

# Ali Fattahi

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## APPOINTMENTS

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### **Assistant Professor**

Business Analytics and Operations Management,  
Johns Hopkins Carey Business School, Baltimore, MD,  
August 2019 – present.

### **Core Faculty**

Hopkins Business of Health Initiative (HBHI),  
January 2024 – present.

### **At-Large Representative**

Peak Load Management Alliance (PLMA),  
October 2021 – present.

## EDUCATION

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### **Ph.D. in Decisions, Operations, and Technology Management,**

UCLA Anderson School of Management, Los Angeles, CA,  
September 2014 – May 2019

### **M.Sc. in Industrial Engineering,**

Koc University, Istanbul, Turkey,  
September 2011 – August 2014.

### **B.Sc. in Industrial Engineering,**

Sharif University, Tehran, Iran,  
September 2007 – July 2011.

## RESEARCH INTERESTS

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**Applications.** Energy management; Sustainability; Healthcare; Mass customization.

**Methodologies.** Large-scale optimization; Approximation algorithms.

## AWARDS, FELLOWSHIPS, AND GRANTS

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JHU Carey Community Event Fund Award (with A. Eshragh and Y. Li), Fall 2023.

JHU Carey General Research Support Fund Award, Spring 2023, Fall 2023.

JHU Carey Dean’s Award for Faculty Excellence, 2021, 2022, 2023.

*2nd Place*, POMS College of Sustainable Operations 2018 Best Student Paper Competition.

*Finalist*, POMS College of Supply Chain Management 2018 Best Student Paper Competition.

Dissertation Year Fellowship, UCLA Graduate Education, Sept. 2018 – June 2019.

Harold and Pauline Price Center for Entrepreneurship and Innovation, 2016 – 2017.

Ziman Center’s Howard and Irene Levine Program, 2016 – 2017.

Morrison Center for Marketing and Data Analytics, 2017 – 2018.

Geoffrion Art’s fund for applied research, 2015 – 2017.

## PUBLISHED PAPERS

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Fattahi, A (2022) Utilities’ Managed Home-Charging Programs for Electric Vehicles. *Management Science*. Accepted.

— Solo author paper.

— Sustainable Operations SIG Day at INFORMS MSOM 2024.

Fattahi, A, Ghodsi, S, Dasu, S, Ahmadi, R (2024) Flattening Energy-Consumption Curves by Monthly-Constrained Direct Load Control Contracts. *Operations Research* 72(2):570-590.

Fattahi, A, Dasu, S, Ahmadi, R (2023) Peak Load Energy Management by Direct Load Control Contracts. *Management Science*. 69(5): 2788-2813.

— *2nd Place*: POMS College of Sustainable Operations 2018 Best Student Paper Competition.

— Brown, M (2022) Improving Utility Calculations on Energy Demand to Reduce Costs. *UCLA Anderson Review*, October 19, 2022. [Link](#)

— Totty, M (2018) A More Efficient Way to Help Utilities Share the Inconvenience of Power Outages: A model by Reza Ahmadi and Ali Fattahi could enable power companies to lower the cost of peak electricity. *UCLA Anderson Review*, January 17, 2018. [Link](#)

Fattahi, A, Dasu, S, Ahmadi, R (2022) Mass Customization and the “Parts-Procurement Planning Problem.” *Management Science*. 68(8): 5778-5797.

— Brown, M (2022) Mass Customization Makes Forecasting Parts Purchases a Manufacturer’s Nightmare: A method that establishes a range of needs — and then tightens the range — works better. *UCLA Anderson Review*, April 13, 2022. [Link](#)

Fattahi, A, Dasu, S, Ahmadi, R (2019) Mass Customization and “Forecasting Options’ Penetration Rates Problem.” *Operations Research*. 67(4): 1120–1134.

— *Finalist*: POMS College of Supply Chain Management 2018 Best Student Paper Competition.

Fattahi, A, Dasu, S, Ahmadi, R (2019) The Weighted Non-Negative Least-Squares Problem with Implicitly Characterized Points. *Operations Research*. 67(4): 1106–1119.

Rasmi, SAB, Fattahi, A, Turkay, M (2021) SASS: Slicing with Adaptive Steps Search Method for Finding All Non-Dominated Solutions of Tri-Objective Mixed-Integer Linear Programming Problems. *Annals of Operations Research*. 296: 841–876.

Fattahi, A, Turkay, M (2018) A One Direction Search Method to Find the Exact Nondominated Frontier of Biobjective Mixed-Binary Linear Programming Problems. *European Journal of Operational Research*. 266(2): 415-425.

Fattahi, A, Turkay, M (2015) On the MILP model for the U-shaped assembly line balancing problems. *European Journal of Operational Research*. 242(1): 343-346.

Fattahi, A, Turkay, M (2015)  $\epsilon$ -OA for the solution of bi-objective generalized disjunctive programming problems in the synthesis of nonlinear process networks. *Computers & Chemical Engineering*. 72: 199-209.

Fattahi, A, Elaoud, S, Sadeqi Azer, E, Turkay, M (2014) A novel integer programming formulation with logic cuts for the U-shaped assembly line balancing problem. *International Journal of Production Research*. 52(5): 1318-1333.

## SUBMITTED/WORKING PAPERS

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Fattahi, A, Li, Y, Sahin, O (2024) Customer-driven Bundle Promotion Optimization at Scale. *Management Science*. Reject & Resubmit.

Fattahi, A (2024) Hourglass Global Optimization through Branch and Bound with Optimization Plus Feasibility.

— Solo author paper.

Fattahi, A, Dada, M, Dai, T (2024) A Subscription Model for Prescription Drugs.

Fattahi, A., Eshragh, A., Aslani, B., Rabiee, M (2024) Large-Scale Group Decision-Making and Rank Clustering.

Taghavi, A, Fattahi, A, Dasu, S, Ahmadi, R (2024) Utilities' Power Grid Inspection-Maintenance Optimization to Minimize Wildfires.

## WORK IN PROGRESS

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Nazari-Heris, M, Fattahi, A (2024) Energizing the Future: Smart Grid Solutions for Electric Vehicle Charging.

Eshragh, A, Fattahi, A, Li, Y, Ghobadi, K, Wang, K (2024) SAILO: Novel State Aggregation Framework for Integrated Machine Learning and Optimization in Large-Scale Markov Decision Processes with Applications in Healthcare.

Fattahi, A, Dasu, S, Ahmadi, R (2024) Implementing Flexible Contracts Under Stochastic Demand and Fairness Policies. *Manuscript in Preparation.*

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## INVITED SEMINARS

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Utilities' Managed Home-Charging Programs for Electric Vehicles.

- Stanford Graduate School of Business, November 20, 2024 (scheduled).
- American University, Kogod School of Business, March 28, 2024.
- Lee Kong Chian School of Business, Singapore Management University, September 29, 2023.
- George Mason University School of Business, September 15, 2023.
- Carlos Alvarez College of Business, The University of Texas at San Antonio, May 6, 2022.

Mass Customization and the Parts' Capacity Planning Problem.

- Katz School of Business, University of Pittsburgh, January 30, 2019.
- NYU Stern School of Business, January 28, 2019.
- Miami Herbert Business School, January 23, 2019.
- Leeds School of Business, University of Colorado Boulder, January 18, 2019.
- Kelley School of Business, Indiana University, January 15, 2019.
- Carey Business School, Johns Hopkins University, January 11, 2019.
- California State University, East Bay, December 12, 2018.
- Carroll School of Management, Boston College, December 7, 2018.

Peak Load Energy Management by Direct Load Control Contracts.

- Carey BS, Diving into the Disciplines, October 28, 2019, Baltimore, MD.

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## CONFERENCE PRESENTATIONS

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Utilities' Managed Home-Charging Programs for Electric Vehicles.

- Sustainable Operations SIG Day at INFORMS MSOM 2024, June 30-July 2, 2024, Minneapolis, MN (full paper).

- INFORMS, October 15-18, 2023, Phoenix, AZ (session co-organizer and co-chair).
- MSOM, June 24-26, 2023, Montreal, Canada (extended abstract).
- POMS, May 21-25, 2023, Orlando, FL (invited).
- INFORMS, October 16-19, 2022, Indianapolis, IN (invited).

Customer-driven Bundle Promotion Optimization at Scale.

- INFORMS RMP Conference, June 28-30, 2021, Virtual (invited).

A Subscription Model for Prescription Drugs.

- Hopkins Business of Health Initiative Lightning Round Talk, March 15, 2024 (invited).
- POMS, April 30 - May 5, 2021, Virtual (invited).

A Reduce-to-Threshold Approach to Direct Load Control Contracts with Monthly Constraints.

- INFORMS, October 24-27, 2021, Virtual (invited).
- POMS, April 30 - May 5, 2021, Virtual (invited).
- INFORMS, NOVEMBER 7-13, 2020, Virtual (invited).
- INFORMS, October 20-23, 2019, Seattle, WA (invited).

Mass Customization and the Parts' Capacity Planning Problem.

- POMS, April 21-25, 2022, Virtual (invited).
- MSOM, June 5-10, 2021, Virtual.
- INFORMS, November 4-7, 2018, Phoenix, AZ (session organizer and chair).

Mass Customization and Forecasting Options' Penetration Rates Problem.

- MSOM, July 1-3, 2018, Dallas, TX.
- SoCal OR/OM Day, May 18, 2018, Los Angeles, CA (invited).
- POMS, May 4-7, 2018, Houston, TX (paper competition).

Peak Load Energy Management by Direct Load Control Contracts.

- INFORMS, November 4-7, 2018, Phoenix, AZ (session organizer and chair).
- POMS, May 4-7, 2018, Houston, TX (invited).
- INFORMS, October 22-25, 2017, Houston, TX.
- MSOM, June 20-21, 2017, Chapel Hill, NC.
- POMS, May 5-8, 2017, Seattle, WA (invited).

Bi-Objective Hub Location-Allocation Problem: Min. Cost and Min. CO2 Emissions.

- International IIE Conference, June 26-28, 2013, Istanbul, Turkey.

A Novel Integer Programming Formulation for U-Shaped Line Balancing Problems Type-1.

— 21st ISMP, August 19-24, 2012, Berlin, Germany.

Road-Rail-Sea Hub Location-Allocation with Sustainability Considerations.

— EURO 2012 (EURO xxv), July 8-11, 2012, Vilnius, Lithuania.

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## TEACHING

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Course Design, Course Lead, and Instructor

— Advanced Business Analytics, Fall 2019 - present.

— Online Advanced Business Analytics, Summer 2021 - Spring 2022.

Faculty Advisor, Innovation Field Project, Spring 2021 - present.

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## PHD THESIS COMMITTEE

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Muhammad Irfan Azhar. *Advanced Algorithms and Solution techniques for U-shaped Assembly Line Balancing problems*. Koc University, Istanbul, Turkey. September 2023.

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## SERVICE TO PROFESSION

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*Chair*. Early Career Sustainable OM Workshop 2026. (Scheduled)

*Co-Organizer*. Business Analytics, AI, and Cherry Blossom Workshop, March 2025. (Scheduled)

*Co-Track Chair*. Service Systems and Operations, Decision Sciences Institute (DSI) Annual Conference, November 23 - 25, 2024, Phoenix, Arizona.

*Judge*. INFORMS Public Sector Operations Research Best Paper Award: 2024.

*Judge*. MSOM Supply Chain Management Special Interest Group: 2023, 2024.

*Judge*. MSOM Sustainable Operations Special Interest Group: 2023, 2024.

*Judge*. POMS Best Healthcare Paper Competition: 2023, 2024.

*Committee Member*. ENRE Best Publication Award - Natural Resources: 2023.

*Judge*. INFORMS TIMES Best Working Paper Award: 2020, 2021, 2023.

*Judge*. POMS College of Sustainable Operations Student Paper Competition: 2023.

*Judge*. POMS College of Sustainable Operations: 2022.

Ad hoc reviewer for:

- Management Science
- Operations Research
- Manufacturing and Service Operations Management
- Production and Operations Management
- INFORMS Journal on Applied Analytics
- INFORMS Journal on Computing
- Journal of the Operational Research Society
- Omega
- OR Spectrum
- The International Journal of Management Science

## SERVICE TO SCHOOL/UNIVERSITY

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*Judge.* Mark O. Robbins Prize in High Performance Computing, Advanced Research Computing at Hopkins (ARCH): 2024.

*Co-Organizer.* OMBA Research Seminar Series, Carey BS, 2021 - 2024.

*Committee Member.* OMBA Tenure-Track Faculty Hiring, Carey BS, 2023 - 2024.

*Committee Member.* Promotion Review, Carey BS, 2023 - 2024.

*Committee Member.* Work Group to Explore a Pre-doctoral Program, Carey BS, 2022 - 2023.

*Mentor.* Carey Mentoring Initiative, Carey BS, 2022 - 2023.

*Committee Member.* OMBA Curriculum Sub-committee, Carey BS, 2022 - present.

*Committee Member.* Annual Faculty Evaluation Workgroup, Carey BS, Spring 2022.

*Online Faculty Partnership.* Online Business Analytics, Carey BS, Spring 2022.

*Hiring Panel.* Video Specialist Supervisor, Carey BS, Spring 2021.

*Committee Member.* OMBA Post-doc Hiring, Carey BS, Spring 2020, Spring 2022.

*Committee Member.* Diversity and Inclusion, Carey BS, 2021 - 2022.

- *Facilitator.* Professional Attire and Dress Codes, Carey BS, April 8, 2022.

*Committee Member.* Annual Faculty Evaluation and Promotion Workgroup. Carey BS. Spring 2022.

*Presenter.* Learning Table Session for Staff, Carey BS, Nov 5, 2021.

## TECHNICAL SKILLS AND LANGUAGES

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*Optimization/Statistics:* R, GAMS, CPLEX.

*Programming:* Java, C++, MATLAB.

*Languages:* English, Farsi, Azerbaijani, Turkish.

## REFERENCES

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Professor Reza Ahmadi (Ph.D. advisor)

- Decisions, Operations, and Technology Management
- UCLA Anderson School of Management, Los Angeles, CA.
- Email: reza.ahmadi@anderson.ucla.edu

Professor Sriram Dasu

- Data Sciences and Operations
- USC Marshall School of Business, Los Angeles, CA.
- Email: dasu@marshall.usc.edu

Professor Charles Corbett

- Decisions, Operations, and Technology Management
- UCLA Anderson School of Management, Los Angeles, CA.
- Email: charles.corbett@anderson.ucla.edu