CURRICULUM VITAE OF SOROUSH SAGHAFIAN

Web: https://SoroushSaghafian.com
Wikipedia: Wikipedia Page

E-mail (UMD, main): saghaf@umd.edu
E-mail (Harvard): soroush_saghafian@hks.harvard.edu
E-mail (secondary, MGH): ssaghafian@mgh.harvard.edu
E-mail (secondary, MIT): saghaf@mit.edu
E-mail (secondary, Beth Israel Medical): ssaghafi@bidmc.harvard.edu

Education

- **Ph.D. (2012)**, Operations Research, Industrial and Operations Engineering, University of Michigan
  - University of Michigan College of Engineering 2011 Outstanding Ph.D. Research Award
- **M.S. (2009),** Mathematics, University of Michigan
- **M.S. (2005)**, Industrial Eng. and Operations Research, Sharif University of Technology
- **B.S. (2003),** Industrial Eng. and Operations Research, Isfahan University of Technology

Technical Areas of Interest

- **Healthcare AI/Analytics and Healthcare Operations Research**: AI and analytical approaches to improving patient flow in hospitals, medical decision-making, healthcare policy, and healthcare delivery
- **Machine Learning and AI:** Reinforcement Learning, AI for Causal Inference, AI in Healthcare, Unsupervised Learning, GenAI, LLMs
- **Data-Driven and Analytics-Based Decision-Making:** Dynamic decision-making under ambiguity, dynamic treatment regimes, control and design of queuing networks, control of inventory/production systems, stochastic scheduling (main methodological tools: Markov decision processes, partially observable Markov decision processes, multi-stage causal inference, queueing theory, sample-path analysis, multi-armed bandit indices, approximate and robust dynamic programming)
- **Operations Management**: Applications of dynamic decision-making in operations management, operational flexibility, mechanisms to mitigate supply chain disruption risks

Academic Employment

- **University of Maryland**
  - Artificial Intelligence Interdisciplinary Institute at Maryland (AIM): Core Faculty, Associate Professor
  - Robert Smith School of Business: Associate Professor, Department of Operations, Decision, and Information Technologies
- **MIT**
  - Visiting Scholar (Sabbatical), MIT Sloan School of Management (2022)
- **Harvard University**
  - Senior Research Fellow (2026-present)
  - Associate Professor of Public Policy (Management, Leadership, and Decision Making), Harvard

University, Harvard Kennedy School (2020-2026)

- Assistant Professor of Public Policy (Management, Leadership, and Decision Making), Harvard University, Harvard Kennedy School (2015-2020)
- Faculty Affiliate, Harvard Center of Public Leadership (2023-2026)
- Faculty Affiliate, Harvard Mossavar-Rahmani Center for Business and Government (2021-2026)
- Faculty Affiliate, Harvard Data Science Initiative (2021-2026)
- Faculty Affiliate, Harvard Belfer Center for Science and International Affairs (2021-2026)
- Core Faculty Member, Harvard Center for Health Decision Science (2018-2026)
- Associate Faculty, Harvard Ariadne Labs (Health Systems Innovation) (2018-2026)
- Faculty Affiliate, Harvard Ph.D. Program in Health Policy (2016-2026)

- **Beth Israel Deaconess Medical Center**
  - Collaboration Appointment (2025-present)

- **Massachusetts General Hospital (MGH)**
  - Collaboration Appointment (2023-present)

- **Mayo Clinic**
  - Adjunct Faculty of Healthcare Systems Engineering, Mayo Clinic College of Medicine (2013-2018)

- **Arizona State University**
  - Assistant Professor of Industrial Engineering**,** School of Computing, Informatics and Decision Systems Engineering (2012-2015).

Research Funding Awards

- **Department of Defense (DoD, Congressionally Directed Medical Research Programs)** (2024-2029) "Data-Driven Biomarker-informed Decision Analytics in Melanoma: Improving Efficacy and Reducing Toxicity of Immune Checkpoint Blockade," Total Amount: **$2,798,930**, Role: Co-Principal Investigator (in collaboration with the Dana Farber Cancer Institute).
- **The Hungarian Innovation Agency** (2026-2028) "AI-HSO: AI-Driven Health System Optimization". Total Amount: **$1,125,000**, Role: Co-Principal Investigator (in collaboration with Semmelweis University).
- **Joint Amazon AWS and Harvard Data Science Initiative** (2025-2027) "Multi-Modal AI for Highly Personalized and Dynamic Causal Decision-Making in Cancer Treatments," Total Amount: **$556,443**, Role: Principal Investigator (in collaboration with the Dana Farber Cancer Institute).
- **National Institute of Health, National Institute of Mental Health (NIH, NIMH, RO1)** (2027-2032, To Be Submitted) "Digital Phenotyping of Unipolar and Bipolar Patients," Role: Co-Investigator (in collaboration with the Brigham and Women's Hospital).
- **Patient Centered Outcome Research Institute (PCORI)** (2025-2028, Under Review) "Causal Reinforcement Learning and Large Language Models for Comparative Effectiveness Research," Total Amount: **$1,059,630**, Role: Principal Investigator (in collaboration with the Dana Farber Cancer Institute).
- **Kuwait Science Foundation (The Middle East Initiative Program)** (July 2022- July 2024) "Improving Population Health in the Middle East via Machine Learning and AI-Enabled Mobile Health Interventions," Total Amount: $204,440. Role: Principal Investigator.
- **National Science Foundation** (Grant CMMI-1562645, Aug. 2016 - Aug. 2019), "Data-Driven Management of Post-Transplant Medications," Total Amount: $305,857, Role: Principal Investigator (in collaboration with the Mayo Clinic).

- **National Science Foundation** (Grant CMMI-1562645, Aug. 2016 - Aug. 2019) "Research Experience for Undergraduates (REU) Supplement," Total Amount: $15,600. Role: Principal Investigator.
- **Harvard Kennedy School Dean's Research Fund** (Jan. 2016 - Dec. 2019) "Towards Personalized Medicine: Utilizing Random Variation in Observational Data to Optimize Treatments," Total Amount: $5,000, Role: Principal Investigator.
- **Mayo Clinic** (Grant XSS0133, Aug. 2013 - Dec. 2015) "Bed-Block Phenomenon: A Significant Problem Affecting Patient Flow," Total Amount: $112,000, Role: Principal Investigator.

Honors and Awards

- **INFORMS MSOM Society Young Scholar Prize (2021)** "[for] outstanding contributions to scholarship in operations management."
- **INFORMS MSOM Society Responsible Research Award (2023)** (second place) "[for] contributing knowledge that may have implications for making the world a better place by informing evidence-based, high-quality, and societally beneficial organizational practices across the business, government, and non-government organizations."
- **Inaugural INFORMS Mehrotra Research Excellence Award (2020)** (first place) "for significant contributions to the practice of health applications through operations research (OR) and management science (MS) modeling and methodologies."
- **INFORMS Computing Society 2025 Harvey J. Greenberg Award** (honorable mention) "for research excellence in the field of computation and operations research applications, especially those in emerging application fields. Honored research would focus on contributions that exhibit the promise of making a significant impact in the scope of OR/MS/Analytics practice."
- **Semi-Finalist, INFORMS Franz Edelman Award (2025)** "for achievement in advanced analytics, operations research, and management science."
- **INFORMS Pierskalla Award (2010)** " for the Best Paper in Healthcare" (from INFORMS Healthcare Applications Society, not a student paper award)
- **Marquis Who's Who Honored Listee Recognition (2025)**
- **Inaugural Best Published Paper Award by the Editorial Board of the Journal of Health Care Management Science (2024)** for the paper "Who Should See the Patient? On Deviations from Preferred Patient- Provider Assignments in Hospitals."
- **Harvard Kennedy School Dinner on the Dean Teaching Excellence Award (Multiple Years)**
- **POMS (Production and Operations Management Society) College of Healthcare Best Paper Award (2019)** (first place)
- **INFORMS Public Sector Operations Research Best Paper Award (2018)** (second place)
- **INFORMS MSOM Journal Best Paper Award (2016)** (awarded to one paper among all published in the prior three years)
- **INFORMS MSOM Society Best Paper Award of Service Special Interest Group (SIG) (2016)**
- **INFORMS Decision Analysis Society Best Student Paper Award (2018)** (second place, awarded to Ph.D. advisee)
- **INFORMS Junior Faculty Interest Group (JFIG) Paper Competition (2015)** (honorable mention)
- **POMS (Production and Operations Management Society) College of Healthcare Best Paper Award (2017)** (second place)
- **Outstanding Professor Recognition by the USCIS (2014)**

- Research Paper selected as **one of five papers representing the best work published in MSOM Journal 2011-2015**
- **POMS (Production and Operations Management Society) College of Supply Chain Best Student Paper Award (2013)** (honorable mention)
- **INFORMS MSOM Society Best Student Paper Award (2012)** (first place)
- **University of Michigan IOE Richard Wilson Prize (2012)** for the Best Student Paper
- **INFORMS Doing Good with Good OR Award (2011)** (finalist)
- **POMS College of Healthcare Best Paper Award (2011)** (second place)
- **University of Michigan College of Engineering Outstanding Ph.D. Research Award** (Richard and Eleanor Towner Award, $2500)
- **Katta Murty Prize (2010)** for the Best Research Paper on Optimization
- **POMS College of Supply Chain Best Student Paper Award (2009)** (finalist)
- **University of Michigan IOE Bonder Fellowship Award in Applied Operations Research (2007)**
- **University of Michigan Named & Dean's Fellowship Award (2006)**
- **Honor Society of Phi Kappa Phi**
- **University Honor of Exceptionally Outstanding Graduate Student** (Department of Industrial Engineering, Sharif University of Technology)
- **Top-ranked graduate Student** for the highest graduate cumulative GPA among all peers (Department of Industrial Engineering, Sharif University of Technology)
- **Second Top-Ranked Undergraduate Student** for the second-highest cumulative GPA among all peers (Department of Industrial Engineering, Isfahan University of Technology)
- **Top 10 Students in the Country** for the 9th highest score among about 3500 participants in Iranian National Graduate Entrance Exam

Invited Keynote Speeches

- Joint Brigham and Women's Hospital, Massachusetts General Hospital, and Beth Israel Deaconess Medical Center Annual Retreat, "Leveraging Data Science to Promote Health Equity" (2025, upcoming): Title of Keynote: Public Policy and AI.
- University of Toronto Rotman School of Business, Data Analytics in Healthcare (2024): Title of Keynote: Making AI Impactful in Healthcare.
- Florida International University College of Business, Healthcare Information and Management Systems Society (HIMSS), AI's Transformative Power (2024): Title of Keynote: Making AI Impactful in Healthcare.
- The Second IRAIS Conference on the Intersection of Information Systems and Artificial Intelligence (2024): Title of Keynote: Advancements in AI.
- Queen's University Inaugural Conference on Healthcare Analytics (2023): Title of Keynote: Algorithm, Human, or an Algorithm-Human Centaur: How to Enhance Health Policy and Clinical Care?
- Data Science Institute at Southern Methodist University and Cox School of Business (2023): Title of Keynote: Making AI Impactful in Healthcare.
- Babson College Back to Babson Breakthrough Conference on "PC as MD: The Role of Tech in Healthcare" (2023): Title of Keynote: Making AI Impactful in Healthcare.
- 6th International Conference on Industrial and Systems Engineering (2020): Title of Keynote: Optimizing Healthcare Systems.
- Harvard Student Agencies Academies (2020): Title of Keynote: Machine Learning.

Invited Scientific Panels and Committees

- INFORMS 2025 Annual Meeting Co-Chair of Community Sessions
- INFORMS Sanjay and Panna Mehrotra Research Excellence Award Selection Committee (2025)
- Invited Reviewer for Swiss National Science Foundation (2025)
- Columbia University AI in Healthcare Panel, "Hallucination, Harm & Hype: Can LLMs Be Trusted in Healthcare?" Organized by World Salon (2025)
- Columbia University AI in Healthcare Panel, "Lab to Cloud: The Digital Transformation of Healthcare." Organized by World Salon (2025)
- Academy of Management Professional Development Workshop Panel on the Applications of AI/Big Data/Machine Learning in Healthcare (2023)
- State Univ. of New York Panel on "Bridging Bytes and Business: AI's Impact on New York" (2023)
- INFORMS Annual Meeting Program Leadership Panel on "Collaborating with AI for Research" (2023)
- INFORMS Annual Meeting Program Panel on "Healthcare Data, So Much Data, So Many Questions to Answer!" (2023)
- National Science Foundation Invited Panel on Digital Healthcare (SBIR/STTR: Healthcare Workflow and Delivery**)** (2022)
- INFORMS MSOM Young Scholar Prize Selection Committee (2022)
- Invited Reviewer for Research Grants Council of Hong Kong (2020)
- Industry Studies Association (2020), Professional Development Workshop for Earlier Career Scholars
- Invited Reviewer for Swiss National Science Foundation (2019)
- INFORMS Public Sector Operations Research Best Paper Award Committee (2018- present)
- INFORMS Pierskalla Award Committee for the Best Paper in Healthcare
- INFORMS Healthcare Applications Society Best Student Paper Award Review Panel (2015-present)
- INFORMS MSOM Best Student Paper Award Judge (2013-Present)
- POMS College of Healthcare Operations Management Best Paper Competition Judge (2016-present)
- INFORMS MSOM Healthcare Special Interest Group (SIG) Review Panel (2015-present)
- INFORMS MSOM Service Management Special Interest Group (SIG) Review Panel (2015-present)
- Health Systems Engineering Alliance Representative (2014- 2018)
- International Conference on Health Care Systems Engineering Review Panel (2013)

Invited Paid Engagements (Speeches, Workshops, Lectures, and Seminars)

- AI.Health4All Center, University of Illinois Chicago, College of Medicine (2026), Title: Making AI Impactful in Healthcare.
- Value-Based Health Care Summit (2025), Organized by The Decision Institute, Title of Seminar: "Data Governance, The US Health Care System, and Value-Based Health Care Implementation Challenges."
- International Academic Program (2024 and 2025), Universidad Autonoma de Madrid in collaboration with Harvard University David Rockefeller Center for Latin American Studies, Title of Seminar: Machine Learning and Public Policy.
- Harvard T.H. Chan School of Public Health (2023), Program for Chairs of Clinical Services, Title of Seminar: Hospital Operations: Patient Flow Management.
- International Academic Program (2023), Universidad Autonoma de Madrid in collaboration with Harvard University David Rockefeller Center for Latin American Studies, Title of Seminar: Machine Learning and

Public Policy.

- Harvard T.H. Chan School of Public Health (2022), Program for Chairs of Clinical Services, Title of Seminar: Hospital Operations: Patient Flow Management.
- International Academic Program (2022), Universidad Autonoma de Madrid in collaboration with Harvard University David Rockefeller Center for Latin American Studies, Title of Seminar: Machine Learning and Public Policy.
- International Academic Program (2021), Universidad Autonoma de Madrid in collaboration with Harvard University David Rockefeller Center for Latin American Studies, Title of Seminar: Machine Learning and Public Policy.
- The AI Institute (2020), Title of Talk: Machine Learning and Public Policy.
- Harvard University, Chinese Executives (2019), Title of Seminar: Business Strategy in the Era of Artificial Intelligence and Machine Learning.
- Harvard University, Chinese Executives (2019), Title of Seminar: Optimizing Service Strategy and Operations.
- International Academic Program (2019), Universidad Autonoma de Madrid in collaboration with Harvard University David Rockefeller Center for Latin American Studies, Title of Seminar: Machine Learning and Public Policy.

Invited National Institute of Health (NIH) Advisory Panels and Working Groups

- National Institute of Health (NIH) and National Institute of Nursing Research (NINR) Advisory Working Group on Artificial Intelligence (AI).
- National Institute of Health (NIH) K01 Advisory Panel: Machine Learning for Emergency Department Psychiatry, Applicant: Christopher Kennedy, Center for Precision Psychiatry at MGH / HMS
- National Institute of Health (NIH) K01 Advisory Panel: Machine Learning to Reduce Adverse Events and Patient Outcomes Among Hospitalized Children, Applicant Mariam Atkinson, Department of Health Policy & Management, Harvard Chan School

Invited Academic Research Seminars and Visits

- AI.Health4All Center, University of Illinois Chicago, College of Medicine (2026)
- University of Virginia Darden School of Business (2026)
- Columbia University, IEOR (2026)
- Georgia Tech University, ISYE (2026)
- Imperial College Business School (2026)
- University College London, School of Management (2026)
- University of Alberta Business School (2026)
- Yale University, Yale School of Management (2025, Shubik Fellow)
- Dartmouth, Tuck School of Business (2025)
- Centaur AI Institute (2025)
- University of Texas at Austin, McCombs School of Business (2025)
- Boston University, Computer Science Department (2025)
- University of Florida, Miami Herbert Business School (2025)
- University of Chicago, Booth School of Business (2024)

- Carnegie Mellon University, Tepper School of Business (2024)
- Johns Hopkins University, Carey Business School (2024)
- University of Calgary, Haskayne School of Business (2024)
- Yale University, Yale School of Management (2023)
- University of Chicago, Institute for Mathematical and Statistical Innovation (2023)
- University of Bath, School of Management (2023)
- Wichita University, IME Colloquium (2023)
- Stanford University, Graduate School of Business (2022)
- MIT, Operations Research Center (2022)
- Harvard University, Institute for Quantitative Social Sciences (2022)
- Massachusetts General Hospital (MGH), Institute for Technology Assessment (2022)
- Johns Hopkins University, Whiting School of Engineering (2022)
- Frontiers of Big Data, AI, and Analytics (2022)
- University of Alabama, Culverhouse College of Business (2022)
- Harvard University, M-RCBG Center for Business and Government (2022)
- Brandeis University, International Business School (2021)
- Case Western University, Weatherhead School of Management (2021)
- Electronic Health Economics Colloquium (EHEC) (2020, presented by Ph.D. student advisee Lina Song)
- Sharif University of Technology (2020)
- Northeastern University, Dep. of Mechanical and Industrial Engineering (2019)
- MIT, Sloan School of Management (2018)
- University of Chicago, Booth School of Business (2017)
- University of British Columbia, Sauder School of Business (2017)
- Harvard University, Harvard Business School (2015)
- University of North Carolina (Chapel Hill), Kenan-Flagler Business School (2015)
- W.P. Carry School of Business (2014)
- University of Arizona, Systems and Industrial Engineering (2014)
- Mayo Clinic Hospital, Intersections in Health Care Delivery (2013)
- ASU & Mayo Clinic, Bio-Medical Informatics (2013)
- MIT, Engineering Systems Division (2012)
- Purdue University, Krannert School of Management (2012)
- Northwestern University, Kellogg School of Management (2012)
- University of British Columbia, Sauder School of Business (2012)
- University of Minnesota, Industrial and Systems Engineering Department (2012)
- Indiana University, Kelly School of Business (2012)
- Penn State University, Industrial and Manufacturing Engineering (2012)
- Dartmouth, Tuck School of Business (2012)

Editorial Positions

- Book review for *Wiley* Publication (Healthcare Operations Research), *CRC Press* (Operations Research Series), and *Cambridge University Press* (Artificial Intelligence)
- Associate Editor: *Management Science, Operations Research, Service Science, Naval Research Logistics* (Special Issue on Health Care Operations Management), *IISE Transaction*
- Co-Editor: *Production and Operations Management* (Wally Hopp Special Issue)
- Senior Editor: *Production and Operations Management*
- Editorial Board of *Management Science, Operations Research*, *Production and Operations Management, Service Science, IISE Transactions*
- Previous referee experience: *Management Science, Operations Research, Manufacturing and Service Operations Management, Operations Research Letters, Production and Operations Management, Health Care Management Science, Mathematical Reviews* (American Mathematical Society)*, Naval Research Logistics, IIE Transactions, IIE Transactions on Healthcare Systems Engineering, Operations Research for Health Care, Flexible Services and Manufacturing, IEEE Transactions on Automation Science and Engineering, IEEE Transactions on Evolutionary Computation*

School and University Service

- **Harvard University**
  - Lead Creator of Analytics Track of HKS Ph.D. Program in Public Policy (2024-present)
  - Harvard Center of Public Leadership (*Faculty Affiliate*) (2023-present)
  - Harvard Kennedy School Faculty Research Seminar Organizer (2022)
  - Harvard Belfer Center for Science and International Affairs (*Faculty Affiliate*) (2021- present)
  - Harvard Data Science Initiative (*Faculty Affiliate*) (2021- present)
  - Harvard Mossavar-Rahmani Center for Business & Government (*Faculty Affiliate*) (2021-present)
  - Harvard Center for Health Decision Science (*Core Faculty*) (2018-present)
  - Harvard Ariadne Labs (Associate Faculty Member) (2018-present)
  - Harvard Standing Committee on Higher Degrees in Public Policy (2018-present)
  - Harvard Ph.D. Program in Health Policy (Standing Committee) (2017-present)
  - Harvard Ph.D. Program in Health Policy (Faculty Affiliate) (2016-present)
  - Harvard HKS Faculty Search Committee for Quantitative Methods (2017-2018)
  - Harvard HKS Ph.D. Admission Committee (2015-present)

Conference Leadership and Service

- INFORMS 2025 Annual Meeting Co-Chair of Community Sessions
- Co-Chair of The Height of Operations: Processes and People (HOPP) conference
- MSOM Cluster Co-Chair of INFORMS 2021 Healthcare Conference
- Session Organizer & Chair (INFORMS Healthcare 2021) "Healthcare Operations and Policy"
- Session Organizer & Chair (INFORMS 2020) "Healthcare Operations and Policy"

- Session Organizer & Chair (POMS 2020) "Healthcare Policy: Quality and Allocation"
- Session Organizer & Chair (INFORMS Healthcare 2019) "Intersection of Healthcare Policy and Healthcare Operations"
- Session Organizer & Chair (INFORMS 2018) "New Topics in Healthcare Policy"
- Session Organizer & Chair (INFORMS 2017) "Advances in Healthcare Policy"
- Co-Chair of INFORMS MSOM 2017 Healthcare Special Interest Group (SIG) Conference
- Session Organizer & Chair (POMS 2017) "New Trends in Healthcare Policy"
- Session Organizer & Chair (INFORMS 2016) **"**Operations Research for Public Health: Data-Driven and Dynamic Decision-Making"
- Session Organizer & Chair (INFORMS 2016) **"**Advances in Emergency Department Operations Management/Research"
- Session Organizer & Chair (POMS 2016) **"**Advances in Emergency Department Operations Research/Management"
- Session Organizer & Chair (INFORMS 2015) **"**Operations Research/Management for Public Health: Data-Driven and Dynamic Decision-Making"
- Session Organizer & Chair (INFORMS 2015) **"**Operations Research/Management for Women's Health"
- Session Organizer & Chair (INFORMS 2014) "Healthcare Operations Research"
- Session Organizer & Chair (POMS 2014) "Hospital Operations: Emergency Department and Beyond"
- Session Organizer & Chair (INFORMS 2013) "Stochastic Operations Research in Healthcare"
- Session Organizer & Chair (POMS 2013) "Healthcare Operations Management"
- Session Organizer & Chair (INFORMS 2012): "Healthcare Operations: Emergency Department
- Co-Chair of the 2011 INFORMS Pierskalla Award Committee for the Best Paper in Healthcare (awarded by INFORMS Healthcare Applications Society)
- Session Organizer & Chair (INFORMS 2011): **"**Emergency Department and Healthcare Operations"
- Session Organizer & Chair (INFORMS 2010): "Patient Flows, ED, and Healthcare Operations"

Professional Society Membership and Other Services (Selected)

- Senior Member, INFORMS (2024-present)
- Letter writer for tenure evaluation/promotion of candidates at various national and international universities

Full Book (Refereed, Solo-Authored)

1. **Saghafian, S.** "Insight-Driven Problem Solving: Analytics Science to Improve the World," 2025, *Cambridge University Press*. [Amazon] [Cambridge Univ. Press][Reviews and Endorsements]

Book Chapters (Refereed, Invited)

[Underline denotes student advisees] [* denotes postdoc advisees] ["(M.D)" denotes M.D. collaborators]

1. Delasay, M. and **S. Saghafian "**AI for Operational Efficiency in Virtual Care," 2026, Book Chapter, Springer (under review).
2. **Saghafian, S.,** Kilinc, D.**,** and S.J. Traub (M.D.). "Dynamic Assignment of Patients to Primary and Secondary Inpatient Units: Is Patience a Virtue?" 2024, *The Cambridge Handbook of Healthcare:*

Productivity, Efficiency, Effectiveness. Cambridge University Press.

3. Ang, Y.Q., Chia, A. and **S. Saghafian** "Using Machine Learning to Demystify Startups Funding, Post-Money Valuation, and Success," 2022, In: Babich V., Birge J.R., Hilary G. (eds), *Innovative Technology at the Interface of Finance and Operations. Springer Series in Supply Chain Management*, vol 11. Springer, Cham.

Refereed Publications (Published, Accepted, or in an Advanced Round)

[Underline denotes student advisees] [* denotes postdoc advisees] ["(M.D)" denotes M.D. collaborators]

1. Jameson, J., **Saghafian, S.,** Huckman, R.S., Hodgson, N. (M.D.), Baugh, J (M.D.). **"**The Impact of Batching Advanced Imaging Tests in Emergency Departments," *Management Science,* 2025 *(invited for the 3rd round).*

    - **INFORMS Healthcare Applications Society best student paper** (finalist)

2. Zhelechian*, M., **Saghafian, S**., Robles, O. "Harmonizing Safety and Speed: A Human-Algorithm Approach to Enhance FDA's Medical Device Clearance Policy," *Management Science,* 2025 *(accepted, forthcoming).*

    - **Media Coverage (selected):**
        - **Transforming FDA Clearance: How AI and Human Insight Can Improve Medical Device Safety**
        - **A Human-Algorithm Approach to Approving Medical Devices Could Slash the Recall Rate and Save Billions**

3. Feizi*, A., Orfanoudaki*, A., **Saghafian, S.,** Martini (M.D.), W., Hodgson (M.D.), N.R. "Vertical Patient Streaming in Emergency Departments," *Management Science,* 2025 *(accepted, forthcoming).*

    - **Semi-Finalist, INFORMS 2025 Franz Edelman Award** "for Achievement in Advanced Analytics, Operations Research, and Management Science"

    - **Media Coverage (selected):**
        - **Study: Triage Protocol Shows Promise in Easing ED Overcrowding [Healthcare Innovation]**
        - **A Simple ER Fix Can Save Time Without Adding Beds [US News]**

4. **Saghafian, S.,** Imanirad, R., Traub (M.D.), S.J., Hodgson, N. (M.D.) "What Drives Physician Efficiency? Evidence from Emergency Department Operations" *Production and Operations Management (minor revision).*

5. Paternina-Caicedo (M.D.), A., Espinosa, O., Sheth (M.D.), S., Huper, N. (M.D.), **Saghafian, S**. "Excess Mortality Rate in Black Children Since 1950 in the United States: A 70-Year Population-Based Study of Racial Inequalities," *Annals of Internal Medicine*, 2025, 178 (4), 490-497.

    - Paper included in **"Top 10 Most Influential Articles"** Published in *Annals of Internal Medicine (2026)*

    - **Media Coverage (selected):**
        - **Black Americans twice as likely to die during childhood as whites [U.S. News]**
        - **Interview with NPR/WBUR on the 70-year study of mortality gaps [NPR/WBUR]**
        - **Race mortality gap narrows, except for infants [Harvard Gazette]**
        - **More Black babies are dying than white infants. Scientists are blaming healthcare inequality [The Independent]**
        - **More babies are being admitted to NICUs in Indiana: CDC data brief [NPR**

Indianapolis]

- Black Americans twice as likely to die during childhood as whites [Medical Press]

6. Lin, S., **Saghafian, S,** Lipschitz (M.D.), J.M., Burdick (M.D.), K.E. "A Multiagent Reinforcement Learning Algorithm for Personalized Recommendations in Bipolar Disorder," *Proceedings of the National Academy of Sciences (PNAS, Nexus), 2025. 4 (8).*

7. Hodgson (M.D.), N.R, **Saghafian, S.,** Martini (M.D.), W., Feizi*, A., and A. Orfanoudaki* "Artificial Intelligence-Assisted Emergency Department Vertical Patient Flow Optimization" *J. of Personalized Medicine*, 2025, 15 (6): 219

8. Coots, M., **Saghafian, S**., Kent, D. (M.D.), Goel, S. "A Framework for Considering the Role of Race and Ethnicity in Estimating Disease Risk" *Annals of Internal Medicine,* 2025, 178 (1), 98-107.

   - **Media Coverage:**

     - Should Race Be Used in Determining Risk for Disease? Yes. And No.

9. Jameson, J., **Saghafian, S.,** Huckman, R.S., Hodgson, N. (M.D.) **"**Variation in Batch Ordering of Imaging Tests in the Emergency Department and the Impact on Care Delivery" *Health Services Research,* 2025 60 (1): e14406.

10. Lipschitz (M.D.), J.M., Lin, S., **Saghafian, S.,** Pike, C.H., Burdick (M.D.), K.E. "Digital Phenotyping in Bipolar Disorder: Using Longitudinal Fitbit Data and Personalized Machine Learning to Predict Mood Symptomatology," *Acta Psychiatrica Scandinavica,* 2025, 151 (3): 434-447.

    - **Among the top 10 most-cited papers published by the journal in 2024**

    - **Media Coverage (selected):**

      - Fitbit Data Accurately Predicts Bipolar Disorder Mood Swings

11. **Saghafian, S.** "Ambiguous Dynamic Treatment Regimes: A Reinforcement Learning Approach," *Management Science,* 2024, 70 (9), 5667-5690.

    - **INFORMS Computing Society 2025 Harvey J. Greenberg Award** (honorable mention)

12. Tarantino, G. et al. "Genomic heterogeneity and ploidy identify patients with intrinsic resistance to PD-1 blockade in metastatic melanoma," *Science Advances,* 2024*,* 10 (48), eadp4670.

13. **Saghafian, S.,** and L. Idan* "Effective Generative AI: The Human-Algorithm Centaur" *Harvard Data Science Review*, 2024, (Special Issue 5).

    - **Media Coverage (selected):**

      - Using AI for Public Impact: Insights from Dr. Soroush Saghafian (five takeaways from an AI pioneer about its potential impact in healthcare) [Fast Company]
      - From Centaurs to Cyborgs: Our Evolving Relationship with Generative AI
      - The Next Frontier of Education: From Ivy Halls to Algorithmic Futures [Education.com]
      - Soroush Saghafian: Making AI Impactful in Healthcare and Public Policy
      - The Promise and Challenges of Artificial Intelligence in Health Care (Video)

14. **Saghafian, S.** "Drivers, Adaptations, and Public Impacts of Hospital Closures: Implications for Policy" *Frontiers in Public Health,* 2024, 12:1415033.

    - **Media Coverage (selected):**

      - TV Interview on the Impact of Hospital Closures (Video)
      - Hospital Closures Mean More Than Just the Loss of Access to Medical Care
      - Patients and staff criticize the state's plan to close beloved children's hospital in

Canton [Boston Globe]

15. Orfanoudaki*, A., Cook (M.D.), C.B., **Saghafian, S.,** Castro J., Kosiorek, H.E., and H.A. Chakkera (M.D.). Diabetes Mellitus and Blood Glucose Variability Increases the 30-Day Readmission Rate After Kidney Transplantation, *Clinical Transplantation,* 2024, 38 (1), e15177.

16. **Saghafian, S.**, Song, L., Newhouse, J.P., Landrum, M.B., and J. Hsu (M.D.) "The Impact of Vertical Integration on Physician Behavior and Healthcare Delivery: Evidence from Gastroenterology Practices," *Management Science*, 2023, *69 (12), 7158-7179.*

    - **NBER Research Spotlight**
    - **Commentary:** Shah, E. D. (M.D.) Commentary on "The Impact of Vertical Integration on Physician Behavior and Healthcare Delivery: Evidence from Gastroenterology Practices." *Management Science, 2023,* 69 (12), 7180-7181.
    - **Media Coverage (selected):**
        - **Hospitals Swallowing Independent Practices Found to Lead to Higher Costs, Worse Patient Health Outcomes**
        - **Study Finds Vertical Integration in Medicine is Leading to Higher Costs and Worse Health Outcomes**
        - **Vertical Integration among Healthcare Providers Is Not All It's Cracked Up to Be**
        - **Op-ed: Is the Pursuit of Efficiency in Healthcare Worth the Gamble?**

17. **Saghafian, S.,** Trichakis, N., Zhu, R., and Shih, H.A. (M.D.) "Joint Patient Selection and Scheduling under No-Shows: Theory and Application in Proton Therapy," *Production and Operations Management*, 2023, 32 (2), 547-563.

18. Boloori, A, and **S. Saghafian** "Health and Economic Impacts of Lockdown Policies in the Early Stage of COVID-19 in the U.S.," *Service Science,* 2023, 15 (3), 188-211.

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        - **Measuring the Health and Economic Trade-Offs of Pandemic Lockdowns**

19. Atkinson, M.K. and **S. Saghafian** "Who Should See the Patient? On Deviations from Preferred Patient-Provider Assignments in Hospitals," *Health Care Management Science*, 2023, 26, 165–199.

    - **Inaugural Best Published Paper Award by the Editorial Board of Health Care Management Science**

20. Hodgson (M.D.), N.R., **Saghafian, S.,** Klanderman (M.D.), M.C., Urumov (M.D.), A., Traub (M.D.), S.J. Physician-Driven Early Evaluation: Encounters Seen in a Vertical Model. *Journal of Emergency Medicine Reports,* 2023, 2 (2), 100028.

21. **Saghafian, S.,** Tomlin, B.T. and S. Biller "The Internet of Things and Data Fusion: Who Talks to Who?" *Manufacturing and Service Operations Management (M&SOM)*, 2022, 24 (1), 333-351.

22. **Saghafian, S.,** Song, L., and A. Raja (M.D.) "Towards a More Efficient Healthcare System: Opportunities and Challenges Caused by Hospital Closures Amid the COVID-19 Pandemic," *Health Care Management Science,* 2022, 25, 187-190.

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        - **Atlanta's Health Care System is Strained by Major Hospital's Closing, Doctors and Patients Say [NBC News]**
        - **How Do Hospital Closures in the United States Impact Patient Care?**
        - **How Five Doctors Recovered After Hospital Closures**

- **After a Year, Questions Remain on Atlanta Medical Center's Closure**

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    - **Media Coverage (selected):**
        - **Optimizing Mobile Health (mHealth) Interventions**

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25. Munshi, V.N., **Saghafian, S.**, Cook (M.D.), C.B., Aradhyula, S., and H.A. Chakkera (M.D.) "Use of Imputation and Decision Modeling to Improve Diagnosis and Management of Patients at Risk for New-Onset Diabetes After Transplantation," *Annals of Transplantation,* 2021, 26, e928624, 1-9.

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    - **INFORMS 2018 Public Sector Operations Research Best Paper Award** (second place)
    - **Media Coverage (selected): The Hill, National Academy of Medicine, New-Meical.net, Industry Global News 24,** Global Health News Wire, Eureka Alert (American Association for the Advancement of Science), Managed Healthcare Executive, and INFORMS.

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29. **Saghafian, S.** "Curing the Healthcare System: Does Transparency Help? 2020, *INFORMS OR/MS Today, 47(1).*

30. Boloori, A, **Saghafian, S.**, Chakkera, H.A. (M.D.), and C.B. Cook (M.D.) "Data-Driven Management of Post-Transplant Medications: An Ambiguous Partially Observable Markov Decision Process Approach," *Manufacturing and Service Operations Management (M&SOM)*, 2020, 22 (5), 1066–1087.

    - **INFORMS MSOM 2023 Responsible Research Award** (second place)
    - **INFORMS Decision Analysis Society 2018 Best Student Paper Award** (second place)
    - **INFORMS MSOM Society 2018 Healthcare Operations Management SIG** (among eight papers accepted)
    - **POMS 2017 College of Healthcare Best Paper Award** (second place)
    - **INFORMS 2016 IBM Service Science Best Student Paper Award** (finalist)

31. **Saghafian, S.** and W.J. Hopp "The Role of Quality Transparency in Healthcare: Challenges and Potential Solutions," *National Academy of Medicine (NAM),* 2019.

32. Bren, A. and **S. Saghafian** "Data-Driven Percentile Optimization for Multi-Class Queueing Systems with Model Ambiguity: Theory and Application," *INFORMS Journal on Optimization,* 2019, 1(4), 267-287.

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    - **INFORMS 2015 Junior Faculty Interest Group (JFIG) Best Paper Competition** (honorable mention)
    - **Lead Journal Article**

35. Hodgson (M.D.), N.R., **Saghafian, S.,** Mi, L., Buras, M.R., Katz (M.D.), E.D., Pines (M.D.), J.M., Sanchez (M.D.), L., Silvers (M.D.), S., Maher (M.D.), S.A., and S.J. Traub (M.D.) "Are Testers Also Admitters? Comparing Emergency Physician Resource Utilization and Admitting Practices," *American Journal of Emergency Medicine*, 2018, 36 (10), 1865-1869.

36. Traub (M.D.), S.J., **Saghafian, S.,** Judson (M.D.), K., Russi (M.D.), C., Madsen (M.D.), B., Cha (M.S.), S., Tolson, H.C., Sanchez (M.D.), L.D., and J.M. Pines (M.D.) "Interphysician Differences in Emergency Department Length of Stay," *Journal of Emergency Medicine,* 2018, 54 (5), 702-710.

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39. Traub (M.D.), S.J., Temkit, M.H., and **S. Saghafian** "Emergency Department Holding Orders," *Journal of Emergency Medicine,* 2017, 52 (6), 885-893.

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    - **2012 Richard Wilson Prize**

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46. Traub (M.D.), S.J., C. Stewart (M.D.), R. Didehban, D., Nestler (M.D.), Y.H., Chang, **S. Saghafian**, and C.A. Lipinski (M.D.) "Emergency Department Rapid Medical Assessment: Overall Effect and Mechanistic Consideration," *Journal of Emergency Medicine,* 2015, 48 (5), 620-627.

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    - **Featured Article in IIE Magazine**

48. **Saghafian, S.**, Hopp, W.J., Van Oyen, M.P., Desmond (M.D.), J.S., and S.L. Kronick (M.D.) "Complexity-Augmented Triage: A Tool for Improving Patient Safety and Operational Efficiency," *Manufacturing and Service Operations Management (M&SOM)*, 2014, 16 (3), 329-345.

    - **INFORMS MSOM Journal 2016 Best Paper Award**
    - **INFORMS MSOM Society 2016 Best Paper Award of Service Special Interest Group (SIG)**
    - **Selected as one of five papers representing the best work published in MSOM 2011-2015 for distribution to Deans and Department Heads**
    - **First Place, INFORMS MSOM Society 2012 Best Student Paper Award**
    - **INFORMS 2011 Doing Good with Good OR Award** (finalists)
    - **Univ. of Michigan College of Engineering 2011 Outstanding Ph.D. Research Award ($2500)**

49. **Saghafian S.** and X. Chao "The Impact of Operational Decisions on the Optimal Design of Salesforce Incentives," *Naval Research Logistics*, 2014, 61 (4), 320-340.

50. Kim, E., **Saghafian, S.**, and M.P. Van Oyen "Joint Control of Production, Remanufacturing, and Disposal Activities in a Hybrid Manufacturing-Remanufacturing System," *European Journal of Operational Research,* 2013, 231 (2), 337-348.

51. Li, X., Li., Y, and **S. Saghafian** "A Hybrid Manufacturing/Remanufacturing System with Random Remanufacturing Yield and Market-Driven Product Acquisition," *IEEE Transactions on Engineering Management,* 2013, 60 (2), 424-437.

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    - **POMS 2011 College of Healthcare Best Paper Award** (second place)
    - **INFORMS MSOM 2011 Healthcare Operations Management SIG** (among 6 papers accepted)

53. **Saghafian, S.** and M.P. Van Oyen "The Value of Flexible Suppliers and Disruption Risk Information: Newsvendor Analysis with Recourse," *IIE Transactions,* 2012, 44 (10), 834-867.

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    - **POMS 2009 College of Supply Chain Best Student Paper Award** (among 4 finalists)

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55. **Saghafian, S.** and M.R. Akbari "Integrative Cell Formation and Layout Design in Cellular Manufacturing Systems," *Journal of Industrial and Systems Engineering*, 2009, 3 (2), 97-115.

56. Hejazi, S.R. and **S. Saghafian** "Flowshop Scheduling Problems with Makespan Criterion: a Review," *International Journal of Production Research*, 2005, 43 (14), 2895-2929.

57. **Saghafian, S.** and S.R. Hejazi "Multi-criteria Group Decision Making Using A Modified Fuzzy TOPSIS Procedure," *IEEE Proceedings, Computational Intelligence for Modeling, Control, and Automation* 2005, 2, 215-221.

Op-Ed Publications

58. **Saghafian, S.** "Is the Pursuit of Efficiency in Healthcare Worth the Gamble?" *INFORMS OR/MS Today*,

op-ed, 2023, Dec. 06. [op-ed Link]

59. **Saghafian, S.** "Why Healthcare Transparency Is Complicated and How It Can be Fixed," *The Hill, op-ed,* 2020, Feb. 19. [op-ed Link]

Publications (Submitted or In Progress)

[Underline denotes student advisees] [* denotes postdoc advisees] ["(M.D)" denotes M.D. collaborators]

60. Dean*, A., Orfanoudaki*, A., **Saghafian, S.,** Song, Karen, Cook (M.D.), C.B. and H.A. Chakkera (M.D.). "Algorithm, Human, or the Centaur: How to Enhance Clinical Care?" 2025 *Manufacturing and Service Operations Management (invited for the 2nd round).*
    - **Selected for MSOM 2025 Healthcare SIG**
    - **Media Coverage (selected):**
        - **Can AI be a Better Doctor?**
        - **Using AI for Public Impact: Insights from Dr. Soroush Saghafian [five takeaways from an AI pioneer about its potential impact in healthcare]**
61. Boloori, A, **Saghafian,** and E. Nategh "Human-Based Versus Algorithmic-Based Treatments: Evidence from the Opioid Epidemic," *Management Science, 2026 (Under Review).*
62. Zhalechian*, M., Hejazian*, H., **Saghafian, S.**, and F. Yoshimi (M.D.), "Interpretable Design of Coordinated Multi-Agent Mobile Health Applications," *Management Science* (to be submitted, 2026).
63. Song, L. and **S. Saghafian** "The Spillover Effects of Hospital Closures on the Efficiency and Quality of Other Hospitals," *Under Revision*, 2024.
    - **POMS 2019 College of Healthcare Best Paper Award (first place)**
    - **Media Coverage (selected):**
        - **Atlanta's Health Care System Is Strained by Major Hospital's Closing, Doctors and Patients Say [NBC News]**
        - **Decades after Historic Black Hospital Closes, Former Nurses Fight to Keep the Memory Alive [PBS NewsHour]**
64. Shakeri, M., Bijvank, M., and **Saghafian, S.** "Who to See Next? Guiding Physicians with Time-dependent Patient Selection Policies Under Shift Work," *Management Science*, 2026 (Under Review).
65. Zhang*, M, Aghaei*, S., **Saghafian, S.**, "Large Language Models for Sequential Decision-Making: Improving In-Context Learning via Supervised Fine-Tuning" *NeurIPS,* 2026 (Under Review).
66. Lin, S., **Saghafian, S.**, Fulk-Logon (M.D.), J., DeStefino (M.D.), N., Lee (M.D.), D.D. "Allocation Out of Sequence in Liver Transplant: Triggers, Practice Variation and Policy Implications," *Work in Progress, 2026.*
67. Jameson, J., Tarantino, G., Gusev, S., Karlas, B., Liu (M.D.), D., **Saghafian, S.** "Performance Thresholds for Biomarker-Guided Immunotherapy Selection in Metastatic Melanoma: A Microsimulation Study Calibrated to CheckMate 067," *Work in Progress, 2026.*
68. **Saghafian, S.,** Imanirad, R., Traub (M.D.), S.J. "Do Independent and Parallel Processing Physicians Influence Each Other's Performance? Evidence from the Emergency Department" *Under Revision*, 2023.
69. Rasouli, M. and **S. Saghafian** "Robust Partially Observable Markov Decision Processes," *Work in Progress, 2023.*
70. Song, L. and **S. Saghafian** "The Allocation of Funds in Healthcare: Which Hospitals to Support?" *Work in Progress,* 2023.
71. **Saghafian, S.** "Causal and Counterfactual Reasoning Under Ambiguity," *Work in Progress,* 2023.

Blog Posts [Blog Series: Public Impact Analytics Science]

- **Saghafian, S.** "Preparing AI for Sequential Decision-Making — and Why It Matters," 20206 (June) [Link]
- **Saghafian, S.** "What AI is Lacking: Insight-Driven Problem Solving," 2025 (Feb.) [Link]
- **Saghafian, S.** "Digital Phenotyping: Analytics Science from the Inception of Computer Networks (Data Pushing) to the Age of Fitbit Data (Data Pulling)," 2024 (Nov.) [Link]
- **Saghafian, S.** "The Public Impact of Using Observational Data to Enhance Efficiency and Effectiveness: From COVID-19 Vaccines to Startups to Emergency Rooms," 2024 (June) [Link]
- **Saghafian, S.** "AI, Human Rights, and Public Impact: Promises and Risks," 2023 (Dec.) [Link]
- **Saghafian, S.** "The Analytics Science Behind ChatGPT: Human, Algorithm, or a Human-Algorithm Centaur?," 2023 (Jan.) [Link]
- **Saghafian, S.** "The Public Impact of Queueing Theory: From Queen Elizabeth to Internet to Emergency Rooms," 2022 (Oct.) [Link]
- **Saghafian, S.** "The Public Impact Analytics Science Behind Mobile Health (mHealth) and Digital Health Interventions," 2021 (Aug.) [Link]
- **Saghafian, S.** "Successful Public Impact Analytics Science in the Era of Information and Algorithmic Transparency Movements," 2021 (Mar.) [Link]
- **Saghafian, S.** "Ambiguity Versus Risk in Sequential Decision-Making: Incomplete Information, Causal Inference, and Reinforcement Learning," 2021 (Feb.) [Link]

Conference Proceedings

- Badarinath, D., Orfanoudaki, A., and **Saghafian, S.** "Cost of Interpretability-Blocked Value Iteration," *In Workshop on Interpretable Policies in Reinforcement Learning*, @ RLC-2024.
- Atkinson, M.K., and **S. Saghafian** "Who Should See the Patient? On Discretionary Patient-Provider Assignments in Hospitals," *Academy of Management Annual Meeting Proceedings, 2020.*
- **Saghafian, S.** and B. Tomlin "The Newsvendor under Demand Ambiguity-Aversion: A Data and Information-Driven Approach" Refereed Extended Abstract, *Proceedings of* 2015 *Manufacturing and Service Operations Management (MSOM) Conference*.
- **Saghafian, S.** and B. Tomlin "The Newsvendor under Demand Ambiguity: Combining Data with Moment and Tail Information" Refereed Extended Abstract, *Proceedings of* 2014 *Manufacturing and Service Operations Management (MSOM) Conference*.
- **Saghafian, S.** and M.P. Van Oyen "Flexibility of Reliable Suppliers and Monitoring of Unreliable Suppliers: How Much Should a Manufacturer Invest?" Refereed Extended Abstract, *Proceedings of* 2008 *Manufacturing and Service Operations Management (MSOM)*.
- **Saghafian, S.,** Van Oyen, M.P., and B. Kolfal "A New Policy for the Control of Parallel Queueing Systems," *Proceedings of 2009 NSF Engineering Research and Innovation Conference*, Honolulu, Hawaii.
- **Saghafian, S.** and M.P. Van Oyen "The Value of Operational Flexibility and Risk Level Information in Supply Chains under Disruption," *Proceedings of 2008 NSF Engineering Research and Innovation Conference*, Knoxville, Tennessee.
- **Saghafian, S.** and M.R. Akbari "A Service Level Based Approach to Supply Chain Network Design", *Proceedings of International Conference on Operations and Supply Chain Management (OSCM 2005)*, Bali, Indonesia.
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- **Saghafian, S.** and M.R. Akbari "Integrative Cell Formation and Layout Design in Cellular Manufacturing Systems," 1st Edition, *Proceedings of 3rd International Conference of Industrial Engineering (IIEC 2004)*.
- **Saghafian, S.** and M.R. Akbari "An Integrated Approach to Supply Chain Network Design with Service Level Consideration," 2nd Edition, Proceedings *of 4th International Conference of Industrial Engineering* (IIEC 2005).
- **Saghafian, S.** and M.R. Akbari "A New Hybrid Metaheuristic Approach to Cellular Manufacturing Systems Design," *IEEE Conference of Computational Intelligence: Methods and Applications (CIMA 2005)*, Istanbul, Turkey.

Other Publications

- Boloori, A. and **S. Saghafian** "COVID-19: What Intervention Policies Are Most Effective? A Brief Report Using Data from Government of Bahrain, *Technical Report* (HKS Working Paper RWP20-011), 2020.
- **Saghafian, S.,** G. Austin, and S.J. Traub (M.D.) "Operations Research/Management: The prescription for Emergency Departments?" *IIE Magazine* (featured article), 2015.
- **Saghafian, S.** and M.P. Van Oyen "Managing supply risks: Should you monitor your risky suppliers? Inject flexibility into your backup system?" *IIE Magazine* (featured article), 2012.
- **Saghafian, S.** "Heuristic Algorithms for Terminal Assignment Problem," *Behbood Industrial Engineering Journal*, 2002, 9, 57-61.
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- **Saghafian, S.** "Applications of WLANs: Wireless Local Area Networks," *Behbood Industrial Engineering Journal*, 2002, 7, 51-54.
- **Saghafian, S.** "An Intro to StarOffice 5.2*," Behbood Industrial Engineering Journal*, 2001, 5, 61-66.
- **Saghafian, S.** "Hacking Techniques," *Arpanet*, 2002, 3, 55-63.
- **Saghafian, S.** "Windows Systems: A review," *Behbood Industrial Engineering Journal*, 2002, 9, 62-65.
- **Saghafian, S.**, M. Jalilpour and M. Setak "Applications of Neural Networks in Prediction," *Proceedings of First Iranian National Conference on Logistics and Supply Chain*, 2005.
- **Saghafian, S.**, and M. Setak "Applications of Fuzzy Theory in Inventory and Production Control," *Proceedings of First Iranian National Conference on Logistics and Supply Chain*, 2005.

Media Coverage (Selected)

- Soroush Saghafian's Interview with Fast Company: Using AI for Public Impact: Insights from Dr. Soroush Saghafian [five takeaways from an AI pioneer about its potential impact in healthcare]
- Soroush Saghafian's Large Grant: Harvard Kennedy School Public Impact Analytics Science Lab Receives $3 Million From DOD [Harvard Crimson]
- Soroush Saghafian on the role of AI in healthcare: Move Fast and Heal Things? AI Tests Regulation and Medicine's Cautious Culture
- Soroush Saghafian on the Impact of Hospital Closures: Hospital Closures Mean More Than Just the Loss of

Access to Medical Care

- Soroush Saghafian's work on health disparities: Black Americans twice as likely to die during childhood as whites [U.S. News]
- Soroush Saghafian's work on health disparities: Race mortality gap narrows, except for infants [Harvard Gazette]
- Soroush Saghafian's Interview with NPR/WBUR: The 70-year study of mortality gaps [NPR/WBUR]
- Soroush Saghafian's Interview with PolicyCast on the Role of Data and Intelligent Policy Design in Healthcare
- Soroush Saghafian's work on health disparities: More Black babies are dying than white infants. Scientists are blaming healthcare inequality [The Independent]
- Soroush Saghafian's work on ER Triage Protocol: Study: Triage Protocol Shows Promise in Easing ED Overcrowding [Healthcare Innovation]
- Soroush Saghafian's work on ER Triage Protocol: Study: A Simple ER Fix Can Save Time Without Adding Beds [US News]
- Soroush Saghafian's Interview: Medical disparities by region and income can be reduced through AI [Korean Newspaper: Chosun Ilbo]
- Soroush Saghafian's work on health disparities: Black Americans twice as likely to die during childhood as whites, research reveals [Medical Press]
- Soroush Saghafian's work on health disparities: More babies are being admitted to NICUs in Indiana: CDC data brief [NPR Indianapolis]
- Soroush Saghafian's work on vertical integration in medicine: Study Finds Vertical Integration in Medicine is Leading to Higher Costs and Worse Health Outcomes
- Soroush Saghafian's interview with Harvard Crimson: Harvard Medical School Licenses Consumer Health Content to Microsoft for AI Use in New Deal
- TV Interview on the societal implications of ChatGPT and other Large Language Models
- Soroush Saghafian's Interview (Video): The Promise and Challenges of Artificial Intelligence in Health Care
- TV Interview on the Impact of Hospital Closures
- Soroush Saghafian's work on hospital closures: Decades after Historic Black Hospital Closes, Former Nurses Fight to Keep the Memory Alive [PBS NewsHour]
- Soroush Saghafian's work on hospital closures: Atlanta's Health Care System Is Strained by Major Hospital's Closing, Doctors and Patients Say [NBC News]
- Soroush Saghafian's work on hospital closures: Patients and staff criticize state's plan to close beloved children's hospital in Canton [Boston Globe]
- Soroush Saghafian's work: Transforming FDA Clearance: How AI and Human Insight Can Improve Medical

Device Safety [Devdiscourse.com]

- Soroush Saghafian's work: From Centaurs to Cyborgs: Our Evolving Relationship with Generative AI
- Soroush Saghafian's work: The Next Frontier of Education: From Ivy Halls to Algorithmic Futures [Education.com]
- Soroush Saghafian's work: Can AI be a Better Doctor?
- Soroush Saghafian's work: A Human-Algorithm Approach to Approving Medical Devices Could Slash the Recall Rate and Save Billions
- Soroush Saghafian: Making AI Impactful in Healthcare and Public Policy
- Soroush Saghafian's work: Fitbit Data Accurately Predicts Bipolar Disorder Mood Swings
- Soroush Saghafian's work: Should Race be Used in Determining Risk for Disease? Yes. And No.
- Soroush Saghafian's work: Hospitals Swallowing Independent Practices Found to Lead to Higher Costs, Worse Patient Health Outcomes [Medical Xpress]
- Saghafian's PIAS-Lab Receives DOD Award
- Soroush Saghafian on hospital closures: How Five Doctors Recovered After Hospital Closures [Medscape]
- Interview with Euronews: AI May Help to Predict How Patients Respond to Antidepressant Treatment [Euronews]
- Soroush Saghafian's work on vertical integration in medicine: Integration among Healthcare Providers Is Not All It's Cracked Up to Be [DOTmed]
- Soroush Saghafian's work on hospital closures: How Do Hospital Closures Impact Patient Care?
- Soroush Saghafian's work on hospital closures: After a Year, Questions Remain on Atlanta Medical Center's Closure [The Atlanta Journal-Constitution]
- Soroush Saghafian's work: Vertical Integration is Hurting Healthcare
- Q&A with Soroush Saghafian: Big Data and Machine Learning can Usher in a New Era of Policymaking
- Interview with GrowthPolicy: Soroush Saghafian on Public Impact through Intelligent Policy Design
- Soroush Saghafian's Interview with INFORMS about the role of OR/MS and Machine Learning in Healthcare Analytics and Policy Planning, and their Impact on Diversity, Equity, and Inclusion (DEI).
- Soroush Saghafian on ChatGPT, Cheating, and the Future of Education [Harvard Crimson Magazine]
- Soroush Saghafian on Optimizing Mobile Health (mHealth) Interventions in the National Academy of Medicine
- Soroush Saghafian Awarded INFORMS Young Scholar Prize
- Soroush Saghafian Awarded INFORMS Prize

- Soroush Saghafian's work on COVID-19 policies: Soroush Saghafian Provides the Quantitative Data and Analytic Model to Help States Weigh the Health Gains and Economic Burdens of Intervention Policies
- Soroush Saghafian's work on COVID-19 policies: Soroush Saghafian Analyzes Coronavirus Policy Options for the Government of Bahrain
- Soroush Saghafian's work on How the Public Sector and Civil Society Can Respond to the Coronavirus Pandemic
- Soroush Saghafian: Why Health Care Transparency is Complicated and How It Can be Fixed [The Hill]
- Soroush Saghafian's work: Cutting ER Lines via Tele-Triage
- Soroush Saghafian's Interview with INFORMS on Healthcare Transparency
- Soroush Saghafian's work: Improving Quality Transparency in Healthcare [National Academy of Medicine]
- Soroush Saghafian's work: Increasing Transparency in the Healthcare System May Not Be Always Better [www.news-medical.net]
- Soroush Saghafian's work: Increasing Transparency in the Healthcare Sector: More Might Not Be Bette [INFORMS]
- Soroush Saghafian's work: New Research Explores on Increasing Transparency in the Healthcare Sector [Industry Global News 24]
- Soroush Saghafian's work: Increasing Transparency in the Healthcare Sector: More Might Not Be Better [Global Health News Wire]
- Soroush Saghafian's work: Increasing Transparency in the Healthcare Sector: More Might Not Be Better [EurekAlert; American Association for the Advancement of Science]
- Soroush Saghafian's work: Increasing Transparency in the Healthcare Sector: More Might Not Be Better [Managed Healthcare Executives]

Postdoctoral Advisees

- **Minmin Zhang** (July 2025-July 2026) Ph.D. (2025) in Operations Management, University of Texas, Dallas, Naveen Jindal School of Management. Position: Postdoc Fellow Affiliate at the Harvard PIAS-Lab.
- **Lihi Idan** (Jan 2024-Jan 2025) Ph.D. (2022) in Computer Science from Yale University. Position: Postdoc Fellow Affiliate at the Harvard PIAS-Lab. Current Position: Assistant Professor at Texas A&M
- **Sina Aghaei** (Jan 2024-Jan 2025). Ph.D. (2023) in Operations Research and Industrial Engineering, Center for Artificial Intelligence in Society at the University of Southern California. Position: Postdoc Fellow at the Harvard PIAS-Lab. Current Position: Researcher at Meta AI.
- **Hossein Hejazian** (Feb 2024-Feb 2025). Ph.D. (2024) in Operations Management, Desautels Faculty of Management, McGill University. Position: Postdoc Fellow at the Harvard PIAS-Lab.
- **Agni Orfanoudaki** (June 2021-June 2023). Ph.D. (2021) in Operations Research from MIT. Ph.D.

advisor: Prof. Dimitris Bertsimas. Research area: The intersection of Optimization and Machine Learning with applications to healthcare. Position: Postdoc Fellow at the Harvard PIAS-Lab. Current Position: Associate Professor of Operations Management at the Saïd Business School, Oxford University

- **Mohammad Zhalechian** (July 2022-July 2024). Ph.D. (2022) in Industrial and Operations Engineering from the University of Michigan. Research Area: the intersection of Statistical Machine Learning and Operations Research. Position: Postdoc Fellow at the Harvard PIAS-Lab. Current Position: Assistant Professor of Operations and Decision Technologies at Kelley School of Business, Indiana University.

- **Arshya Feizi** (April 2022-April 2023). Ph.D. (2022) in Operations Management from Boston University. Research area: Hospital Operations. Position: Postdoc Fellow at the Harvard PIAS-Lab. Current Position: Associate at Analysis Group.

- **Xi Xiong** (July 2021-July 2022). Ph.D. (2021) in Transportation Planning and Engineering from New York University. Research area: Multi-agent reinforcement learning. Position: Postdoc Visiting Fellow at the Harvard PIAS-Lab.

Ph.D. Advisees

- **Jacob Jameson** (Current Ph.D. advisee) Role: **Chair**. Dissertation Title: TBD.

- **Ibrahima (Ibou) Dieye** (Current Ph.D. co-advisee), Dissertation Title: TBD.

- **Deepak Badarinath** (Current Ph.D. co-advisee), Dissertation Title: TBD.

- **Sidian Lin** (Ph.D., May 2027 (expected)) Role: **Chair**. Dissertation Title: Predictive and Prescriptive Machine Learning Models for Sequential Decision-Making in Healthcare. Other committee members: Susan Murphy (Harvard Statistics and Computer Science), Sharad Goel (HKS), Jessica Lipschitz (Brigham and Women's Hospital)

- **Amy Wickett** (Ph.D., Dec. 2022), Role: Committee Member. Dissertation Title: "Essays on Diversity." Position on Graduation: Applied Scientist II at Uber.

- **Stuart Iler** (Ph.D., May 2022), Role: Committee Member. Dissertation Title: "Essays on Shock Propagation in Economic Production Networks." Position on Graduation: Consultant at Resources for Future. Other committee members: Robert Stavins (HKS) and Joseph Aldy (HKS).

- **Raha Imanirad** (Ph.D., June 2020), Role: **Chair**. Dissertation Title: "Essays on Emergency Department Physician Performance". Position on Graduation: Assistant Professor of Operations Management, Schulich School of Business, York University. Committee members: Ananth Raman (HBS) and Ryan Buell (HBS).

- **Lina Song** (Ph.D., May 2020), Role: **Chair.** Dissertation Title: "Data-Driven Healthcare Operations Management: The Role of Provider Market and Public Policy." Position on Graduation: Assistant Professor of Operations and Technology, University College London, School of Management. Committee members: Joseph Newhouse (HMS and HKS) and Mary Beth Landrum (HMS).

- **Vidit Munshi** (Ph.D., May 2020), Role: Committee Member. Dissertation Title: "Risk-Based Strategies for Population Screening and Disease Management". Position on Graduation: Lecturer, Questrom School of Business, Boston University. Committee members: Jane Kim (HSPH) and Ankur Pandya (HSPH).

- **Alireza Boloori** (Ph.D., Apr. 2019), Role: **Chair**. Dissertation Title: "Data-Driven Decision-Making for Medications Management Modalities." Position on Graduation: Assistant Professor (Dept. of Statistics and Probability), Michigan State University. Current Position: Assistant Professor of Business Analytics,

University of Washington.

- **Austin Bren** (Ph.D., Apr. 2018), Role: **Chair**. Dissertation Title: "Data-Driven Robust Optimization in Healthcare Applications." Position on Graduation: Operations Research Scientist at Opex Analytics.

- **Aysegul Demirtas** (Ph.D., Feb. 2018), Role: **Co-Chair**. Dissertation Title: "The Optimal Control of Child Delivery for Women with Hypertensive Disorders of Pregnancy." Position on Graduation: Data Scientist at Intel.

- **Bahareh Azarnoush** (Ph.D., Dec. 2014), Role: Committee Member. Dissertation Title: "Holistic Learning for Multi-Target and Network Monitoring Problems." Position on Graduation: Data Scientist at Netflix.

Senior Fellow Advisees and Visitors (Industry and Academia)

- **Sol Rashidi,** Chief AI Officer for Enterprise, Former AWS and Fortune 100 C-Suite executive, Senior Fellow at the Harvard Mossavar-Rahmani Center for Business and Government.

- **Miklós Szócska** (M.D.), Former Minister of State for Health of Hungary, the Director of The Health Services Management Training Centre, and Senior Fellow at the Harvard Mossavar-Rahmani Center for Business and Government.

- **Kyu Rhee** (M.D., MPP), Senior Vice President and Aetna Chief Medical Officer at CVS Health, and Senior Fellow at the Harvard Mossavar-Rahmani Center for Business and Government.

- **Brian Denton** (M.D., Ph.D.), Stephen M. Pollock Professor of Industrial and Operations Engineering, and Department Chair.

- **Adel Hamaizia** (Ph.D.), Managing Director at London-based Highbridge Advisory.

- **Omar Robles** (Ph.D., MBA), Managing Partner at Emerging Health Consulting and Senior Fellow at the Harvard Mossavar-Rahmani Center for Business and Government

- **Abdullah Alibrahim** (Ph.D., MS.), Assistant Professor of Industrial & Management Systems Engineering at the College of Engineering & Petroleum, Kuwait University, and Senior Fellow at the Harvard Middle East Initiative.

Non-Ph.D. Advisees

- Sara Guezguez (2025), Harvard College Undergraduate RA.

- Guadalupe Hayes-Mota, May 2023 (MBA, MS, MPP, Title: "Unraveling the Genomic Frontier: Machine Learning's Pivotal Role in Advancing Gene Editing and Therapeutic Innovation."

- Dean Mai, (Nov. 2023), Harvard Master of Liberal Arts (ALM) Thesis, Title: "Human Preference for Machines Versus Human-based Judgement: A Balance Theory Perspective."

- Camille Ang, Mar. 2022 (HKS-HBS MPA/ID-MBA Student), Second Year Policy Analysis, Title: "Improving Cost Efficiency at PhilHealth: Towards Greater Health Risks Protection for Filipinos."

- Jake Schneider, Mar. 2020 (MPA/ID Student), Second Year Policy Analysis, Title: "Dislocations in

Foreign Direct Investment: A Machine Learning Approach to Identifying Over- and Under-Invested International Markets."

- Dana Rye, Mar. 2016 (Joint MBA and MPP Student), Policy Analysis Exercise Title: "Brigham & Women's Hospital Endoscopy Unit TDABC Analysis."
- Garret Austin, Dec. 2013 (Undergraduate Honors Thesis), Thesis Title: "Operations Research Contributions to Emergency Department Patient Flow Optimization."

Teaching

- **Harvard University**
  - API 222 Machine Learning and Big Data Analytics [Fall 2025]
  - API 202M-Z Quantitative Analysis and Empirical Methods II [Spring 2025]
  - Computer Science Department: COMP SCI 2880 (Harvard Computer Science Department), AI for Social Impact [Fall 2024, Invited Guest Lecturer]
  - API 222 Machine Learning and Big Data Analytics [Fall 2024]
  - Harvard Kennedy School **Executive Education**: Leading in Artificial Intelligence, "Advancements in AI and ML" [Summer 2024]
  - API 222 Machine Learning and Big Data Analytics [Spring 2024]
  - Harvard Kennedy School **Executive Education**: Investment Decisions and Behavioral Finance, "Artificial Intelligence" [Fall 2023]
  - Harvard T.H. Chan School of Public Health **Executive Education**: "Program for Chairs of Clinical Services" [Spring 2023]
  - Harvard Kennedy School **Executive Education**: Wexner Senior Leaders, "Machine Learning and Big Data for Policymakers" [Spring 2023]
  - API 222A Machine Learning and Big Data Analytics [Spring 2023]
  - Harvard Kennedy School **Executive Education**: "Services Delivery: Quality, Equity, Efficiency" [Summer 2022]
  - Harvard T.H. Chan School of Public Health **Executive Education**: "Program for Chairs of Clinical Services" [Spring 2022]
  - API 222A Machine Learning and Big Data Analytics [Fall 2021]
  - API 222B Machine Learning and Big Data Analytics [Fall 2021]
  - Harvard Kennedy School **Executive Education**: "Services Delivery: Quality, Equity, Efficiency" [Summer 2021]
  - API 222A Machine Learning and Big Data Analytics [Fall 2020]
  - API 222B Machine Learning and Big Data Analytics [Fall 2020]
  - API 115/ECON 2115 Econometric Methods II [Spring 2020- Machine Learning Module]
  - API 222A Machine Learning and Big Data Analytics [Fall 2019]
  - API 222B Machine Learning and Big Data Analytics [Fall 2019]
  - API 222B Machine Learning and Big Data Analytics [Spring 2019]
  - API 115/ECON 2115 Econometric Methods II [Spring 2019- Machine Learning Module]
  - API 222 Machine Learning and Big Data Analytics [Fall 2018]
  - API 201Z Quantitative Analysis and Empirical Methods [Fall 2017]

- API 201Z Quantitative Analysis and Empirical Methods [Fall 2016]
- MLD 603M Operations Management for Improving Public Services [Spring 2016]

- **Arizona State University**
  - IEE 575 Applied Stochastic Operations Research Models [Spring 2015]
  - IEE 470 Stochastic Operations Research [Spring 2015]
  - IEE 470 Stochastic Operations Research [Fall 2014]
  - IEE 575 Applied Stochastic Operations Research Models [Spring 2014]
  - IEE 470 Stochastic Operations Research [Fall 2013]
  - IEE 598 Stochastic Operations Research [Fall 2013]
  - IEE 598 Operations Research in Hospitals [Spring 2013] (In collaboration with Mayo Clinic)
  - IEE 498 Operations Research in Hospitals [Spring 2013] (In collaboration with Mayo Clinic)
  - IEE 470 Stochastic Operations Research [Fall 2012]
  - IEE 598 Stochastic Operations Research [Fall 2012]

- **University of Michigan**
  - IOE 440 Operations Analysis and Management [Fall 2010]
  - IOE 440 Operations Analysis and Management [Fall 2009]

Conference Presentations

- **INFORMS Healthcare 2026 (Raleigh, NC)** "Interpretable Design of Multi-Agent Reinforcement Learning in Mobile Health Applications" (Presented by former postdoc advisee Mohammad Zhalechian)
- **INFORMS Healthcare 2026 (Raleigh, NC)** Determining Performance Thresholds for Biomarker-Guided Immunotherapy Selection in Metastatic Melanoma (Presented by Ph.D. student advisee Jacob Jameson)
- **NBER Conference: Applications of Artificial Intelligence in Healthcare 2026** (Cambridge, MA) "Harmonizing Safety and Speed: A Human-Algorithm Approach to Enhance the FDA's Medical Device Clearance Policy."
- **POMS 2026** (Reno, NV) "The Impact of Batching Advanced Imaging Tests in Emergency Departments" (Presented by Ph.D. student advisee Jacob Jameson)
- **University of Maryland, Smith School of Business, Workshop on AI & Analytics for Social Good 2026** (College Park, MD) "Interpretable Design of Multi-Agent Reinforcement Learning in Mobile Health Applications" (Presented by former postdoc advisee Mohammad Zhalechian)
- **INFORMS 2025** (Atlanta, GA) "Causal Reinforcement Learning and Centaurs: Making AI Impactful in Healthcare" **(invited talk)**
- **INFORMS 2025** (Atlanta, GA) "The Impact of Batching Advanced Imaging Tests in Emergency Departments" (Presented by Ph.D. student advisee Jacob Jameson) **(HAS best student paper session)**
- **INFORMS 2025** (Atlanta, GA) "Biomarker-Guided Immunotherapy in Metastatic Melanoma" (Presented by Ph.D. student advisee Jacob Jameson) **(invited talk)**
- **INFORMS 2025** (Atlanta, GA) "Interpretable Design of Multi-Agent Reinforcement Learning in Mobile Health Applications" (Presented by postdoc advisee Hossein Hejazian) **(invited talk)**

- **INFORMS 2025** (Atlanta, GA) "A Multi-Agent Reinforcement Learning Algorithm for Personalized Recommendations in Bipolar Disorder" (Presented by Ph.D. student advisee Sidian Lin) **(invited talk)**
- **INFORMS 2025** (Atlanta, GA) "Harmonizing Safety and Speed: A Human-Algorithm Approach to Enhance the FDA's Medical Device Clearance Policy" (Presented by former postdoc advisee Mohammad Zhalechian) **(invited talk)**
- **MSOM 2025 Healthcare SIG** (London, UK, Upcoming) "Algorithm, Human, or the Centaur: How to Enhance Clinical Care?" (Presented by former postdoc advisee Agni Orfanoudaki)
- **MSOM 2025** (London, UK) "Harmonizing Safety and Speed: A Human-Algorithm Approach to Enhance the FDA's Medical Device Clearance Policy" (Presented by former postdoc advisee Mohammad Zhalechian)
- T**he American Academy of Emergency Medicine (AAEM) Scientific Assembly 2025 (Miami, FL, Upcoming)** "Artificial Intelligence-Assisted Emergency Department Vertical Patient Flow Optimization" (To be presented by M.D. collaborator Nicole Hodgson)
- **POMS 2025** (Atlanta, GA) **"**Who is Next? Guiding Physicians with Time-dependent Patient Selection Policies under Shift Work" (Presented by Ph.D. student collaborator Mahdi Shakeri)
- **International Conf. on Computational Social Science 2024** (Philadelphia, PA): "Reevaluating the Role of Race and Ethnicity in Estimating Disease Risk" (Presented by Ph.D. student advisee Madison Coots)
- **Society for Medical Decision Making (SMDM) Annual Meeting 2024** (Boston, MA): "A Framework for Evaluating the Role of Race and Ethnicity in Estimating Disease Risk" (Presented by Ph.D. student advisee Madison Coots)
- **INFORMS 2024** (Seattle, WA): "Data-Driven Excellence in Healthcare: Merging Optimization, Stochastic Decision-Making, and Operations Management" **(invited panelist)**
- **INFORMS 2024** (Seattle, WA): "Ambiguous Dynamic Treatment Regimes: A Reinforcement Learning Approach" **(invited talk)**
- **INFORMS 2024** (Seattle, WA): "AI Assistant for Highly Personalized and Dynamic Causal Decision-Making in Cancer Treatments" (Presented by postdoc advisee Sina Aghaei) **(invited talk)**
- **INFORMS 2024** (Seattle, WA): "Harmonizing Safety and Speed: An Analytical Approach to Enhance FDA's Medical Device Clearance Policy" (Presented by former postdoc advisee Mohammad Zhalechian) **(invited talk)**
- **INFORMS 2024** (Seattle, WA): "Featured Session of the Journal, Health Care Management Science" **(invited talk)**
- **INFORMS 2024** (Seattle, WA): "Variation in Batch Ordering of Imaging Tests in the Emergency Department and the Impact on Care Delivery" (Presented by Ph.D. student advisee Jacob Jameson) **(invited talk)**
- **INFORMS 2024** (Seattle, WA): "Effective and Efficient Staff in Emergency Departments" (Presented by postdoc advisee Hossein Hejazian) **(invited talk)**
- **INFORMS 2024** (Seattle, WA): "Development and Validation of a Reinforcement Learning Algorithm for Personalized Treatment in Bipolar Disorder" (Presented by Ph.D. student advisee Sidian Lin) **(invited talk)**

- **POMS 2024** (Minneapolis, MN): "Algorithm, Human, or the Centaur: How to Enhance Clinical Care?" (Presented by former postdoc advisee Agni Orfanoudaki) **(invited talk)**
- **POMS 2024** (Minneapolis, MN): "Harmonizing Safety and Speed: An Analytical Approach to Enhance FDA's Medical Device Clearance Policy" (Presented by former postdoc advisee Mohammad Zhalechian) **(invited talk)**
- **POMS 2024** (Minneapolis, MN): "Vertical Patient Streaming in Emergency Departments" (Presented by former postdoc advisee Agni Orfanoudaki) **(invited talk)**
- **INFORMS 2023** (Phoenix, AZ): "INFORMS Public Sector Operations Research Best Video Award Finalist: Improving Emergency Department Patient Flow" (Presented by Ph.D. student advisee Jacob Jameson) **(invited talk)**
- **INFORMS 2023** (Phoenix, AZ): "Balancing Speed with Safety: An Analytical Approach to Improve FDA's Premarket Approval Pathway" (Presented by former postdoc advisee Mohammad Zhalechian) **(invited talk)**
- **INFORMS 2023** (Phoenix, AZ): "Does Machine Learning Improve Operational Efficiency? Evidence from the Design of an Emergency Department Vertical Processing Unit" (Presented by former postdoc advisee Agni Orfanoudaki) **(invited talk)**
- **INFORMS 2023** (Phoenix, AZ): "The Impact of Batch vs. Sequential Ordering Tests in the Emergency Department" (Presented by Ph.D. student advisee Jacob Jameson) **(invited talk)**
- **INFORMS 2023** (Phoenix, AZ): "Should Race and Ethnicity be Used in Predictive Risk Models? Evidence from Diabetes Screening (Presented by Ph.D. student advisee Madison Coots) **(invited talk)**
- **INFORMS 2023** (Indianapolis, IN) "A Data-driven Analytical Framework for the Opioid Prescription Epidemic" (Presented by former Ph.D. advisee Alireza Boloori) **(invited talk)**
- **INFORMS 2023** (Phoenix, AZ): "Estimating Activity and Sleep Goals for Bipolar Disorder Patients" (Presented by Ph.D. student advisee Sidian Lin) **(invited talk)**
- **Academy of Management (Professional Development Workshop) 2023** (Boston, MA): "Making AI and ML Impactful in Healthcare" **(invited workshop facilitator on "Hot Methods")**
- **INFORMS Healthcare 2023** (Toronto, ON): "Ambiguous Dynamic Treatment Regimes: A Reinforcement Learning Approach" **(invited talk)**
- **INFORMS Healthcare 2023** (Toronto, ON): "Estimating Activity and Sleep Goals for Bipolar Disorder Patients" (Presented by Ph.D. student advisee Sidian Lin) **(invited talk)**
- **INFORMS Healthcare 2023** (Toronto, ON): Algorithm, Human, or the Centaur: How to Enhance Clinical Care?" (Presented by postdoc advisee Agni Orfanoudaki) **(invited talk)**
- **INFORMS Healthcare 2023** (Toronto, ON): Does Machine Learning Improve Operational Efficiency? Evidence from the Design of an Emergency Department Vertical Processing Unit" (Presented by postdoc advisee Agni Orfanoudaki) **(invited talk)**
- **INFORMS Healthcare 2023** (Toronto, ON): "Interpretable Design of Multi-Agent Mobile Health (Mhealth) Applications" (Presented by postdoc advisee Mohammad Zhalechian) **(invited talk)**
- **INFORMS Healthcare 2023** (Toronto, ON): "Should Race and Ethnicity be Used in Predictive Risk Models? Evidence from Diabetes Screening (Presented by Ph.D. student advisee Madison Coots) **(invited**

talk)

- **INFORMS Healthcare 2023** (Toronto, ON): "Balancing Speed with Safety: An Analytical Approach to Improve FDA's Premarket Approval Pathway" (Presented by postdoc advisee Mohammad Zhalechian) **(invited talk)**
- **INFORMS Healthcare 2023** (Toronto, ON): "Improving ED Efficiency: Tradeoffs Between Batch Ordering and Sequentially Ordering Diagnostic Tests" (Presented by Ph.D. student advisee Jacob Jameson) **(invited talk)**
- **INFORMS Healthcare 2023** (Toronto, ON): "Who is an Efficient Physician? Evidence from Emergency Medicine (Presented by former Ph.D. student advisee Raha Imanirad) **(invited talk)**
- **INFORMS 2022** (Indianapolis, IN): "Analytics for Public Impact: Research Activities at the Public Impact Analytics Science Lab at Harvard" **(invited talk)**
- **INFORMS 2022** (Indianapolis, IN): "Managing the Risk of Readmission for Solid Organ Transplant Patients" (Presented by postdoc advisee Agni Orfanoudaki) **(invited talk)**
- **INFORMS 2022** (Indianapolis, IN): "A Comparison Between Rapid Medical Assessment vs. Fast-Track in Emergency Departments" (Presented by postdoc advisee Arshya Feizi) **(invited talk)**
- **INFORMS 2022** (Indianapolis, IN): "Offline Policy Learning of Mobile Health Interventions for Bipolar Disorder Patients" (Presented by Ph.D. advisee Sidian Lin) **(invited talk)**
- **INFORMS 2022** (Indianapolis, IN) A Data-driven Analytical Framework for the Opioid Prescription Epidemic (Presented by former Ph.D. advisee Alireza Boloori)
- **POMS 2022** (Virtual Conference): "The Allocation of Funds in Healthcare: Which Hospitals to Support" (Presented by former Ph.D. advisee Lina Song)
- **POMS 2022** (Virtual Conference): "The Impact of Vertical Integration on Healthcare Delivery: Evidence from Gastroenterology Practices" (Presented by former Ph.D. advisee Lina Song)
- **INFORMS 2021 (Anaheim, CA):** "The Impact of Vertical Integration on Healthcare Delivery: Evidence from Gastroenterology Practices" (Presented by Ph.D. advisee Lina Song) **(invited talk)**
- **INFORMS Healthcare 2021** (Virtual Conference): "Who Should See the Patient? On Deviations from Routine Patient-Provider Assignments in Hospitals" **(cluster organizer, session organizer, and chair)**
- **INFORMS 2021 (Anaheim, CA):** "Do Physicians Influence One Another's Performance: Evidence from the Emergency Department" (Presented by Ph.D. advisee, Raha Imanirad) **(invited talk)**
- **INFORMS Healthcare 2021** (Virtual Conference): "Who Should See the Patient? On Deviations from Routine Patient-Provider Assignments in Hospitals" **(cluster organizer, session organizer, and chair)**
- **INFORMS Healthcare 2021** (Virtual Conference): "The Impact of Vertical Integration on Healthcare Delivery: Evidence from Gastroenterology Practices" (Presented by Ph.D. advisee Lina Song) **(invited talk)**
- **INFORMS Healthcare 2021** (Virtual Conference): "The Allocation of Funds in Healthcare: Which Hospitals to Support" (Presented by Ph.D. advisee, Lina Song) **(invited talk)**
- **MSOM 2021** (Virtual Conference): "Who Should See the Patient? On Deviations from Routine Patient-Provider Assignments in Hospitals" **(MSOM Healthcare SIG Talk)**
- **MSOM 2021** (Virtual Conference): "The Impact of Vertical Integration on Physician Behavior and

Healthcare Delivery" (Presented by Ph.D. advisee Lina Song)

- **MSOM 2021** (Virtual Conference): "The Allocation of Funds in Healthcare: Which Hospitals to Support" (Presented by Ph.D. advisee Lina Song)
- **CORS (Canadian Operational Research Society) 2021** (Virtual Conference): "Do Physicians Influence One Another's Performance: Evidence from the Emergency Department" (Presented by Ph.D. advisee, Raha Imanirad)
- **POMS 2021** (Virtual Conference): "Vertical Integration and Quality: Evidence from Specialists-Hospital Integration" (Presented by Ph.D. student advisee Lina Song) **(invited talk)**
- **POMS 2021** (Virtual Conference): "The allocation of funds in healthcare: investment decisions under access-quality trade-off" (Presented by Ph.D. student advisee, Lina Song) **(invited talk)**
- **POMS 2021** (Virtual Conference): "COVID-19: Health and Economic Impacts of Societal Intervention Policies in the U.S." (Presented by Ph.D. student advisee Alireza Boloori) **(invited talk)**
- **INFORMS 2020** (Virtual Conference): "Who Should See the Patient? On Discretionary Patient-Provider Assignments in Hospitals" **(session organizer and chair)**
- **INFORMS 2020** (Virtual Conference): "The Impact of Vertical Integration on Physician Behavior and Healthcare Delivery" (Presented by Ph.D. student advisee Lina Song) **(invited talk)**
- **INFORMS 2020** (Virtual Conference): "The Allocation of Funds in Healthcare: Which Hospitals to Support?" (Presented by Ph.D. student advisee Lina Song) **(invited talk)**
- **INFORMS 2020** (Virtual Conference): "Do Physicians Influence One Another's Performance: Evidence from the Emergency Department" (Presented by Ph.D. student advisee Raha Imanirad) **(invited talk)**
- **Annual Meeting of Academy of Management 2020** (Vancouver, BC): "Who Should See the Patient? On Discretionary Patient-Provider Assignments in Hospitals" (Presented by collaborator Mariam Atkinson)
- **AcademyHealth 2020** (Boston, MA): "The Spillover Effects of Hospital Closures on the Efficiency and Quality of Other Hospitals" (Presented by Ph.D. student advisee Lina Song)
- **AcademyHealth 2020** (Boston, MA): "Vertical Integration and Quality: Evidence from Specialists-Hospital Integration" (Presented by Ph.D. student advisee Lina Song)
- **INFORMS Healthcare 2019** (Cambridge, MA): "Can Public Reporting Cure Healthcare? The Role of Quality Transparency in Improving Patient-Provider Alignment" **(session organizer and chair)**
- **INFORMS Healthcare 2019** (Cambridge, MA): "Do Hospital Closures Improve the Efficiency and Quality of Other Hospitals?" (Presented by Ph.D. student advisee Lina Song) **(invited talk)**
- **INFORMS Healthcare 2019** (Cambridge, MA): "Physician Peer Effects on Speed and Quality: Evidence from the Emergency Department" (Presented by Ph.D. student advisee Raha Imanirad) **(invited talk)**
- **INFORMS Healthcare 2019** (Cambridge, MA): "Who Is an Efficient and Effective Physician? Evidence from Emergence Medicine" (Presented by Ph.D. student advisee Raha Imanirad) **(invited talk)**
- **INFORMS Healthcare 2019** (Cambridge, MA): "Joint Patient Selection and Scheduling under No-Shows: Theory and Application in Proton Therapy" (Presented by co-author Nikos Trichakis): **invited talk)**
- **POMS 2019** (Washington, D.C.): "Physician Peer Effects on Speed and Quality: Evidence from the Emergency Department" (Presented by Ph.D. student advisee Raha Imanirad) **(invited talk)**
- **POMS 2019** (Washington, D.C.): "Do Hospital Closures Improve the Efficiency and Quality of Other

Hospitals?" (Presented by Ph.D. student advisee Lina Song) **(invited talk)**

- **INFORMS 2018** (Phoenix, AZ): "Workload Management in Telemedical Physician Triage and Other Knowledge-based Service Systems" **(invited talk)**
- **INFORMS 2018** (Phoenix, AZ): "Physician Peer Effects on Speed and Quality: Evidence from the Emergency Department" (Presented by Ph.D. student advisee Raha Imanirad) **(invited talk)**
- **INFORMS 2018** (Phoenix, AZ): "An Empirical Analysis of the Opioid Prescription Epidemic" (Presented by Ph.D. student advisee Alireza Boloori) **(invited talk)**
- **INFORMS 2018** (Phoenix, AZ): "Who Is an Efficient and Effective Physician? Evidence from Emergence Medicine" (Presented by Ph.D. student advisee, Raha Imanirad) **(invited talk)**
- **INFORMS 2018** (Phoenix, AZ): "Joint Patient Selection and Scheduling: Theory and Application in Proton Therapy" (Presented by Ph.D. student advisee Ruihao Zhu) **(invited talk)**
- **INFORMS 2018** (Phoenix, AZ): "Impact of Physician's Ambiguity on Management of Medications" (Presented by Ph.D. student advisee Alireza Boloori) **(invited talk)**
- **INFORMS 2018** (Phoenix, AZ): "Do Hospital Closures Improve the Efficiency and Quality of Other Hospitals?" (Presented by Ph.D. student advisee Lina Song) **(invited talk)**
- **INFORMS 2018** (Phoenix, AZ): "Can Public Reporting Cure Healthcare? The Role of Quality Transparency in Improving Patient-Provider Alignment" **(session organizer and chair)**
- **INFORMS 2018** (Phoenix, AZ): "Comparison of Post-transplantation Diabetes Mellitus Features and Outcomes in Kidney, Liver, and Heart Transplantation Patients" (Presented by Ph.D. student advisee, Vidit Munshi) **(session organizer and chair)**
- **MSOM 2018: Healthcare Operations Management SIG** (Dallas, TX): "Data-Driven Management of Post-Transplant Medications: An APOMDP Approach" (Presented by Ph.D. student advisee Alireza Boloori)
- **MSOM 2018** (Dallas, TX): "Can Public Reporting Cure Healthcare? The Role of Quality Transparency in Improving Patient-Provider Alignment"
- **MSOM 2018** (Dallas, TX): "The Internet of Things and Information Fusion: Who Talks to Who?"
- **MSOM 2018** (Dallas, TX): "Do Hospital Closures Improve the Efficiency and Quality of Other Hospitals?" (Presented by Ph.D. student advisee Lina Song)
- **MSOM 2018** (Dallas, TX): "Physician Peer Effects on Speed and Quality: Evidence from the Emergency Department (Presented by Ph.D. student advisee Raha Imanirad)
- **INFORMS 2017** (Houston, TX): "Impact of the United States Health Care Delivery System Reform on Care Patterns: Evidence from Cancer Care" (Presented by Ph.D. student advisee, Lina Song) **(invited talk)**
- **INFORMS 2017** (Houston, TX): "Evaluating The Performance of Emergency Department Physicians" (Presented by Ph.D. student advisee Raha Imanirad) **(invited talk)**
- **INFORMS 2017** (Houston, TX): "A Contract Mechanism for the Opioid Prescription Epidemic" (Presented by Ph.D. student advisee Alireza Boloori) **(invited talk)**
- **INFORMS 2017** (Houston, TX): "Data-Driven Management of Post-Transplant Medications: An APOMDP Approach" (Presented by Ph.D. student advisee Alireza Boloori) **(invited talk)**
- **INFORMS 2017** (Houston, TX): "Optimal Child Delivery Strategies for Hypertensive Disorders of

Pregnancy" (Presented by Ph.D. student advisee Aysegul Demirtas) **(invited talk)**

- **INFORMS 2017** (Houston, TX): "Data-Driven Percentile Optimization for Multi-class Queueing Systems with Model Ambiguity: Theory and Application" (Presented by Ph.D. student advisee, Austin Bren) **(invited talk)**
- **MSOM 2017** (Chapel Hill, NC): "Data-Driven Management of Post-Transplant Medications: An APOMDP Approach" (Presented by Ph.D. student advisee Alireza Boloori)
- **POMS 2017** (Seattle, WA): "Hospital-Patient Alignment in Healthcare Systems" **(session organizer and chair)**
- **POMS 2017** (Seattle, WA): "Impact of Medicare's Guidelines on the Opioid Epidemic" (Presented by Ph.D. student advisee Alireza Boloori) **(session organizer and chair)**
- **POMS 2017** (Seattle, WA): "Data-Driven Management of Post-Transplant Medications: An APOMDP Approach" (Presented by Ph.D. student advisee Alireza Boloori) **(invited talk) (POMS College of Healthcare Best Paper Award Finalist)**
- **American College of Emergency Physicians Research Forum 2016** (Las Vegas, NV) "Physician-level Differences in Emergency Department Length of Stay" (presented by co-author Stephan Traub)
- **INFORMS 2016** (Nashville, TN): "Ambiguous Partially Observable Markov Decision Processes" **(invited talk)**
- **INFORMS 2016** (Nashville, TN): "Impact of Ambiguity on Medications Management Strategies: An Application to NODAT" (Presented by Ph.D. student advisee Alireza Boloori) **(session organizer and chair)**
- **INFORMS 2016** (Nashville, TN): "Robust Data-Driven Emergency Department Management via Percentile Optimization: Multi-Class Queueing Systems with Model Ambiguity" **(**presented by Ph.D. student advisee, Austin Bren) **(session organizer and chair)**
- **INFORMS 2016** (Nashville, TN): "of Pregnancy" **(**presented by Ph.D. student advisee Aysegul Demirtas) **(session organizer and chair)**
- **INFORMS 2016** (Nashville, TN): "Assignment Policy to Improve Emergency Department Boarding Time: A Safety and Quality Of Care Perspective" **(**presented by Ph.D. student advisee Derya Kilinc) **(session organizer and chair)**
- **PCOGS (Pacific Coast OB/GYN Society) 2016** (Sun Valley, ID) "Assessing the Maternal & Neonatal Risk of Childbirth Morbidly for Women with Hypertensive Disorders of Pregnancy" (Presented by co-author Dean Coonrod)
- **POMS 2016** (Orlando, FA) "A Robust POMDP Framework for the Management of Post-Transplant Medications" **(Invited Talk) (**presented by Ph.D. student advisee Alireza Boloori)
- **POMS 2016** (Orlando, FA) "Dynamic Assignment of Emergency Department Patients to Primary and Secondary Inpatient Units" **(**presented by Ph.D. student advisee Derya Kilinc) **(session organizer and chair)**
- **POMS 2016** (Orlando, FA) "Percentile Optimization in Multi-Class Queueing Systems with Parameter Ambiguity" **(**presented by Ph.D. student advisee Austin Bren) **(session organizer and chair)**
- **INFORMS 2015** (Philadelphia, PA) "Ambiguous Partially Observable Markov Decision Processes:

Structural Results and Applications" **(invited talk) INFORMS 2015 Junior Faculty Interest Group (JFIG) Best Paper Competition** (Honorable Mention)

- **INFORMS 2015** (Philadelphia, PA) "The Newsvendor under Demand Ambiguity: Combining Data with Moment and Tail Information" **(invited talk)**
- **INFORMS 2015** (Philadelphia, PA) "Percentile Optimization in Multi-Class Queueing Systems with Parameter Ambiguity" **(**presented by Ph.D. student advisee Austin Bren) **(session organizer and chair)**
- **INFORMS 2015** (Philadelphia, PA) "Dynamic Assignment of Emergency Department Patients to Primary and Secondary Inpatient Units" **(**presented by Ph.D. student advisee Derya Kilinc) **(session organizer and chair)**
- **INFORMS 2015** (Philadelphia, PA) "A Robust POMDP Framework for the Management of Post-Transplant Medications" **(**presented by Ph.D. student advisee Alireza Boloori) **(session organizer and chair)**
- **INFORMS 2015** (Philadelphia, PA) "The Optimal Control of Child Delivery for Women with Hypertensive Disorders of Pregnancy" **(**presented by Ph.D. student advisee Aysegul Demirtas) **(session organizer and chair)**
- **MSOM 2015** (Toronto, ON) *"*The Newsvendor under Demand Ambiguity-Aversion: A Data and Information-Driven Approach"
- **Society for Academic Emergency Medicine 2014 (Dallas, TX)** "Rapid Medical Assessment Team in Triage: Overall Effect and Subgroup Analysis" (presented by co-author Stephan Traub)
- **Society for Academic Emergency Medicine 2014 (Dallas, TX)** "Operational Improvements Associated with an Algorithmic Patient Assignment System" (presented by co-author Stephan Traub)
- **INFORMS 2014** (San Francisco, CA) "The Newsvendor under Demand Ambiguity: Combining Data with Moment and Tail Information" **(invited talk)**
- **MSOM 2014** (Seattle, WA) "The Newsvendor under Demand Ambiguity: Combining Data with Moment and Tail Information"
- **POMS 2014:** (Atlanta, GA) "Bed-Block Management in Emergency Departments" **(session organizer and chair)**
- **INFORMS 2013** (Minneapolis, MN) "The Role of Flexible Beds in Bed-Block Management" **(session organizer and chair)**
- **INFORMS 2013** (Minneapolis, MN) "Doing while Learning: Data-Driven Production Strategies under Ambiguity" **(invited talk)**
- **INFORMS Healthcare 2013** (Chicago, IL) "Bed-Block Management in Emergency Departments: The Role of Flexible Beds" **(invited talk)**
- **INFORMS Healthcare 2013** (Chicago, IL) "Triage and Patient Flow Design in Hospital Emergency Departments" **(invited talk)**
- **POMS 2013: College of Supply Chain Best Student Paper Award Finalist** (Denver, CO): "Compensating for Dynamic Supply Disruptions with Backup Flexibility" **(invited talk)**
- **POMS 2013** (Denver, CO) "Complexity-Based Triage for Hospital EDs" **(invited talk)**
- **INFORMS 2012** (Phoenix, AZ) "An Enhanced Triage System for Emergency Departments" **(session**

organizer and chair)

- **POMS 2012** (Chicago, IL) "A New Triage System for Emergency Departments" **(invited talk)**
- **POMS 2012** (Chicago, IL) "Compensating for Dynamic Supply Disruptions with Backup Flexibility" **(invited talk)**
- **INFORMS 2011: Doing Good with Good OR Award Finalists** (Charlotte, NC): "Improving Patient Flow in Emergency Departments"
- **INFORMS 2011**(Charlotte, NC): "Complexity-Based Triage: A Tool for Improving Patient Safety and Operational Efficiency" **(session organizer and co-chair)**
- **MSOM 2011: Healthcare Operations Management SIG** (Ann Arbor, Michigan): "Improving Patient Flow in Emergency Departments" **(among six papers accepted)**
- **POMS 2011** (Reno, NV): *"*Patient Streaming as a Mechanism for Improving Responsiveness in Emergency Departments" **(2nd place for best student paper award)**
- **INFORMS Healthcare 2011 (**Montreal, Canada): "Emergency Department Patient Flow Redesign" **(invited talk)**
- **Society for Academic Emergency Medicine (SAEM) 2011 Meeting** (Boston, MA*):* "Modeling the Operational Characteristics of Patient Flow Schemes: Streaming vs Pooling"
- **INFORMS 2010** (Austin, TX): "Patient Streaming as a Mechanism for Improving Responsiveness in Emergency Departments" **(INFORMS Pierskalla Best Paper Award)**.
- **INFORMS 2010** (Austin, TX): "Overcoming Crowding in Emergency Departments: A New Streaming Mechanism" **(session organizer and co-chair)**.
- **INFORMS 2010** (Austin, TX): "Dynamic Control of Unreliable Flexible Servers: The ``W'' Network" and Beyond" **(invited talk)**
- **INFORMS 2010** (Austin, TX): "Disruption Risk Information and Flexible Backup Suppliers" **(invited talk)**
- **Mayo Clinic 2010 Conference** (Rochester, MN) "A New Patient Flow Design for Emergency Departments"
- **University of Michigan Hospital 2010**: "Understanding Streaming VS. Pooling in Emergency Departments: Queueing Theory and Simulation" **(invited talk**)
- **INFORMS 2009** (San Diego, CA): "Dynamic Control of Flexible Servers under the Risk of Disruptions"
- **POMS 2009** (Orlando, FL): "The Value of Flexible Suppliers and Disruption Risk Level Information in Supply Chains" **(finalist for POMS College of Supply Chain best student paper award)**
- **INFORMS 2008** (Washington DC): "Stochastic Networks with Breakdowns: Effective Control of Flexible Servers"
- **MSOM 2008** (College Park, MD): "Flexibility of Reliable Suppliers and Monitoring of Unreliable Suppliers: How Much Should a Manufacturer Invest?"
- **NSF 2008** (NSF Engineering Research and Innovation Conference, Knoxville, Tennessee)
- **IHD 2008** (Third Annual Conference on Improving Healthcare Delivery, Cincinnati, OH).
- **INFORMS 2007** (Seattle, WA): "The Value of Flexible Suppliers in Supply Chains"

- **International Conference of Industrial Engineering (IIEC)** 2004 & 2005
- **International Management Conference (IMC) 2004 & 2005**

Poster Presentations (Selected)

- **Inaugural Reinforcement Learning Conference (RLC) 2024** (Amherst, MA): Badarinath, D., Orfanoudaki, A., & Saghafian, S. "Cost of Interpretability - Blocked Value Iteration."
- **Harvard Psychiatry Research Day 2023** (Boston, MA): Pike, C. K., Lin, S., Saghafian, S., Lebovitz, J., & Burdick, K. E., & Lipschitz, J. M. "Relationship between smartwatch sleep metrics over nine months and history of suicide attempt among adults with bipolar disorder."