

VAHID EGHBAL AKHLAGHI

AI4OPT Institute | H. Milton Stewart School of Industrial and Systems Engineering | Georgia Institute of Technology
vahid.eghbal@gatech.edu | www.eghbal-akhlaghi.com | Tel: +1 (319) 512 8735

ACADEMIC APPOINTMENT

Georgia Institute of Technology, Atlanta, United States Artificial Intelligence Institute for Advances in Optimization H. Milton Stewart School of Industrial and Systems Engineering Postdoctoral Fellow, Supply Chain and Logistics Chief of Staff	08/2022 – Present
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EDUCATION

Ph.D. in Business Analytics: University of Iowa, Tippie College of Business, Iowa City, IA Advisor: Prof. Ann Campbell Dissertation: <i>Humanitarian Fuel Distribution and Flood Mitigation</i>	2022
Graduate Certificate in College Teaching University of Iowa, Iowa City, IA	2022
M.Sc., Industrial Engineering: Middle East Technical University, Turkey Advisors: Prof. Hakan Gültekin, Prof. Sinan Gürel Dissertation: <i>Robotic Cell Scheduling</i>	2017

RESEARCH INTERESTS

Methodology: Network Theory, Discrete Optimization, Constraint Programming, Applied Machine Learning, Spatial Data Mining
Applications: Logistics, Transportation, Supply Chain Management, Scheduling, Healthcare, Sustainability

ACCEPTED GRANT WRITING (82,000 USD)

Green Robotic Cell Scheduling - Assisted in writing a proposal for research funding accepted by The Scientific and Technological Research Council of Turkey (TUBITAK), **Grant No. 215M845**.

RESEARCH/PROJECT ASSISTANT

<i>Transportation Network Mitigation for Flood Preparedness</i> Sponsored by the Department of Transportation (DOT)	2020 - 2022
<i>Green Robotic Cell Scheduling</i> Sponsored by the Scientific and Technological Research Council of Turkey (TUBITAK)	2016 - 2017
<i>Line Balancing in Production Lines Served by a Single/Dual Gripper Robot</i> Sponsored by the Scientific and Technological Research Council of Turkey (TUBITAK)	2014 - 2016

PUBLICATIONS

Akhlaghi, V. E., Campbell, A. M., & Demir, I. (2023). The Flood Mitigation Problem in a Road Network. *Production and Operations Management* (Under major revision)

Akhlaghi, V. E., & Campbell, A. M. (2022). The two-echelon island fuel distribution problem. *European journal of operational research*, 302(3), 999-1017

Akhlaghi, V. E., Campbell, A. M., & de Matta, R. E. (2021). Fuel distribution planning for disasters: Models and case study for Puerto Rico. *Transportation Research Part E: Logistics and Transportation Review*, 152, 102403

Gürel, S., Gultekin, H., & Akhlaghi, V. E. (2019). Energy conscious scheduling of a material handling robot in a manufacturing cell. *Robotics and Computer-Integrated Manufacturing*, 58, 97-108

Gultekin, H., Coban, B., & Akhlaghi, V. E. (2018). Cyclic scheduling of parts and robot moves in m-machine robotic cells. *Computers & Operations Research*, 90, 161-172

Masehian, E., Akhlaghi, V. E., Akbaripour, H., & Sedighzadeh, D. (2015). An Expert System for Intelligent Selection of Proper Particle Swarm Optimization Variants. *International Journal of Supply and Operations Management*, 2(1), 569-594

REFEREED CONFERENCE PROCEEDINGS

Lee, C., Boonbandansook, W., Akhlaghi, V. E., Dalmeijer, K., & Van Hentenryck, P. (2023). Constraint Programming to Improve Hub Utilization in Autonomous Transfer Hub Networks. *CP 2023: 29th International Conference on Principles and Practice of Constraint Programming*, Toronto, Canada, Aug 2023

Akhlaghi, V. E., Campbell, A. M., De Matta, Renato E., Two-Tier Fuel Distribution Planning for Disasters on Islands, *TSL Conference, Second Triennial Conference*, Arlington, VA. May 2020.

Akhlaghi, V. E., Gultekin, H and Coban, B, Shortest k-unit Cycle in a Multiple Part-Type Robotic Cell, *7th Multidisciplinary International Conference on Scheduling: Theory and Applications (MISTA 2015)*, Prague, Czech Republic, Pages 876-878, Aug 2015.

SELECTED CONFERENCE PRESENTATIONS

Logistics Operations for Infrastructure Network Restoration

- INFORMS Annual Meeting, Indianapolis, IN, October 2022

Using ships to supplement fuel supplies on islands for disaster recovery

- 13th Annual Conference on Health and Humanitarian Logistics (HHL), September 20-22, 2021.
- INFORMS Annual Meeting, Online, November 2020

An Intermodal Transportation Network for Humanitarian Fuel Distribution on Islands

- 12th Annual Conference on Health and Humanitarian Logistics (HHL), September 29-Oct 1, 2020.
- INFORMS Annual Meeting, Seattle, October 2019

Energy conscious robot scheduling in robotic cell manufacturing

- INFORMS Annual Meeting, Nashville, November 2016

Comparison of CRM and k-Unit Cycles in Robotic Cells with Multiple Parts

- 28th European Conference on Operational Research, Poznan, Poland, July 2016

Bicriteria Scheduling in a Multiple Part-Type Robotic Cell

- 23rd International Conference on Multiple Criteria Decision Making, Helmut-Schmidt-University, Hamburg, Germany, August 2015.

Genetic Algorithm Robust Parameter Tuning for a Robotic Cell Scheduling Problem

- 23rd International Conference on Multiple Criteria Decision Making, Helmut-Schmidt-University, Hamburg, Germany August 2015

TEACHING EXPERIENCE

Teaching Practicum:

BAIS 2800: Foundations of Business Analytics, University of Iowa, one semester, Spring 2022

BAIS 3020: Computational Thinking (Programming using Python), University of Iowa, Fall 2021

Head Teaching Assistant (360 students and five TAs):

BAIS 3000: Operations Management, University of Iowa, Fall 2019

Teaching Assistant:

BAIS 3000: Operations Management, University of Iowa, Fall 2018, Spring 2018

BAIS 1500: Business Computing Essentials, University of Iowa, Fall 2017 (695 students)

END 395: Operations Research II, TOBB University of Economics and Technology, Fall 2015

IE 275: Production and Inventory Control I, University of Tabriz, Spring 2010

SPECIAL HONORS AND GRANTS

George Family Foundation Postdoctoral Fellow, H. Milton Stewart School of Industrial and Systems Engineering, Georgia Institute of Technology, 2022
Ballard & Seashore Merit-based Dissertation Fellowship, University of Iowa, 2021
Dare to Discover Banner Campaign, University of Iowa, Office of the Vice President, 2021
INFORMS 2020 Student Chapter Annual Award, Cum laude, Vice President of the Chapter, 2020
Post-Comprehensive Research Award, University of Iowa Graduate College, Spring 2020
3MT – Three-Minute Thesis Finalist Award, University of Iowa Graduate College, 2019
Graduate Student Senate (GSS) Travel Funds Award, University of Iowa Graduate College, 2019
Summer Research Fellowship, University of Iowa Graduate College, 2018-2020
Research Fellowship, University of Iowa, Department of Business Analytics, Spring 2019
TUBITAK Research Scholarship Award, 2014 - 2017

SERVICE & PROFESSIONAL ACTIVITIES

Journal Reviewer

IIE Transactions
Computers and Operations Research
Journal of Cleaner Production
Journal of Numerical Algebra, Control and Optimization
Journal of Computational Sciences
Journal of Industrial and Management Organizations

Leadership:

Supply Chain and Logistics Chief of Staff, AI4OPT Institute, Georgia Institute of Technology, 2022 - present
Elected Vice President, University of Iowa INFORMS graduate student chapter, 2019-2020
Elected president, Scientific Society of Industrial Engineering, University of Tabriz, 2007-2009

Session Chair:

Optimization of Logistics Delivery Systems, INFORMS 2023 Annual meeting, October 2023
Humanitarian Operations and Disaster Management (Public Sector Operations Research (PSOR) track), INFORMS 2020 Annual meeting, Online, November 2020
Global and Discrete Optimization, 28th European Conference on Operational Research, Poznan, Poland, 2016
Health Care Management under Emergency Aspects, 28th European Conference on Operational Research, Poznan, Poland, 2016

Memberships/Professional Affiliations:

INFORMS
Transportation Science and Logistics Society
Scheduling Methods Application and Research Team (SMART)

COMPUTER SKILLS

Programming:

Python, C++, R, MATLAB, SQL

Engineering Software:

Gurobi optimizer, CPLEX OPL, GAMS IDE, Lingo, ArcGIS, Vensim, SPSS, SOLIDWORKS

INDUSTRIAL & PROFESSIONAL EXPERIENCES

<i>Kinaxis</i> , Operations Research Analyst, Internship, USA-Remote	March 2023 - present
<i>Online Health Consultation National Center</i> , System Analysis Engineer, Iran	2013
<i>National service</i> , Knowledge Management Engineer, Iran	2011 - 2012

REFERENCES

Pascal Van Hentenryck

A. Russell Chandler III Chair and Professor
H. Milton Stewart School of Industrial and Systems
Engineering, Georgia Institute of Technology
Email: pascal.vanhentenryck@isye.gatech.edu

Ibrahim Demir

Associate Professor, Civil and Environmental
Engineering, University of Iowa
Email: ibrahim-demir@uiowa.edu

Patrick J. Johanns (*teaching reference*)

Associate Professor of Instruction, Business Analytics,
Tippie College of Business, University of Iowa
Email: patrick-johanns@uiowa.edu

Ann Melissa Campbell

Clement T. and Sylvia H. Hanson Family Chair in
Manufacturing Productivity and Professor, Business
Analytics, University of Iowa
Email: ann-campbell@uiowa.edu

Hakan Gültekin

Associate Professor, Department of Mechanical and
Industrial Engineering, Sultan Qaboos University
Email: hgultekin@squ.edu.om