spotlight Presentation
- 2022 Marketplace Innovation Workshop (MIW)

"Non-Stationary Bandits with Auto-Regressive Temporal Dependency"
- 2021, 2022, 2023 INFORMS Annual Meeting
- IJCAI-ECAI 2022 Doctoral Consortium
- 2021, 2022 MIT-IBM Watson AI Lab Poster Session

Professional Services

Session Co-Chair
- "Fair and Socially Aware Practices in Operations Management", 2023 INFORMS Annual Meeting

Reviewer
- ICML (2022, 2023, 2024), NeurIPS (2022, 2023), ICLR (2024), The Web Conference 2024,
- Management Science, Production and Operations Management, IEEE Open Journal of Signal Processing

Student Coordinator, MIT Operations Management Seminar Series Spring & Fall 2022

Visiting Graduate Student, Learning and Games Program, Simons Institute at UC Berkeley Spring 2022

Skills

Programming: Python, Matlab, LaTeX, Julia, Gurobi, C++, Git, Mathematica
Languages: English (proficient), Mandarin (native), Spanish (basic)