

e-ISSN: 2459-1718



Journal of Transportation and Logistics

<http://www.ijttl.com/>



Volume 8



Issue 1



2023



İSTANBUL
UNIVERSITY
PRESS



Dizinler / Indexing and Abstracting

TÜBİTAK-ULAKBİM TR Dizin

Open AIRE

DOAJ

ERIH PLUS

SOBİAD

EBSCO Central & Eastern European Academic Source

Cabells Journalytics





Owner / Sahibi

Prof. Dr. Abdullah OKUMUŞ

Istanbul University, School of Transportation and Logistics, Istanbul, Türkiye
İstanbul Üniversitesi Ulaştırma ve Lojistik Fakültesi, İstanbul, Türkiye

Responsible Manager / Sorumlu Yazı İşleri Müdürü

Prof. Dr. Mehmet ADAK

Istanbul University, School of Transportation and Logistics, Istanbul, Türkiye
İstanbul Üniversitesi Ulaştırma ve Lojistik Fakültesi, İstanbul, Türkiye

Correspondence Address / Yazışma Adresi

Istanbul University, Faculty of Transportation and Logistic,
Beyazıt Campus, 34452 Fatih, Istanbul, Türkiye

E-mail: editor@iujtl.com

<https://dergipark.org.tr/tr/pub/jtl>

<https://iupress.istanbul.edu.tr/en/journal/jtl/home>

Publisher / Yayıncı

Istanbul University Press / İstanbul Üniversitesi Yayınevi
İstanbul Üniversitesi Merkez Kampüsü, 34452 Beyazıt, Fatih,
İstanbul, Türkiye

Phone / Telefon: +90 (212) 440 00 00

Authors bear responsibility for the content of their published articles.
Dergide yer alan yazılardan ve aktarılan görüşlerden yazarlar sorumludur.

The publication language of the journal is English and Turkish.
Yayın dili İngilizce ve Türkçe'dir.

This is a scholarly, international, peer-reviewed, open-access journal published biannually in May and November.
Mayıs ve Kasım aylarında, yılda iki sayı olarak yayımlanan uluslararası, hakemli, açık erişimli ve bilimsel bir dergidir.

Yayın Türü / Publication Type: Yaygın Süreli / Periodical

EDITORIAL MANAGEMENT / DERGİ YAZI KURULU

Editors-in-Chief / Baş Editörler

Prof. Dr. Mehmet ADAK – Istanbul University, Faculty of Transportation and Logistics, Department of Transportation and Logistics, Istanbul, Türkiye – mehmet.adak@istanbul.edu.tr

Assoc. Prof. Abit BALIN – Istanbul University, Faculty of Transportation and Logistics, Department of Transportation and Logistics, Istanbul, Türkiye – abitbalin@istanbul.edu.tr

Co-Editors in Chief / Baş Editör Yardımcıları

Prof. Dr. Rasim İlker GÖKBULUT – Istanbul University, Faculty of Transportation and Logistics, Department of Transportation and Logistics, Istanbul, Türkiye – rasim.gokbulut@istanbul.edu.tr

Assoc. Prof. Erkan ÇELİK – Istanbul University, Faculty of Transportation and Logistics, Department of Transportation and Logistics, Istanbul, Türkiye – erkancelik@istanbul.edu.tr

Prof. Yi-Hsien WANG – Chinese Culture University, Department of Banking and Finance, Taipei, Taiwan – wyx12@ulive.pccu.edu.tw

Managing Editor / Yönetici Editör

Assist Prof. Bahadır Fatih YILDIRIM – Istanbul University, Faculty of Transportation and Logistics, Department of Transportation and Logistics, Istanbul, Türkiye – bahadirf.yildirim@istanbul.edu.tr

Language Editors / Dil Editörleri

Elizabeth Mary EARL – Istanbul University, Department of Foreign Languages, Istanbul, Türkiye – elizabeth.earl@istanbul.edu.tr

Rachel Elana KRISS – Istanbul University, Department of Foreign Languages, Istanbul, Türkiye – rachel.kriss@istanbul.edu.tr

Statistics Editor / İstatistik Editörü

Assoc. Prof. Burcu ADIGÜZEL MERCANGÖZ – Istanbul University, Faculty of Transportation and Logistics, Department of Transportation and Logistics, Istanbul, Türkiye – burcua@istanbul.edu.tr



EDITORIAL BOARD / YAYIN KURULU

Prof. Dr. Abdullah OKUMUŞ – Istanbul University, Faculty of Business Administration, Department of Business Administration, Istanbul, Türkiye – okumus@istanbul.edu.tr

Prof. Dr. Ayşe Güldem CERİT – Dokuz Eylül University, Maritime Faculty, School of Maritime Business and Management, İzmir, Türkiye – gcerit@deu.edu.tr

Prof. Dr. Bruce C.T. Ho – National Chung Hsing University, Institute of Technology Management, Taichung, Taiwan – bruceho@nchu.edu.tw

Prof. Dr. Chelsea WHITE – Georgia Institute of Technology, Transportation and Logistics, Atlanta, GA, USA – cwhite@isye.gatech.edu

Prof. Dr. Ergün EROĞLU – Istanbul University, Faculty of Business Administration, Department of Business Administration, Istanbul, Türkiye – eroglu@istanbul.edu.tr

Prof. Dr. Goh MARK – National University of Singapore, Department of Decision Sciences, School of Business, Singapore – tligohkh@nus.edu.sg

Prof. Dr. Haluk KORKMAZYÜREK – Toros University, Faculty of Economics, Administrative and Social Sciences, Department of International Finance and Banking, Mersin, Türkiye – haluk.korkmazurek@toros.edu.tr

Prof. Dr. Kannan GOVINDAN – University of Southern Denmark, Department of Technology and Innovation, Odense, Denmark – kgov@iti.sdu.dk

Prof. Dr. Kulwant PAWAR – University of Nottingham, Department of Operations Management and Information Systems, Nottingham, UK – kulwant.pawar@nottingham.ac.uk

Prof. Dr. M. Mehdi AMINI – Memphis University, Department of Marketing & Supply Chain Management, Memphis, TN, USA – mamini@memphis.edu

Prof. Dr. Malgorzata PANKOWSK – University of Economics, Department of Informatics, Katowice, Poland – malgorzata.pankowska@ue.katowice.pl

Prof. Dr. Mehmet TANYAS – Maltepe University, Faculty of Business and Management Sciences, Department of International Trade and Logistics, Istanbul, Türkiye – mehmettanyas@maltepe.edu.tr

Prof. Dr. Mukesh Kumar BARUA – Indian Institute of Technology Roorkee, Department of Management Studies Uttarakhand, India – mukesh.barua@ms.iitr.ac.in

Prof. Dr. Murat KIYILAR – Istanbul University, School of Business, Department of Finance, Istanbul, Türkiye – muratkiy@istanbul.edu.tr

Prof. Dr. Nachiappan SUBRAMANIAN – University of Sussex, Business School, SPRU - Science Policy Research Unit, Brighton, Sussex House, Falmer Brighton, United Kingdom – n.subramanian@sussex.ac.uk

Prof. Dr. Ömer ÖZKAN – Cyprus West University, Faculty of Law, Department of Law, Famagusta, North Cyprus – ozkanhukuk@yahoo.com

Prof. Dr. Özcan KILIÇ – University of Wisconsin-River Falls, College of Business and Economics, Department of Management and Marketing, River Falls, WI, USA – ozcan.kilic@uwrf.edu

Prof. Dr. Sadettin ÖZEN – Maltepe University, Faculty of Business Administration and Management Sciences, Istanbul, Türkiye – sadettinozen@yahoo.com

Prof. Dr. Samuel Fosso WAMBA – Toulouse Business School, Department of Information Systems and Data Science, Toulouse, France – s.fosso-wamba@tbs-education.fr

Prof. Dr. Sanjay MISRA – Covenant University, Department of Electrical and Information Engineering, OTA, Nigeria – sanjay.misra@covenantuniversity.edu.ng

Prof. Dr. Seung-Chul KIM – Hanyang University, Department of Operations and Service Management, Seoul, Korea – sckim888@hanyang.ac.kr



EDITORIAL BOARD / YAYIN KURULU

Prof. Dr. Sihyun PAIK – Yanbian University of Science & Technology, School of Business, Yanji, Jilin, China – sh-paik@yust.edu

Prof. Dr. Talha HARCAR – Penn State University, Department of Business, Pennsylvania, USA – tdh13@psu.edu

Prof. Dr. Turan PAKSOY – Necmettin Erbakan University, Faculty of Aeronautics and Astronautics, Department of Aviation Management, Konya, Türkiye – tpaksoy@erbakan.edu.tr

Prof. Dr. Vedat SARIKOVANLIK – Istanbul University, School of Business, Department of Finance, Istanbul, Türkiye – vedsari@istanbul.edu.tr

Prof. Dr. Yavuz GÜNALAY – Bahçeşehir University, Faculty of Economics, Administrative and Social Sciences, Department of Logistic Management, Istanbul, Türkiye – yavuz.gunalay@eas.bau.edu.tr

Prof. Dr. Tuncay ÇELİK – Kayseri University, Faculty of Applied Sciences, Department of International Trade and Logistics, Kayseri, Türkiye – tcelik@kayseri.edu.tr

Assoc. Prof. Diego ESCOBARI – University of Texas Rio Grande Valley, Department of Economics and Finance, Texas, USA – diego.escobari@utrgv.edu

Assoc. Prof. Ebru DEMİRCİ – Istanbul University, Faculty of Transportation and Logistics, Department of Transportation and Logistics, Istanbul, Türkiye – edemirci@istanbul.edu.tr

Assoc. Prof. Eren ÖZCEYLAN – Gaziantep University, Faculty of Engineering, Department of Industrial Engineering, Gaziantep, Türkiye – ezceylan@gantep.edu.tr

Assoc. Prof. Eugene Y. C. WONG – Hang Seng University of Hong Kong, Department of Supply Chain and Information Management, Shatin, Hong Kong – eugene.wong@oocl.com

Assoc. Prof. Giovanni SATTA – University of Genoa, Genoa, Department of Economics, Italy – satta@economia.unige.it

Assoc. Prof. Gültekin ALTUNTAŞ – Istanbul University, Faculty of Transportation and Logistics, Department of Transportation and Logistics, Istanbul, Türkiye – altuntas@istanbul.edu.tr

Assoc. Prof. Hakan DEMİREL – Zonguldak Bülent Ecevit University, Maritime Faculty, Ship Machinery Management Engineering Department, Zonguldak, Türkiye – hakandemirel@beun.edu.tr

Assoc. Prof. Halit ÖZEN – Yıldız Technical University, Faculty of Civil Engineering, Department of Civil Engineering, Istanbul, Türkiye – ozen@yildiz.edu.tr

Assoc. Prof. Lincoln C. WOOD – University of Otago, Department of Management, Dunedin, New Zealand – lincoln.wood@otago.ac.nz

Assoc. Prof. Muhammet GÜL – Munzur University, Faculty of Health Sciences, Department of Emergency Aid and Disaster Management, Tunceli, Türkiye – muhammetgul@munzur.edu.tr

Assoc. Prof. Shao Hung GOH – Singapore University of Social Science, School of Business, Clementi, Singapore – shgoh015@unisim.edu.sg

Assoc. Prof. Sigal KAPLAN – The Hebrew University of Jerusalem, Faculty of Social Sciences, The Department of Geography, Jerusalem, Israel – sigal.kaplan@mail.huji.ac.il

Assoc. Prof. Syed Masiur RAHMAN – King Fahd University of Petroleum & Minerals, Center for Environment & Water Research Institute, Dhahran, Saudi Arabia – smrahman@kfupm.edu.sa

Assoc. Prof. Taih-Cherng LIRN – National Taiwan Ocean University, Department of Shipping and Transportation Management, Keelung, Taiwan – tedlirn@email.ntou.edu.tw

Assoc. Prof. Xiaolei WANG – Tongji University, School of Economics and Management, Shanghai, China – xlwangiris0420@gmail.com

EDITORIAL BOARD / YAYIN KURULU

Assoc. Prof. Zehra BOZBAY – Istanbul University, School of Business, Department of Marketing, Istanbul, Türkiye – zehrat@istanbul.edu.tr

Assoc. Prof. Wei LI – Central South University, School of Civil Engineering, Department of Railway Engineering, Changsha, China – leewei@csu.edu.cn

Asst. Prof. Özge Nalan BİLİŞİK – Yıldız Technical University, Department of Industrial Engineering, Istanbul, Türkiye – oznalan@yildiz.edu.tr

Asst. Prof. Banu Yüksel ÖZKAYA – Hacettepe University, Faculty of Engineering, Department of Industrial Engineering, Ankara, Türkiye – byuksel@hacettepe.edu.tr

Dr. Cafer AVCI – Yalova University, Faculty of Engineering, Department of Computer Engineering, Yalova, Türkiye – cafer.avci@yalova.edu.tr

Dr. Melike ERDOĞAN – Düzce University, Faculty of Engineering, Department of Industrial Engineering, Düzce, Türkiye – melikeerdogan@duzce.edu.tr

Dr. Rahimeh NEAMATIAN MONEMI – University of Southampton, Business School Southampton, CORMSIS Centre for Operational Research, Southampton, United Kingdom – r.n.monemi@gmail.com

TABLE OF CONTENTS / İÇİNDEKİLER

RESEARCH ARTICLES / ARAŞTIRMA MAKALELERİ

- 1 Fleet Size and Mix Vehicle Routing Problem (FSMVRP), Adapted Large Neighbourhood Search Heuristic Optimization Proposal With a Plant-capacity and Multi-day Planning Algorithm: A Livestock Feed Industry Case Study
Alperen Ekrem Çelikdin
- 13 Pricing of Contractual Shipments and Slot Allocation in Container Liner Shipping under Stochastic Environment
Ercan Kurtuluş
- 29 Evaluating Trigger Effects of Covid-19 on Supply Chain Integration
Gülden Oral, Mahmut Mollaoglu, Umur Bucak
- 36 Risk Assessment of Solid Bulk Cargo Liquefaction Consequences in Maritime Transportation under a Fuzzy Bayesian Network Approach
Muhammet Aydın
- 48 Traffic Analysis Model with Bayesian Network and Social Media Data: D100 Highway Travel Information System
Cihan Çiftçi, Halim Kazan
- 62 İç Entegrasyonun Lojistik Hız Ve Güvenirlilik Üzerindeki Etkisi: Müşteri Entegrasyonun Aracı Rolü
The Impact of Internal Integration on Logistics Speed and Reliability: The Mediating Role of Customer Integration
Ahmet Çetindaş, Mazlum Çelik
- 73 Akıllı Şehir Lojistiği Kapsamında Akıllı Ulaşım Sistemleri (AUS) için Sistem Analizi
System Analysis for Intelligent Transportation Systems (ITS) in the Scope of Smart City Logistics
Aziz Cumhur Kocalar