Sam Heshmati, PhD

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Education

- **PhD in Engineering and Industrial Management**
  University of Porto, Portugal — *June 2020*
- **Master's in Business Administration**
  Semnan University, Iran — *September 2011*
- **BSc in Electrical Engineering**
  Urmia University, Iran — *February 2006*

Research Experience and Professional

- **Postdoctoral Researcher, University of Cincinnati, USA** — **July 2019 – July 2020**
  Department of Operations, Business Analytics, and Information Systems
- **Senior Operations Research and Data Scientist, USA** — **January 2018 – November 2019**
  Cahoot.ai
- **Research Assistant, University of Leuven (KU Leuven), Belgium** — **April 2015 – July 2017**
  Department of Computer Science
- **Research Assistant, University of Porto, Portugal** — **March 2013 – April 2015**
  INESC TEC - Institute for Systems and Computer Engineering, Technology and Science

Peer Reviewed Publications

1. Hosseinzadeh M., Hudson N., **Heshmati, S.**, Khamfroush H. "Communication-Loss Trade-Off in Federated Learning: A Distributed Client Selection Algorithm", IEEE CCNC 2022.
2. **Heshmati, S.**, Toffolo T. A. M., Vancroonenburg W., Vanden Berghe G., "Crane-operated warehouses: Integrating location assignment and crane scheduling", Computers & Industrial Engineering, Volume 129, 2019, Pages 274-295, ISSN 0360-8352.
   Impact Factor: 3.518
3. **Heshmati, S.**, Verstichel J., Vanden Berghe G., "Alternative e-commerce delivery policies: A case study concerning the effects on carbon emissions", EURO Journal on Transportation and Logistics, 2018, Pages 1-32, ISSN 2192-4384.
4. **Heshmati, S.**, Kokkinogenis, Z., Rossetti R., Carravilla M., Oliveira J., Computational Management Science Springer International Publishing, 2016, Ch. "An Agent-Based Approach to Schedule Crane Operations in Rail-Rail Transshipment Terminals", pp. 91-97.
5. Khamfroush, H., Saadat, R., **Heshmati, S.**, 2009. "A New Tree-Based Routing Algorithm for Energy Reduction in Wireless Sensor Networks", 2009 International Conference on Signal Processing Systems, pp.116–120.

In Progress Publications

1. **Heshmati, S.**, Carravilla M. A., Oliveira J. F., "Scheduling Crane Operations in Rail-Rail Transshipment Terminals", To be submitted to Journal of Scheduling.

Presentations and Invited Talks

1. Application Of Flexible Flow Shop Scheduling with Sequence Dependent Setup Times in Labeling Industry, 2021 INFORMS Annual Meeting, Anaheim CA, October, 2021
2. Learning-Based Resource Management for Mobile Edge Computing System 2021 INFORMS Annual Meeting, Anaheim CA, October, 2021
3. Scheduling Crane Operations in Rail-Rail Transshipment Terminals, The 28^{th} International Conference on Automated Planning and Scheduling, Delft, June, 2018

4. Heuristics for crane scheduling and location assignment problems in automated warehouses, 31^{th} Conference of the Belgian Operational Research Society, Brussels, February, 2017
5. Mathematical formulation for scheduling rail-mounted gantry cranes in warehouses, Workshop on Applied Combinatorial Optimization Methods (WACOM), Ouro Preto, March, 2016
6. A continuous-time model for scheduling gantry cranes in storage yards, 30^{th} Conference of the Belgian Operational Research Society UCL-CORE, Louvain-la-Neuve, January, 2016
7. Scheduling handling operations in an automated storage yard employing rail mounted gantry cranes, The OR Society YoungOR 19 Biennial Conference, Birmingham, September, 2015
8. An Agent-based Approach to Schedule Crane Operations in Rail-Rail Transshipment Terminals, 20^{th} Conference of the International Federation of Operational Research Societies (IFORS), Barcelona, July, 2014
9. Crane Operations in Rail-Rail Transshipment Terminals, 17^{th} Meeting of the EURO Working Group on Transportation (EWGT2014), Seville, July, 2014
10. Science and Technology Parks in Iran and Portugal: Does regional and national innovation systems matter? 7^{th} International Seminar on Regional Innovation Policies (RIP) Porto, October 2012

Grants

- Igniting Research Collaboration (IRC), University of Kentucky, Role: Co-PI, Amount: $21,500. 7/1/2022 - 12/31/2022, *Informed choices and environmental impacts: An experiment to reduce emissions and packaging waste in the online food delivery sector*
- Faculty-Led Undergraduate Research, University of Kentucky, Role: PI, Amount: $1,700. 3/15/2022 - 6/30/2022
- Sustainability Challenge Grants, University of Kentucky, Role: Co-PI, Amount: $ 50,000. Under Review, *Reducing the environmental impact of online food delivery through behavioral and commercial innovation*
- Cisco Research Fund, Cisco, Role: Co-PI, Amount: $120,000. Under Review, *Optimal QoS-Aware Radio-Access Technology Selection and Offloading Decision Making for Edge-Enabled Heterogeneous Wireless Network Systems*
- Travel grant to visit Carnegie Mellon University from University of Leuven €2000, July - 2017

Teaching Experience

- **Industry Project - MKT740** **Summer 2021 & 2022**
  University of Kentucky, Graduate Level Course
- **Business Analytics Strategy and Applications - AN450G** **Since Spring 2021**
  University of Kentucky, Undergraduate Level Course
- **Business Data Management - AN324** **Since Spring 2021**
  University of Kentucky, Undergraduate Level Course
- **Productions and Operations Management - MKT/SCE631** **Fall 2020, Spring 2022**
  University of Kentucky, Graduate Level Course
- **Operations Planning and Scheduling - OM4076** **Summer 2019 & 2020**
  University of Cincinnati, Undergraduate Level Course
- **Decision Models - BANA4095** **Spring 2020**
  University of Cincinnati, Undergraduate Level Course
- **Data Analysis - BANA7011** **Spring 2020**
  University of Cincinnati, Graduate Level Course

Mentorship

- **Alltech - Freight Management Case Study**, *Final Project of Masters in Supply Chain Management* Summer 2021
- **Toyota - Feasibility of Sequencing Headliners Delivery from Supplier**, *Final Project of Masters in Supply Chain Management* Summer 2021

Service and Outreach

- **Ad Hoc Reviewer**
  - International Journal of Applied Artificial Intelligence
  - IEEE WCNC 2021
  - IEEE Globecom 2020 CQRM
  - Journal of Public Library of Science PLOS ONE
- **Analytics Club Advisor** (University of Kentucky) Since January 2021
- **Judge, Econ Games 2021** (University of Kentucky) March 2021
- **Judge, OSWALD Research & Creativity Competition** (University of Kentucky) November 2020