

Asst. Prof. Vedat Bayram

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: H-8528-2018

ScopusID: 56480683900

Yoksis Researcher ID: 261292

Biography

Vedat Bayram is an Assistant Professor at TED University, Department of Industrial Engineering. Prior to his current position he was a Postdoctoral Research Fellow at the University of Waterloo, Faculty of Engineering, Department of Management Sciences. He worked for many years as a Senior Operations Research Analysis Officer at the Project Management Division of Turkish General Staff Headquarters. He received his PhD. from Bilkent University, the Department of Industrial Engineering in 2015. He holds an M.S. degree in Operations Research from U.S. Naval Postgraduate School and a B.S. degree in Systems Engineering from Turkish Army Academy. His research interests include large scale optimization, convex optimization, stochastic programming, and data-driven optimization applications with an emphasis on disaster management, transportation and logistics problems.

Education Information

Doctorate, Ihsan Dogramaci Bilkent University, Faculty Of Engineering, Department Of Industrial Engineering, Turkey
2009 - 2015

Postgraduate, U.S. Naval Postgraduate School, Department of Operations Research, United States Of America 2000 - 2002

Undergraduate, Land War Academy Command, Turkish Military Academy (Dean's Office), Turkey 1993 - 1997

Dissertations

Doctorate, Nonlinear Mixed Integer Programming Models and Algorithms for Fair and Efficient Large Scale Evacuation Planning, Ihsan Dogramaci Bilkent University, Faculty Of Engineering, Department Of Industrial Engineering, 2015

Postgraduate, Optimizing the Capacity and Operation of U.S. Army Ammunition Production Facilities, Naval Postgraduate School, Department of Operations Research, 2002

Research Areas

Logistics Management, Disaster Management, Transportation Engineering, Traffic Engineering, Nonlinear Programming, Linear Programming, Integer and Mixed Integer Programming, Facility Location and Design, Network Design

Academic Titles / Tasks

Assistant Professor, TED University, Faculty of Engineering, Department of Industrial Engineering, 2017 - Continues
Other, University of Waterloo, Department of Management Sciences, 2016 - 2017

Academic and Administrative Experience

Strategic Planning Group, Resource Planning, TED University, Faculty Of Engineering, Department Of Industrial Engineering, 2022 - Continues

University Ethics Committee Member, TED University, Faculty Of Engineering, Department Of Industrial Engineering, 2017 - Continues

Department Coordinator for Double Major-Minor Degree Programs, TED University, Faculty Of Engineering, Department Of Industrial Engineering, 2017 - Continues

Faculty Board Assistant Professor Representative, TED University, Faculty Of Engineering, Department Of Industrial Engineering, 2017 - Continues

Faculty Discipline Board Member, TED University, Faculty Of Engineering, Department Of Industrial Engineering, 2017 - Continues

Department Coordinator for Senior Design Project Courses, TED University, Faculty Of Engineering, Department Of Industrial Engineering, 2017 - Continues

Assistant Professor, Faculty of Engineering, Department of Industrial Engineering, 2017 - Continues

Courses

Mathematical Modeling & Optimization II, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020

Senior Project I, Undergraduate, 2022 - 2023, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018

Mathematical Modeling & Optimization II, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018

Discrete Optimization, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017

Humanitarian Logistics, Undergraduate, 2021 - 2022

Senior Project II, Undergraduate, 2021 - 2022

Senior Project I, Undergraduate, 2021 - 2022

Humanitarian Logistics, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017

Discrete Optimization, Postgraduate, 2020 - 2021, 2018 - 2019, 2017 - 2018

Discrete Optimization, Undergraduate, 2020 - 2021

Senior Project II, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018

Graduation Project, Postgraduate, 2018 - 2019

Discrete Optimization, Postgraduate, 2016 - 2017

Advising Theses

Bayram V., Yıldız B., Multi Model Tsunami Evacuation Planning considering Evacuees' Compliance Behavior, Doctorate, S.Moslemi(Student), Continues

Bayram V., Yıldız B., Evacuation Zoning for Istanbul Tsunami Evacuation Planning, Postgraduate, L.Mamouri(Student), Continues

Bayram V., Yıldız B., Network Design and Management Problems for Social Aid Distribution Operations, Doctorate, D.Benli(Student), Continues

Bayram V., Nickel S., Evacuation Zoning Considering Evacuee Compliance, Postgraduate, M.Luo(Student), Continues

Advising Graduates (Non-Thesis)

Bayram V., USE OF UNMANNED AERIAL VEHICLES IN CITY LOGISTICS, Masters (Non-Thesis), H.Gül(Student), 2019

Jury Memberships

Post Graduate, Post Graduate, İhsan Doğramacı Bilkent Üniversitesi, August, 2022
September, 2021
July, 2021
June, 2020
December, 2019
December, 2019
June, 2019
Bilkent University Supply Chain Management and Logistics Workshop, June, 2019
May, 2019
February, 2019
December, 2018
November, 2018
July, 2018
June, 2018
June, 2018
June, 2018
June, 2018
ISCO (International Symposium on Combinatorial Optimization), January, 2018
December, 2017
December, 2017
September, 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Hub Network Design Problem with Capacity, Congestion and Stochastic Demand Considerations**
Bayram V., Yıldız B., Farham S.
TRANSPORTATION SCIENCE, vol.1, no.1, pp.1-20, 2023 (SCI-Expanded)
- II. **Optimal Order Batching in Warehouse Management: A Data-Driven Robust Approach**
Bayram V., Baloch G., Gzara F., Elhedhli S.
INFORMS Journal on Optimization, vol.4, no.3, pp.278-303, 2022 (SCI-Expanded)
- III. **Joint capacity, inventory, and demand allocation decisions in manufacturing systems**
Bayram V., Gzara F., Elhedhli S.
IIE TRANSACTIONS, vol.51, no.3, pp.248-265, 2019 (SCI-Expanded)
- IV. **A STOCHASTIC PROGRAMMING APPROACH FOR SHELTER LOCATION AND EVACUATION PLANNING**
Bayram V., Yaman H.
RAIRO-OPERATIONS RESEARCH, vol.52, no.3, pp.779-805, 2018 (SCI-Expanded)
- V. **Shelter Location and Evacuation Route Assignment Under Uncertainty: A Benders Decomposition Approach**
Bayram V., Yaman H.
TRANSPORTATION SCIENCE, vol.52, no.2, pp.416-436, 2018 (SCI-Expanded)
- VI. **Compromising system and user interests in shelter location and evacuation planning**
Bayram V., Tansel B. C., Yaman H.
TRANSPORTATION RESEARCH PART B-METHODOLOGICAL, vol.72, pp.146-163, 2015 (SCI-Expanded)

Articles Published in Other Journals

- I. **AN EXACT SECOND ORDER CONE PROGRAMMING APPROACH FOR TRAFFIC ASSIGNMENT PROBLEMS**
Bayram V.
RAIRO - Operations Research, vol.58, no.1, pp.847-864, 2024 (Scopus)
- II. **A Joint Demand and Supply Management Approach to Large Scale Urban Evacuation Planning: Evacuate or Shelter-in-Place, Staging and Dynamic Resource Allocation**
Bayram V., Yaman Patternotte H.
Optimization Online, vol.1, no.1, pp.1, 2021 (Peer-Reviewed Journal)
- III. **Line balancing optimization under robot location and worker-station assignment considerations: A case study of a dishwasher factory**
Bas I., Tosun O., Bayram V.
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, vol.27, no.4, pp.495-503, 2021 (ESCI)
- IV. **Data driven storage location assignment problem considering order picking frequencies: A heuristic approach**
Cobanoglu I., Gure I., Bayram V.
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, vol.27, no.4, pp.520-531, 2021 (ESCI)
- V. **Optimization models for large scale network evacuation planning and management: A literature review**
Bayram V.
Surveys in Operations Research and Management Science, vol.21, no.2, pp.63-84, 2016 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

- I. **PROCUREMENT AND INVENTORY OPTIMIZATION CONSIDERING PART DISRUPTIONS IN MANUFACTURING**
Bayram V.
14th INTERNATIONAL CONFERENCE ON ENGINEERING & NATURAL SCIENCES, 18 - 19 July 2022, pp.42
- II. **STRATEGICALLY LOCATING LAST MILE WAREHOUSES FOR AN ONLINE RETAIL COMPANY**
Bayram V.
INTERNATIONAL CONFERENCE ON RESEARCH IN APPLIED SCIENCES, 9 - 10 July 2022, pp.94-95
- III. **Zone Based Evacuate or Shelter-in-place Decisions and Dynamic Resource Allocation**
Bayram V.
- IV. **Large Scale Urban Evacuation Planning and Management: A Zone-Based Approach**
Bayram V.
- V. **A New Perspective On Hub Location Problems: A Path-based Generalized Approach,**
Bayram V.
- VI. **Cell-Based Dynamic Evacuation Traffic Management under Risk and Resource Allocation Considerations**
Bayram V., Yaman Patternotte H.
- VII. **Hub Location under Capacity and Congestion Considerations: An Exact Solution Approach**
Bayram V., Farham M. S., Yıldız B.
- VIII. **Hub Location under Congestion and Capacity Considerations: An Exact Solution Approach**
Farham S., Yıldız B., Bayram V.
- IX. **Data Driven Robust Order Batching Decisions for Warehouse Management: A Data Analytics and Branch and Price Approach**
Bayram V., Baloch G., Gzara F., Elhedhli S.
- X. **A Benders Decomposition Approach for Shelter Location and Evacuation Planning under Uncertainty**

Bayram V., Yaman H.

XI. Compromising System and User Interests in Shelter Location and Evacuation Planning

Bayram V., Tansel B. Ç.

Supported Projects

Yıldız B., Bayram V., TUBITAK Project, Sosyal yardım ulaştırma ağları tasarım ve yönetimi, 2022 - 2025

Bayram V., Yalçiner A. C., Yıldız B., Doğulu C., TUBITAK Project, Tsunami Tehdidine Karşı İstanbul İli Marmara Denizi Kıyıları Tahliye Planlaması Ve Yönetimi (Evacuation Planning and Management for Istanbul City Marmara Sea Shores Against Tsunami Threat), 2021 - 2024

BAYRAM V., H2020 Project, "Real-Time Large Scale Urban Evacuation Management-RealTimeEvac", 2020 - 2023

Bayram V., TUBITAK Project, Hub Location under Congestion and Capacity Considerations, 2019 - 2021

Gzara S. F., Elhedhli P. S., BAYRAM V., Baloch G., Data Analytics for Warehouse Operations Management", 2016 - 2017

BAYRAM V., Yaman P. H., TUBITAK Project, Nonlinear Mixed Integer Programming Models for Evacuation Planning, 2014 - 2016

Activities in Scientific Journals

Sustainability Analytics and Modeling Journal, IFORS, Elsevier, Committee Member, 2021 - Continues

Memberships / Tasks in Scientific Organizations

INFORMS Public Sector Operations Research, Member, 2018 - Continues, United States Of America

INFORMS Section on Location Analysis, Member, 2018 - Continues, United States Of America

INFORMS Transportation Science and Logistics Society, Member, 2016 - Continues, United States Of America

YAEM (Yöneylem Araştırması ve Endüstri Mühendisliği), Member, 2015 - Continues, Turkey

INFORMS, Member, 2015 - Continues, United States Of America

Scientific Refereeing

Socio Economic Planning Sciences, Journal Indexed in SSCI, September 2022

EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, SCI Journal, July 2022

Sustainability Analytics and Modeling, Journal Indexed in SCI-E, June 2022

Transportation Research Part C, SCI Journal, May 2022

4OR, SCI Journal, April 2022

TRANSPORTATION RESEARCH PART B-METHODOLOGICAL, SCI Journal, February 2022

4OR, SCI Journal, January 2022

4OR: A Quarterly Journal of Operations Research, December 2021

TRANSPORTATION RESEARCH. PART C: EMERGING TECHNOLOGIES, December 2021

IISE Transactions, November 2021

OR SPECTRUM, October 2021

SOCIO-ECONOMIC PLANNING SCIENCES, October 2021

Computers and Industrial Engineering, August 2021

IISE Transactions, August 2021

TRANSPORTATION SCIENCE, August 2021

SOCIO-ECONOMIC PLANNING SCIENCES, July 2021

Computers and Operations Research, June 2021

SOCIO-ECONOMIC PLANNING SCIENCES, June 2021

EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, May 2021
OR SPECTRUM, May 2021
IIE Transactions, March 2021
Computers and Industrial Engineering, March 2021
INFORMS Journal on Computing, March 2021
Computers and Operations Research, March 2021
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, January 2021
IET INTELLIGENT TRANSPORT SYSTEMS, January 2021
TRANSPORTATION RESEARCH PART B-METHODOLOGICAL, December 2020
TRANSPORTATION RESEARCH PART E-LOGISTICS AND TRANSPORTATION REVIEW, December 2020
Computers and Operations Research, December 2020
TRANSPORTATION RESEARCH PART B-METHODOLOGICAL, November 2020
OMEGA International Journal of Management Science, November 2020
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, October 2020
SOCIO-ECONOMIC PLANNING SCIENCES, October 2020
INFORMS Journal on Computing, September 2020
TRANSPORTATION RESEARCH PART E-LOGISTICS AND TRANSPORTATION REVIEW, August 2020
CENTRAL EUROPEAN JOURNAL OF OPERATIONS RESEARCH, August 2020
Production and Operations Management, August 2020
TRANSPORTATION RESEARCH PART B-METHODOLOGICAL, July 2020
TRANSPORTATION RESEARCH PART B-METHODOLOGICAL, June 2020
INFORMS Journal on Computing, May 2020
TRANSPORTATION SCIENCE, May 2020
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, April 2020
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, March 2020
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, February 2020
INFOR: Information Systems and Operational Research, January 2020
SOCIO-ECONOMIC PLANNING SCIENCES, January 2020
OMEGA International Journal of Management Science, December 2019
INFOR: Information Systems and Operational Research, January 2019
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, January 2019
NETWORKS, January 2019
TRANSPORTMETRICA A: TRANSPORT SCIENCE, January 2019
TRANSPORTATION RESEARCH PART E-LOGISTICS AND TRANSPORTATION REVIEW, January 2019
SOCIO-ECONOMIC PLANNING SCIENCES, January 2019
OR SPECTRUM, January 2019
TRANSPORTATION SCIENCE, January 2019
INTERNATIONAL JOURNAL OF DISASTER RISK REDUCTION, January 2018
TRANSPORTMETRICA A: TRANSPORT SCIENCE, January 2018
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, January 2018
TRANSPORTATION RESEARCH PART B-METHODOLOGICAL, January 2018
TRANSPORTATION RESEARCH PART E-LOGISTICS AND TRANSPORTATION REVIEW, January 2018
Computers and Operations Research, January 2017
INFOR: Information Systems and Operational Research, January 2017
ANNALS OF OPERATIONS RESEARCH, January 2017
INFORMS Journal on Computing, January 2017
TRANSPORTATION RESEARCH PART B-METHODOLOGICAL, January 2017
IIE Transactions, January 2017
EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, January 2017
TRANSPORTATION RESEARCH PART E-LOGISTICS AND TRANSPORTATION REVIEW, January 2017
Computers and Operations Research, January 2016

INFOR: Information Systems and Operational Research, January 2016
TRANSPORTATION RESEARCH PART B-METHODOLOGICAL, January 2016
INTERNATIONAL JOURNAL OF DISASTER RISK REDUCTION, January 2016
SURVEYS IN OPERATIONS RESEARCH AND MANAGEMENT SCIENCE, January 2016

Tasks In Event Organizations

Bayram V., Salman F. S., Yetiş B., Balçık Koyuncu B., The 1st Bi-Annual EURO HOpe Summer School on Humanitarian Logistics 2021, Science / Art Camp or Summer School Organization, Turkey, Temmuz 2021

Congress and Symposium Activities

EURO HOPE Mini Conference, Invited Speaker, İstanbul, Turkey, 2022

Awards

Bayram V., HORIZON EUROPE HORIZON-MSCA-2021-PF-01-01 — MSCA Postdoctoral Fellowships 2021 Seal of Excellence, European Commission, September 2022

Bayram V., Horizon 2020 Marie Curie Global Fellowship Seal of Excellence Award, European Commission, August 2020