## Michael L. Hamilton

Contact Information 330 Mervis Hall 3950 Roberto Clemente Drive Pittsburgh, PA 15260 **Employment** 

University of Pittsburgh, Pittsburgh, PA

Summer 2019 -

Katz Graduate School of Business

Area: Business Analytics and Operations

Title: Assistant Professor

Education

Columbia University, New York, NY

Fall 2014 - Spring 2019

Ph.D. in Operations Research

Thesis: Pricing Tools and Analysis for Emerging e-Commerce Technologies

Rutgers University, New Brunswick, NJ

Fall 2010 - Spring 2014

B.S. in Mathematics

Working Papers Note: Author ordering on all papers is alphabetical, as is convention in OR/MS.

- 1. Cui, T., Hamilton, M., Optimal Feature-Based Market Segmentation and Pricing. Submitted.
  - Accepted to the  $18^{th}$  Conf. on Web and Internet Economics (WINE), 2022.
  - Finalist, INFORMS Service Science Best Cluster Paper Competition, 2022.
- 2. Cui, T., Hamilton, M., Pricing Strategies for Online Dating Platforms. Submitted.
- 3. DiChristofano, A., Hamilton, M., Linardi, S., McCloud, M. Project 412Connect: Bridging Students to Communities. In preparation for journal submission.
  - Accepted to the  $1^{st}$  ACM Conf. on Equity and Access in Algorithms, Mechanisms, and Optimization (**EAAMO**), 2021. **Oral Presentation**.
  - New Horizons Award for Bridging Research and Practice at ACM EAAMO'21.
  - Engaged Scholarship Development Initiative Grant Winner (Amount: \$3000).
- 4. Hamilton, M., Singal, R., Churning while Learning: Maximizing User Engagement in a Recommendation System. In preparation for journal submission.
  - Finalist, 2020 RMP Data-Driven Research Challenge.
- 5. Cui, T., Gal-Or, E., Gordon, M., Hamilton, M., Shang, J. Sustainable Investment: Effects of Green Manufacturing and Social Responsibility in Competition. In progress.
- 6. Cui, T., Hamilton, M., Jia, S., Fee Structures for Online Platforms. In progress.

# Published Papers

- 1. Chen, N., Elmachtoub, A., Hamilton, M., Lei, X., Loot Box Pricing and Design.

  Management Science Dec. 2020
  - Accepted to the 21<sup>st</sup> ACM Conf. on Economics and Computation (EC), 2020.
  - Finalist, 2021 CSAMSE Conference Best Paper Award.
  - Winner, 2019 IBM Best Student Paper Award in Service Science.

| • Invited to present at the Federal Trade Commission | (FTC) | Workshop | on |
|--|-------|----------|----|
| Consumer Issues Related to Loot Boxes, 2019.         |       |          |    |

- 2. Elmachtoub, A., Gupta, V., Hamilton, M., The Value of Personalized Pricing.

  Management Science

  April 2021
  - Accepted to the  $15^{th}$  Conf. on Web and Internet Economics (WINE), 2019.
  - Finalist, INFORMS Service Science Best Cluster Paper Competition, 2018.
- 3. Elmachtoub, A., Hamilton, M., The Power of Opaque Products in Pricing.

  Management Science

  Jan. 2021
  - Accepted to the  $13^{th}$  Conf. on Web and Internet Economics (WINE), 2017

## Previous Papers

- 4. Hamilton, M., Hoang, P., Murray, J., Stafford, C., & Tran, H. A Dynamic Feature Selection Based LDA Approach to Baseball Pitch Prediction.

  Trends and applications in knowledge discovery and data mining 2015
- Hamilton, M., Hoang, L. Layne, J. Murray, D. Padget, C. Stafford, & H. Tran. Applying Machine Learning Techniques to Baseball Pitch Prediction. Int. Conf. on Pattern Recognition Applications and Methods

## Prior Experience

## MediaMath, New York, NY Research Science Intern

Summer 2017

Amazon Research, Seattle WA.

Summer 2016

Research Science Intern

# North Carolina State University, Raleigh, NC

Summer 2013

Undergraduate Researcher

#### Presentations

Notes: (\*) symbol implies talk was given by a coauthor. The (C) implies the talk was given online.

"Pricing Strategies for Online Dating Platforms"

| - INFORMS Annual Conference 2022, Indianapolis, In. $(\mbox{*})$ | Oct. 2022 |
|--|-----------|
| • University of Toronto, Rotman Young Scholar Seminar            | July 2022 |
| - RMP Section Conference 2022, Remote Conference. (C*)           | July 2022 |
| • MSOM Annual Conference 2022, Munich.                           | June 2022 |
| • CORS Annual Conference 2022, Vancouver. (*)                    | June 2022 |
|  |           |

"Project 412Connect: Bridging Students to Communities"

| $\bullet$ INFORMS Annual Conference 2022, Indianapolis, In. (*) | Oct. 2022  |
|---|------------|
| - ACM EAAMO Conference 2021, Remote Conference. (C*)            | Oct 2021   |
| • Sara Fine Institute (SFI) 2021, Year in Data Seminar. (C*)    | Sept. 2021 |

<sup>&</sup>quot;Churning while Learning: Maximizing User Engagement in a Recommendation System"

• RMP Section Conference 2021, Remote Conference. (C) July 2021

<sup>&</sup>quot;Optimal Feature-Based Market Segmentation and Pricing"

| • WINE Conference 2022, Troy NY. (*)                              | Dec.  | 2022 |
|---|-------|------|
| • INFORMS Annual Conference 2022, Indianapolis, In.               | Oct.  | 2022 |
| • INFORMS Annual Conference 2021, Anaheim CA.                     | Oct.  | 2021 |
| • RMP Section Conference 2021, Remote Conference. (C)             | July  | 2021 |
| • CORS Annual Conference 2021, Remote Conference. (C)             | June  | 2021 |
| "Loot Box Pricing and Design"                                     |       |      |
| • RMP Section Conference 2021, Remote Conference. (C*)            | July  | 2021 |
| • MSOM Conference 2021, Indianapolis, In. (*)                     | June  | 2021 |
| • CSAMSE Conference 2021, Remote Conference. (C*)                 | June  | 2021 |
| - CORS Annual Conference 2021, Remote Conference. (C*)            | June  | 2021 |
| • ACM EC Conference 2020, Remote Conference. (C*)                 | July  | 2020 |
| • POMS Annual Conference 2020, Minneapolis MN. (C)                | May   | 2020 |
| • INFORMS Annual Conference 2019, Seattle WA. (*)                 | Oct.  | 2019 |
| • Federal Trade Commission (FTC) Workshop on Consumer Issues      |       |      |
| Washington D.C. (*)   | Sept. | 2019 |
| "The Value of Personalized Pricing"                               |       |      |
| • WINE Conference 2019, New York NY.                              | Dec.  | 2019 |
| • MSOM Conference 2018, Dallas TX.                                | July  | 2018 |
| • RMP Section Conference 2018, Toronto CN. (*)                    | June  | 2018 |
| • POMS Annual Conference 2018, Houston TX.                        | May   | 2018 |
| • INFORMS Annual Meeting 2019, Seattle WA.                        | Oct.  | 2019 |
| • INFORMS Annual Meeting 2018, Phoenix AZ.                        | Oct.  | 2018 |
| • INFORMS Annual Meeting 2017, Houston TX.                        | Oct.  | 2017 |
| "The Power of Opaque Products in Pricing"                         |       |      |
| • UCLA, Anderson School of Management, Los Angeles, CA.           | Feb.  | 2019 |
| • University of Pittsburgh, Katz Graduate School of Business, PA. | Jan.  | 2019 |
| • WINE Conference 2017, IIS, Bangalore, India.                    | Dec.  | 2017 |
| • MSOM Conference 2017, UNC, Chapel Hill NC.                      | June  | 2017 |
| • POMS Annual Conference 2017, Seattle WA.                        | May   | 2017 |
| • INFORMS Annual Meeting 2018, Phoenix AZ.                        | Oct.  | 2018 |
| • INFORMS Annual Meeting 2016, Nashville TN.                      | Nov.  | 2016 |
| • RMP Section Conference 2016, NYU, New York NY.                  | June  | 2016 |

#### Teaching University of Pittsburgh, Pittsburgh, PA Instructor and Course Coordinator • BUSQOM 1080 Data Analysis for Business Fall 2019 - Fall 2022 Columbia University, New York, NY Teaching Assistant • IEOR 4111 Operations Consulting. Fall 2017 - Spring 2018 • IEOR 8100 Learning and Optimization. Spring 2016 • IEOR 4004 Optimization Models & Methods. Fall 2015, Fall 2016 • IEOR 4106 Stochastic Models. Spring 2015 Rutgers University, New Brunswick, NJ Recitation Mentor/Grader • CS 111, Introduction to Computer Science. Spring 2013 - Spring 2014 • MATH 151/152, Calculus I & II Fall 2012 - Fall 2014 Mentorship Note: The (A) designates students for which I am their primary advisor. PhD Student Co-Author • Qiqi Hao (A), University of Pittsburgh (Katz). Fall 2022 - Present • Titing Cui (A), University of Pittsburgh (Katz). Fall 2021 - Present • Alex DiChristofano, WUSTL (DCDS) Fall 2020 - Present PhD Thesis Committee Member • Jing Luo (2022) Undergraduate Advising • Mehba Teshome (2021 $\rightarrow$ Pitt M.S.), Stephen Imhoff (2021 $\rightarrow$ PNC), Jingyao Wu (2022 $\rightarrow$ JHU M.S.), Tianyu Tan (2022), Lidong Yang (2022 $\rightarrow$ CMU M.S.) Honors & Awards Finalist, INFORMS Service Science Best Cluster Paper Competition 2022 Katz 2021 Excellence in Research Award 2021 Winner, EAAMO New Horizons Award for Bridging Research and Practice 2021 Finalist, 2021 CSAMSE Conference Best Paper Award 2021 Finalist, 2020 RMP Data-Driven Research Challenge 2021 Engaged Scholarship Development Initiative Summer Design Fellow 2021 Winner, IBM Best Student Paper Award in Service Science (to Xiao Lei) 2019 Finalist, INFORMS Service Science Best Cluster Paper Competition 2018 JMM Outstanding Poster Presentation Winner 2014 High Honors in Mathematics (Top 4), Rutgers University 2014 Weill Scholarship 2013 - 2014 SAS Excellence Award, The Harry J. Riskin Scholarship 2012 - 2014

Scarlet Scholarship

Dean's Scholarship

Rutgers Mathematics Honors Track

Rutgers School of Arts and Sciences Honors Program

2010 - 2014

2010 - 2014

2013 - 2014

2010 - 2014

## **Funding**

#### Grants

• University of Pittsburgh - Pitt Seed Grant, Building DS4SJ Ecosystems: Sustaining Impact, (co-PI with Sera Linardi, Bob Gradeck, and Nick Farnan), 2022-2023 (\$75,000).

## Professional Activities & Service

#### Reviewer

- Journals: Management Science, Operations Research, Manufacturing & Service Operations Management, Production and Operations Management, IISE Transactions, Naval Research Logistics, Computational Management Science.
- Conferences: ACM Economics and Computation (EC) (2020, 2021), ACM Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO) (2021, 2022)

#### **Session Chair**

• INFORMS Annual Meeting, Anaheim

2021

# Program Committee

ACM EAAMO

2021, 2022

### Academic Service

- Faculty Judge for YinzOR Poster and Flash Talk Competitions 2022
- Business Analytics Task Force Committee Member 2022 (Pitt)
- Faculty Search Committee Member 2022 (Pitt)
- PhD Admissions Committee Member 2022 (Pitt)
- Instructor/Coach for Katz Super Analytics Challenge 2021, 2022 (Pitt)
- Co-organizer, Discussant Lead for the 50<sup>th</sup> NBER Decentralization Conference: Mechanism Design for Vulnerable Populations 2020
- Faculty Mentor for ACM Economics and Computation (EC) 2020
- Academic Job Market Panel Organizer 2018 (Columbia)
- IEOR-DRO Seminar Student Organizer 2017 (Columbia)

Misc.

Languages: Python, R, Julia, Matlab, Java, LATEX

Volunteering: School 2 Career (S2C) Tutor, Grief to Action (G2A) Member

Citizenship: USA

References are available upon request.