Assoc. Prof. CEREN TUNCER ŞAKAR

Personal Information

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International Researcher IDs
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Education Information

Doctorate, Middle East Technical University, Faculty Of Engineering, Department Of Industrial Engineering, Turkey 2008 - 2013
Postgraduate, Middle East Technical University, Faculty Of Engineering, Department Of Industrial Engineering, Turkey 2003 - 2006
Undergraduate, Middle East Technical University, Faculty Of Economic And Administrative Sciences, İşletme, Turkey 1999 - 2003

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Multicriteria portfolio optimization, Middle East Technical University, Faculty Of Engineering, Department Of Industrial Engineering, 2013
Postgraduate, A DEA-based Approach to Ranking Multicriteria Alternatives, Middle East Technical University, Faculty Of Engineering, Department Of Industrial Engineering, 2006

Research Areas

Optimization Theory and Methods, Multiobjective Optimization, Project Management, Financial Models and Applications, Decision Theory, Multi Criteria Decision Making, Decision Support Systems

Academic Titles / Tasks

Associate Professor, Hacettepe University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2020 - Continues
Assistant Professor, Hacettepe University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2014 - 2020
Research Assistant, Middle East Technical University, Faculty Of Engineering, Department Of Industrial Engineering, 2010 - 2013

Research Assistant, Middle East Technical University, Faculty Of Engineering, Department Of Industrial Engineering, 2005 - 2006

Academic and Administrative Experience

Hacettepe Üniversitesi, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2014 - Continues

Courses

Deterministic Operations Research, Undergraduate, 2021 - 2022
Optimization Techniques and Applications, Postgraduate, 2021 - 2022
Introduction to Optimization and Modeling, Undergraduate, 2021 - 2022
Project Planning and Control, Postgraduate, 2020 - 2021
Project Management, Undergraduate, 2020 - 2021
Multicriteria Optimization, Postgraduate, 2020 - 2021
Multicriteria Decision Making, Undergraduate, 2020 - 2021
Optimization of Engineering Systems, Postgraduate, 2019 - 2020
Operations Planning and Control, Postgraduate, 2019 - 2020
Revenue Management, Undergraduate, 2018 - 2019
Pricing and Revenue Optimization, Postgraduate, 2018 - 2019

Advising Theses

Tuncer Şakar C., Testik M. C., Proje Planlama ve Plan Güncelleme Süreçlerinde Matematiksel Modelleme Tabanlı Dijital İkiz Yaklaşımı, Postgraduate, S.ÖZLEM(Student), 2023
Tuncer Şakar C., HIZLI TÜKETİM ÜRÜNLERİ SEKTÖRÜNDE ONLINE ALIŞVERİŞ MÜŞTERİLERİNİN SEGMENTASYONU, Postgraduate, B.KESKİN(Student), 2023
Tuncer Şakar C., A Data Envelopment Analysis Approach for Efficient Human Resource Allocation in Project Management, Postgraduate, S.Berkan(Student), 2022
Tuncer Şakar C., A Multicriteria Approach for Configuration and Positioning of Air Defense Systems, Postgraduate, D.Özyılmaz(Student), 2022
Tuncer Şakar C., Yet B., Implementing shared decision-making for returning to play sports after an injury using the Analytic Hierarchy Process (AHP) in a web application, Postgraduate, N.YILMAZ(Student), 2022
Tuncer Şakar C., Yet B., Multiple criteria approaches for medical decision support models, Postgraduate, M.CEBESOY(Student), 2020
Tuncer Şakar C., Yet B., Learning Bayesian network parameters from small data sets by using ranked nodes method, Postgraduate, S.İŞYAR(Student), 2020
Tuncer Şakar C., Customer Order Scheduling Problem for the Box Packaging Industry: An Application, Postgraduate, B.CEYDA(Student), 2019
Tuncer Şakar C., Yet B., A multicriteria preventive maintenance approach and its application in the after-sales service of a truck and bus company, Postgraduate, G.GÜVEN(Student), 2019
Tezcaner Öztürk D., Tuncer Şakar C., Heuristic Approaches for the Multi-objective Routing Problem for a Fleet of Unmanned Aerial Vehicles, Postgraduate, B.BİŞKİN(Student), 2019
Tuncer Şakar C., New Approaches to Rank Decision Making Units in Data Envelopment Analysis, Postgraduate, M.KÜBRA(Student), 2018
Tuncer Şakar C., Positioning of Military Surveillance Systems in a Pilot Area within Urban Safety, Postgraduate, F.ÇARMAN(Student), 2016

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Efficient Human Resource Allocation in Projects Using Centralized Data Envelopment Analysis**
Tuncer Şakar C., Bozat S. B.
ENGINEERING MANAGEMENT JOURNAL, pp.1-15, 2024 (SCI-Expanded)

II. **A Multicriteria Method to Form Optional Preventive Maintenance Plans: A Case Study of a Large Fleet of Vehicles**
Guner G. G., Sakar C. T., YET B.
IEEE Transactions on Engineering Management, vol.70, no.6, pp.2153-2164, 2023 (SCI-Expanded)

III. **Biobjective route planning for a fleet of UAVs: Exact and heuristic approaches**
Bişkin B., Tezcaner Öztürk D., Tuncer Şakar C.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.38, no.4, pp.2167-2178, 2023 (SCI-Expanded)

IV. **Reducing the question burden of patient reported outcome measures using Bayesian networks**
Yücetürk H., Gülle H., Şakar C. T., Joyner C., Marsh W., ÜNAL E., Morrissey D., YET B.
Journal of Biomedical Informatics, vol.135, 2022 (SCI-Expanded)

V. **A Multi-objective open vehicle routing problem with overbooking: Exact and heuristic solution approaches for an employee transportation problem**
Daşdemir E., Testik M. C., Tezcaner Öztürk D., Tuncer Şakar C., Güleryüz G., Testik Ö. M.
OMEGA, vol.108, pp.1-16, 2022 (SCI-Expanded)

VI. **A New Interactive Algorithm for Continuous Multiple Criteria Problems: A Portfolio Optimization Example**
Karakaya G., Tuncer Şakar C.
International Journal of Information Technology and Decision Making, vol.20, no.1, pp.371-398, 2021 (SCI-Expanded)

VII. **Estimating criteria weight distributions in multiple criteria decision making: a Bayesian approach**
YET B., TUNCER ŞAKAR C.
ANNALS OF OPERATIONS RESEARCH, vol.293, no.2, pp.495-519, 2020 (SCI-Expanded)

VIII. **A new DEA approach to fully rank DMUs with an application to MBA programs**
Ekiz M. K., TUNCER ŞAKAR C.
INTERNATIONAL TRANSACTIONS IN OPERATIONAL RESEARCH, vol.27, no.4, pp.1886-1910, 2020 (SCI-Expanded)

IX. **A new approach to rank all alternatives in data envelopment analysis: ASES**
EKİZ M. K., TUNCER ŞAKAR C.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.35, no.2, pp.683-695, 2020 (SCI-Expanded)

X. **An interactive approach with filtering to find a preferred solution of a decision maker**
TUNCER ŞAKAR C., KARAKAYA G.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.34, no.4, pp.1987-2005, 2019 (SCI-Expanded)

XI. **An MCDM-integrated maximum coverage approach for positioning of military surveillance systems**
Carman F., TUNCER ŞAKAR C.
JOURNAL OF THE OPERATIONAL RESEARCH SOCIETY, vol.70, no.1, pp.162-176, 2019 (SCI-Expanded)

XII. **An interactive approach to stochastic programming-based portfolio optimization**
Koksalan M., TUNCER ŞAKAR C.
ANNALS OF OPERATIONS RESEARCH, vol.245, pp.47-66, 2016 (SCI-Expanded)

XIII. **EFFECTS OF MULTIPLE CRITERIA ON PORTFOLIO OPTIMIZATION**
Ceren T. S., Koksalan M.
INTERNATIONAL JOURNAL OF INFORMATION TECHNOLOGY & DECISION MAKING, vol.13, no.1, pp.77-99, 2014 (SCI-Expanded)

XIV. **A stochastic programming approach to multicriteria portfolio optimization**
Sakar C., Koksalan M.

JOURNAL OF GLOBAL OPTIMIZATION, vol.57, no.2, pp.299-314, 2013 (SCI-Expanded)

XV. **A DEA-BASED APPROACH TO RANKING MULTI-CRITERIA ALTERNATIVES**
Koeksalan M., Tuncer C.
INTERNATIONAL JOURNAL OF INFORMATION TECHNOLOGY & DECISION MAKING, vol.8, no.1, pp.29-54, 2009
(SCI-Expanded)

Articles Published in Other Journals

I. **Assessing Serious Spinal Pathology Using Bayesian Network Decision Support: Development and Validation Study**
Hill A., Joyner C. H., Keith-Jopp C., YET B., Sakar C. T., Marsh W., Morrissey D.
JMIR Formative Research, vol.7, 2023 (ESCI)

II. **Predicting the response to bDMARD treatment in RA: Then what?**
Tuncer Şakar C., Karakaya G., Bilgin E., Kılıç L., Kalyoncu U.
Ulusal Romatoloji Dergisi, vol.14, no.2, pp.87-93, 2022 (Peer-Reviewed Journal)

III. **A bayesian network decision support tool for low back pain using a RAND appropriateness procedure: proposal and internal pilot study**
Hill A., Joyner C. H., Keith-Jopp C., YET B., Sakar C., Marsh W., Morrissey D.
JMIR Research Protocols, vol.10, no.1, 2021 (ESCI)

IV. **An interactive ranking-based multi-criteria choice algorithm with filtering: Applications to university selection**
KARAKAYA G., TUNCER ŞAKAR C.
METU Studies in Development, vol.46, no.1, pp.17-46, 2019 (Peer-Reviewed Journal)

V. **Çok Kriterli Karar Verme Problemlerinde Fayda Fonksiyonu Ağırlıklarının Tahmin Edilmesi için Matematiksel Model Temelli bir Yöntem**
TUNCER ŞAKAR C., YET B.
Uludağ University Journal of The Faculty of Engineering, vol.23, no.1, pp.379-402, 2018 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

I. **An Online Shared Decision Making Tool for Clinical Consultation**
Tuncer Şakar C., Keith-Jopp C., Yet B., Joyner C., Hill A., Roberts J., Marsh W., Morrissey D.
22nd Annual Conference in Sports & Exercise Medicine, London, England, 08 September 2022, pp.37-38

II. **Modernising the MSK pathway using digital innovations**
Morrissey D., Vikatou T., Hill A., Jubb C., Lowe C., Yet B., Tuncer Şakar C.
1st North East London Health & Care Partnership AHPs Conference, London, England, 23 February 2022

III. **A meta fuzzy functions integrated mixed vehicle routing approach for coast guard patrol management project in Turkey**
Çaman Çevik F., Tuncer Şakar C.
31st European Conference on Operational Research (EURO 2021), Athens, Greece, 11 - 14 July 2021, pp.71

IV. **Multicriteria Decision Support Approaches for Physiotherapy Under Uncertainty**
CEBESOY M., TUNCER ŞAKAR C., YET B.
30th European Conference on Operational Research (EURO 2019), Dublin, Ireland, 23 - 26 June 2019, pp.302

V. **Multi-Objective Route Planning of a Fleet of Unmanned Aerial Vehicles**
BİŞKİN B., TEZCANER ÖZTÜRK D., TUNCER ŞAKAR C.
30th European Conference on Operational Research (EURO 2019), Dublin, Ireland, 23 - 26 June 2019, pp.208-209

VI. **PROMETHEE Approaches for Medical Decision Support under Uncertainty**
CEBESOY M., TUNCER ŞAKAR C., YET B.
25th International Conference on Multiple Criteria Decision Making (MCDM 2019), İstanbul, Turkey, 16 - 21 June

2019, pp.159-160

VII. **A Heuristic Approach to Multi-objective Routing Problem for a Fleet of Unmanned Aerial Vehicles**
BİŞKİN B., TEZCANER ÖZTÜRK D., TUNCER ŞAKAR C.
25th International Conference on Multiple Criteria Decision Making (MCDM 2019), İstanbul, Turkey, 16 - 21 June 2019, pp.107

VIII. **Otomotiv Endüstrisinde Çok Kriterli Güvenilirlik Yaklaşımları**
GÜNER G. G., TUNCER ŞAKAR C., YET B.
39. Yöneylem Araştırması ve Endüstri Mühendisliği Ulusal Kongresi (YA/EM 2019), Ankara, Turkey, 12 - 14 June 2019, pp.89

IX. **Sıralı Düğümler Yöntemi ile Bayes Ağı Temelli Fizyoterapi Karar Destek Aracı Öğrenilmesi**
GÜNER G. G., TUNCER ŞAKAR C., YET B.
39. Yöneylem Araştırması ve Endüstri Mühendisliği Ulusal Kongresi(YA/EM 2019), Ankara, Turkey, 12 - 14 June 2019, pp.93

X. **Belirsizlik Altında Medikal Karar Destek İçin Çok Kriterli Karar Verme Yaklaşımları**
GÜNER G. G., TUNCER ŞAKAR C., YET B.
39. Yöneylem Araştırması ve Endüstri Mühendisliği Ulusal Kongresi (YA/EM 2019), Ankara, Turkey, 12 - 14 June 2019, pp.99

XI. **Farklı Öncelikli Hedefler İçeren Üç-Amaçlı İHA Filosu Rotalama Problemi**
BİŞKİN B., TEZCANER ÖZTÜRK D., TUNCER ŞAKAR C.
39. Yöneylem Araştırması ve Endüstri Mühendisliği Ulusal Kongresi (YA/EM 2019), Ankara, Turkey, 12 - 14 June 2019, pp.100

XII. **A Filtering-enabled Interactive Algorithm to Find Preferred Solutions of the Decision Maker**
KARAKAYA G., TUNCER ŞAKAR C.
INFORMS 2018 Annual Meeting, Phoenix, United States Of America, 4 - 07 November 2018, pp.374

XIII. **Karar Verme Birimlerinin Tam Sıralaması için Veri Zarflama Analizi Tabanlı Yeni bir Yöntem**
EKİZ M. K., TUNCER ŞAKAR C.
ZEUGMA 1. Uluslararası Multidisipliner Çalışmalar Kongresi, Antalya, Turkey, 13 - 16 September 2018, pp.242

XIV. **A New DEA-based Method for Full Ranking of Decision Making Units**
EKİZ M. K., TUNCER ŞAKAR C.
2nd International Conference on Innovations in Natural Science and Engineering (ICINSE 2018), Kiev, Ukraine, 7 - 10 September 2018, pp.54-55

XV. **An MCDM-integrated Maximum Coverage Approach for Positioning of Military Surveillance Systems**
ÇARMAN F., TUNCER ŞAKAR C.
29th European Conference on Operational Research (EURO 2018), Valencia, Spain, 8 - 11 July 2018, pp.157

XVI. **Karar Vericinin Tercih Ettiği Çözümü Bulmak için Filtreleme Yardımlı İnteraktif bir Yöntem**
TUNCER ŞAKAR C., KARAKAYA G.
38. Yöneylem Araştırması ve Endüstri Mühendisliği Kongresi (YA/EM 2018), Eskişehir, Turkey, 26 - 29 June 2018, pp.67-68

XVII. **A Probabilistic Approach for Indirect Elicitation of the Preferences of a Decision Maker**
YET B., TUNCER ŞAKAR C.
BALCOR 2018 - XIII Balkan Conference on Operational Research, Belgrade, Serbia, 25 - 28 May 2018, pp.39

XVIII. **A Multiobjective Evolutionary Approach to Employee Bus Transportation Problem**
DAŞDEMİR E., TESTİK M. C., TESTİK Ö. M., TUNCER ŞAKAR C.
International Conference on Advanced Technologies, Computer Engineering and Science (ICATCES 2018), Karabük, Turkey, 11 - 13 May 2018

XIX. **Veri Zarflama Analizi ile MBA Programlarının Sıralanması**
EKİZ M. K., TUNCER ŞAKAR C.
7th International Conference of Strategic Research in Social Science and Education (ICoSReSSE 2017), 13 - 15 October 2017, pp.8-19

XX. **Estimating the Weights of a Utility Function using a Bayesian Approach**
TUNCER ŞAKAR C., YET B.

The 24th International Conference on Multiple Criteria Decision Making (MCDM 2017), Ottawa, Canada, 10 - 14 July 2017, pp.117

XXI. **Properties of Optimal Stochastic Programming Solutions in Portfolio Optimization with Different Criteria and Planning Periods**
TUNCER ŞAKAR C., KÖKSALAN M. M.
INFORMS 2016 Annual Meeting, Nashville, United States Of America, 13 - 16 November 2016

XXII. **Effects of Multiple Criteria and Cardinality and Weight Constraints on Portfolio Optimization**
TUNCER ŞAKAR C., KÖKSALAN M. M.
The 23rd International Conference on Multiple Criteria Decision Making (MCDM 2015), Hamburg, Germany, 2 - 07 August 2015, pp.31-32

XXIII. **An Interactive Approach to Multicriteria Multi-period Portfolio Optimization**
TUNCER ŞAKAR C., KÖKSALAN M. M.
The IFORS 2014 Triennial Conference, Barselona, Spain, 13 - 18 July 2014

XXIV. **Effects of Multiple Criteria and Different Planning Horizons on Portfolio Optimization**
TUNCER ŞAKAR C., KÖKSALAN M. M.
21st International Symposium on Mathematical Programming (ISMP 2012), Berlin, Germany, 19 - 24 August 2012

XXV. **A Stochastic Programming Approach to Multicriteria Portfolio Optimization**
TUNCER ŞAKAR C., KÖKSALAN M. M.
INFORMS 2011 Annual Meeting, Charlottetown, Canada, 13 - 16 November 2011

XXVI. **A Stochastic Programming Approach to Multicriteria Portfolio Optimization**
TUNCER ŞAKAR C., KÖKSALAN M. M.
The 21st International Conference on Multiple Criteria Decision Making (MCDM 2011), Jyväskylä, Finland, 13 - 17 July 2011

Supported Projects

Tuncer Şakar C., Yet B., Ünal E., Halaçlı B., TUBITAK Project, Probabilistic Machine Learning and Decision Making Models based on Patient Reported Outcome Measures, 2021 - 2023

Yet B., Tuncer Şakar C., Ünal E., Newton Programme Project, Research Links for Medical Artifical Intelligence: Management of Musculoskeletal Injury, 2018 - 2020

TUNCER ŞAKAR C., DAŞDEMİR E., Project Supported by Higher Education Institutions, Tercih Tabanlı bir Evrimsel Algoritma ve Sürekli Uzaydaki İnsansız Hava Aracı Rota Planlama Problemi Üzerine Uygulaması, 2017 - 2017

TUNCER ŞAKAR C., DAŞDEMİR E., Project Supported by Higher Education Institutions, Çok Kriterli İnsansız Hava Aracı Rota Planlama Problemi için bir Evrimsel Algoritma, 2017 - 2017

TUNCER ŞAKAR C., Project Supported by Higher Education Institutions, Bir Fayda Fonksiyonundaki Kriter Ağırlıklarının bir Bayes Yaklaşımı ile Tahmin Edilmesi, 2017 - 2017

TUNCER ŞAKAR C., KÖKSALAN M., Project Supported by Higher Education Institutions, Portfolyo Optimizasyonunda Optimal Stokastik Programlama Çözümlerinin Farklı Kriter ve Planlama Dönemleri Altında Özellikleri, 2016 - 2017

TUNCER ŞAKAR C., DAŞDEMİR E., Project Supported by Higher Education Institutions, Otokorelasyonlu gözlemler için Faz I analizi senaryolarının kontrol grafiklerinin Faz II performansı üzerindeki etkilerinin değerlendirilmesi, 2016 - 2017

TUNCER ŞAKAR C., Project Supported by Higher Education Institutions, Çok Kriterli Karar Verme Modelleri İçin Olasılıksal Bir Yaklaşım, 2016 - 2017

TUNCER ŞAKAR C., Project Supported by Higher Education Institutions, Çoklu Kriterlerin ve Sayı ve Ağırlık Kısıtlarının Portfolyo Eniyilemesi Üzerindeki Etkileri, 2015 - 2016

Metrics

Publication: 46
Citation (WoS): 85

Citation (Scopus): 114
H-Index (WoS): 5
H-Index (Scopus): 6

Non Academic Experience

BİLGİ Bilgi Sistemleri A.Ş.
ASELSAN A.Ş.