# İhsan Sadati (Mir Ehsan Hesam Sadati), Ph.D.

Instructor & Researcher Industrial Engineering Program Sabanci University Email: <u>msadati@sabanciuniv.edu</u> Personal Homepage: http://myweb.sabanciuniv.edu/msadati/



#### **EDUCATIONAL STATUS**

[2014–2018] **Ph.D.** in Industrial Engineering and Operations Management, Koç University, Istanbul, Turkey.

**Thesis:** A Trilevel r-Interdiction Multi-Depot Vehicle Routing Problem with<br/>Depot Protection and Customer Selection

Supervisor: Prof. Deniz Aksen

 [2012–2014] MSc in Industrial Engineering, Urmia University, Urmia, Iran.
 Thesis: Harmony Search Algorithm for Optimization of Multi-Objective Fuzzy Random Portfolio Selection
 Supervisor: Assoc. Prof. Ali Doniavi

[2008–2012] BSc in Industrial Engineering, University of Tabriz, Tabriz, Iran.
 Thesis: A Fuzzy Modeling for Fuzzy Portfolio Optimization
 Supervisor: Assoc. Prof. Javad Nematian

# **PROFESSIONAL EXPERIENCE**

- September 2022 Present: Instructor, Faculty of Engineering and Natural Sciences, Sabanci University
- June 2021 Present: Researcher at Smart Mobility and Logistics Lab, Faculty of Engineering and Natural Sciences, Sabanci University
- June 2019 May 2021: Postdoctoral Research Fellow, Faculty of Engineering and Natural Sciences, Sabanci University
- March 2019 May 2019: Assistant Professor, Industrial Engineering Department, Istanbul Kültür University
- August 2014 December 2018: Research and Teaching Assistant, Department of Industrial Engineering, Koç University

#### **RESEARCH INTERESTS**

Vehicle Routing, Green Logistics, Electric Vehicle Routing Problem, Facility Interdiction, Heuristic & Metaheuristic, Supply Chain Management, Mathematical Modelling, Combinatorial Optimization.

# PUBLICATIONS IN JOURNALS OF THE SCIENCE CITATION INDEX (SCI)

- 1. Vahid Akbari, Bülent Çatay and İhsan Sadati, "Route optimization of battery electric vehicles using dynamic charging on electrified roads". *Sustainable Cities and Society*, 105532 (2024).
- 2. Nima Moradi, İhsan Sadati and Bülent Çatay, "Last Mile Delivery Routing Problem using Autonomous Electric Vehicles". *Computers & Industrial Engineering*, 109552 (2023).
- 3. Bülent Çatay and İhsan Sadati, "An improved matheuristic for solving the electric vehicle routing problem with time windows and synchronized mobile charging/battery swapping". *Computers & Operations Research*, 106310 (2023).
- 4. Vahid Akbari, İhsan Sadati, F. Sibel Salman and Davood Shiri, "Optimizing Minimizing total weighted latency in home healthcare routing and scheduling with patient prioritization". *OR Spectrum*, 45, 807–852 (2023).
- 5. Mir Ehsan Hesam Sadati, Vahid Akbari and Bülent Çatay, "Electric Vehicle Routing Problem with Flexible Deliveries". *International Journal of Production Research*, 60(13), 4268-4294 (2022).
- 6. Mir Ehsan Hesam Sadati and Bülent Çatay, "A Hybrid Variable Neighborhood Search Approach for the Multi-Depot Green Vehicle Routing Problem". *Transportation Research Part E: Logistics and Transportation Review*, 102293 (2021).
- 7. Mir Ehsan Hesam Sadati, Bülent Çatay and Deniz Aksen, "An Efficient Variable Neighborhood Search with Tabu Shaking for a Class of Multi-Depot Vehicle Routing Problems". *Computers & Operations Research*, 105269 (2021).
- 8. Vahid Akbari, Mir Ehsan Hesam Sadati and Ramez Kian, "A Decomposition-Based Heuristic for the Multi-Crew Coordinated Road Restoration Problem for Network Connectivity". *Transportation Research Part D: Transport and Environment*, 102854 (2021).
- 9. Mir Ehsan Hesam Sadati, Deniz Aksen and Necati Aras, "A Trilevel r-Interdiction Selective Multi-Depot Vehicle Routing Problem With Depot Protection." *Computers & Operations Research*, 104996 (2020).
- 10. Mir Ehsan Hesam Sadati, Deniz Aksen and Necati Aras, "The *r*-Interdiction Selective Multi-Depot Vehicle Routing Problem". *International Transactions in Operational Research*, 27(2), 835-866 (2020).
- 11. Javad Nematian and Mir Ehsan Hesam Sadati, "New methods for solving a vertex p-center problem with uncertain demand-weighted distance: A real case study." *International Journal of Industrial Engineering Computations* 6(2), 253-266 (2015).
- Mir Ehsan Hesam Sadati, Ali Doniavi, and Abbas Samadi, "Possibility theory for multiobjective fuzzy random portfolio optimization." *Decision Science Letters* (Emerging Sources Citation Index), 3(3), 305-318 (2014).
- 13. Mir Ehsan Hesam Sadati and Javad Nematian, "Two-level linear programming for fuzzy random portfolio optimization through possibility and necessity-based model." *Procedia Economics and Finance* 5, 657-666 (2013).

#### **OTHER PUBLICATIONS**

1. İhsan Sadati, Integrating a Connected Micromobility Infrastructure to the Existing Public Transport. Journal of Intelligent Transportation Systems and Applications (Akıllı Ulaşım Sistemleri ve Uygulamaları Dergisi), 6(1), pp.184-193 (2023).

- 2. Mir Ehsan Hesam Sadati and Ali Doniavi, "Optimization of Fuzzy Random Portfolio selection by Implementation of Harmony Search Algorithm." *International Journal of Engineering Trends and Technology*, 8(2), 60-64 (2014).
- 3. Mir Ehsan Hesam Sadati and Jamshid Bagherzadeh Mohasefi, "The Application of Imperialist Competitive Algorithm for Fuzzy Random Portfolio Selection Problem." *International Journal of Computer Applications*, 79(9), 10-14 (2013).

# **INVOLVED PROJECTS**

- 1. Researcher: Sheffield University Management School <u>Research and Knowledge</u> <u>Exchange/Impact Stimulation Fund</u> (Collaborators: Dr. Sina Rastani and Dr. Merve Keskin)
- Researcher: TÜBİTAK 1001 (Scientific and Technological Research Council of Türkiye) <u>Proposal Accepted on 29 December, 2023 (PI: Duygu Taş Küten-Sabanci University)</u> <u>(Link)</u>
- 3. Researcher: Iran National Science Foundation (INSF) "Application of a combination of mathematical models and GIS capabilities in locating health facilities, Case study: Health care network of Golestan Province" (Principal Investigator: Prof. Raheleh Khanduzi-Gonbad Kavous University, Iran).
- 4. Researcher: MeHUB: Integrating a Connected Micromobility Infrastructure to the Existing Public Transport (<u>Link</u>)
- 5. Researcher: Smart City Strategy of Konya (Link)

## **TEACHING EXPERIENCE**

- Sabanci University, Turkey (Instructor)
  - DA 507, Modeling and Optimization: Professional Graduate Course (Fall 2023)
  - ENS 511, Engineering Optimization (Spring 2022, Spring 2024)
  - ENS 208, Introduction to Industrial Engineering (Spring 2023 to Present)
  - IE 430, Logistics Systems Planning and Design (Fall 2022, Fall 2023)
  - IE 305, Simulation (Fall 2022)
  - IE 313, Operations Research III (Summer 2022)
  - IE 454, Supply Chain Analysis (Fall 2021)

#### • Istanbul Kültür University, Turkey (Full-Time Faculty Position)

- IE 0411, Logistics Systems, 1 semester
- IE 4503, Engineering Economics, 1 semester
- Koç University, Turkey (Teaching Assistant)
  - INDR 201, Discrete Mathematical Structures, 1 semester
  - INDR 252, Applied Statistics, 1 semester
  - INDR 430/530, Decision Analysis, 1 semester
  - MATH 101, Mathematics for Business, 1 semester
  - MGIS 301, Management Information Systems, 2 semesters
  - MGIS 410/510, Electronic Commerce Management, 2 semesters
  - QMBU 310/501, Introduction to Management Science, 2 semesters

# **AWARDS AND HONORS**

- Sheffield University Management School Research and Knowledge Exchange/Impact Stimulation Fund (Collaborators: Dr. Sina Rastani and Dr. Merve Keskin)
- The most downloaded articles from Computers & Operations Research in the last 90 days (October 15, 2020), <u>A trilevel r-interdiction selective multi-depot vehicle</u> routing problem with depot protection
- **Top Downloaded Paper 2018-2019**, International Transactions in Operational Research, <u>The *r*-Interdiction Selective Multi-Depot Vehicle Routing Problem</u>
- Fall 2017 Outstanding Teaching Award Recipient, Graduate School of Science and Engineering, Koç University.
- Koç University Foundation Scholarship (2014-present).
- **Ranked 1**<sup>st</sup> graduate student, Urmia University.
- Certificate of "Attended and Participated in a Pearson In-Service Workshop on Top Notch at Alef Educational Complex", 2013.
- Honor Student in Pre-university Certificate, Tabriz-Iran 2007.

#### **MEMBERSHIP**

- Association of European Operational Research Societies (<u>EURO</u>)
- o Euro Working Group on Vehicle Routing and Logistics (VeRoLog)
- Production and Operations Management Society (<u>POMS</u>)
- Operational Research Society-Turkey (<u>YAD</u>)

#### **REFEREE FOR**

- o Transportation Research Part E: Logistics and Transportation Review
- Computers & Operations Research
- o International Journal of Production Research
- European Journal of Operational Research
- INFORMS Journal on Computing
- Annals of Operations Research
- o Omega: The International Journal of Management Science
- o Engineering Applications of Artificial Intelligence
- Soft Computing
- Applied Mathematical Modelling
- o Journal of Advanced Transportation
- o EURO Journal on Transportation and Logistics
- Arabian Journal for Science and Engineering
- o Transactions on Emerging Telecommunications Technologies
- Economic Modelling
- o Journal of Contemporary Management
- Global Journal of Technology & Optimization

## EDITORIAL BOARD MEMBERSHIP

- Annals of Applied Sciences (journal website)
- Scientific Committee member-The 2024 International Conference on Demographic Transition, Health and Technologies ICDTHT'24 (<u>Conference website</u>)

#### PRESENTATIONS

- "Electric vehicle routing problem with an on-demand mobile charging system". 14<sup>th</sup> International Conference on Industrial Engineering and Operations Management (**IEOM** 2024), hosted by Khalifa University, Dubai, UAE, February 11-14, 2024.
- "Electric Vehicle Routing Problem with an On-Demand Mobile Charging System". 2023 POMS International Conference (POMS 2023), hosted by Rennes School of Business, Paris, France, 18-20 July 2023.
- *"Electric Vehicle Routing Problem with Flexible Deliveries"*. 32<sup>nd</sup> European Conference on Operational Research (EURO 2022), Aalto University, Espoo, Finland, 3-6 July, 2022.
- *"Electric Vehicle Routing Problem with Flexible Deliveries"*. 8<sup>th</sup> meeting of the EURO Working Group on Vehicle Routing and Logistics Optimization (VeRoLog 2022), Kühne Logistics University, Hamburg, Germany, 12-15 June, 2022.
- "Electric Vehicle Routing Problem with Flexible Deliveries". 12<sup>th</sup> Annual International Conference on Industrial Engineering and Operations Management (IEOM 2022), hosted by Kadir Has University, in collaboration with Sabancı University, Istanbul, Turkey, March 7 – 10, 2022.
- "Multi-Depot Green Vehicle Routing Problem". 40<sup>th</sup> National Operations Research and Industrial Engineering Congress (YAEM 2021), Boğaziçi University, Industrial Engineering Department, Istanbul, Turkey, 4-7 July, 2021.
- *"The r-Interdiction Multi-Depot Vehicle Routing Problem"*. 29<sup>th</sup> European Conference on Operational Research (**EURO 2018**), Valencia, Spain, 8-11 July, 2018.
- "The r-Interdiction Multi-Depot Vehicle Routing Problem with Customer Selection". Operations Research / Industrial Engineering Doctoral Students Colloquium, Sabanci University Industrial Engineering Department, Istanbul, Turkey, 2-3 November, 2017.
- "The r-Depot Interdiction Vehicle Routing Problem with Capacitated Vehicles and Depots". 37<sup>th</sup> National Operations Research and Industrial Engineering Congress (YAEM 2017), Yıldız Technical University Industrial Engineering Department, Istanbul, Turkey, 5-7 July, 2017.
- "Comparison of Three Classes of MIP Formulations for the Generic CVRP". 4<sup>th</sup> meeting of the EURO Working Group on Vehicle Routing and Logistics Optimization (VeRoLog 2015), University of Vienna, Vienna, Austria, 8-10 June, 2015.

## ADVANCED COMPUTER SKILLS

Visual Studio C#, Python, CPLEX, GUROBI, GAMS, MATLAB, Mathematica, Excel.

### REFERENCES

- Professor Bülent Çatay
  Department of Industrial Engineering, Sabanci University, İstanbul, Turkey
  Email: <u>catay@sabanciuniv.edu</u>
  Phone: (+90) 216 483 9531
- Professor Deniz Aksen
  College of Administrative Sciences and Economics, Koç University, İstanbul, Turkey
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