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ScopusID: 57215931449

### Education Information

Doctorate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Endüstri Mühendisliği, Turkey  
2017 - Continues

Postgraduate, Karadeniz Technical University, -, Endüstri Mühendisliği, Turkey 2016 - 2017

Undergraduate, Tobb University Of Economics And Technology, Faculty Of Engineering, Endüstri Mühendisliği, Turkey  
2009 - 2014

### Research Areas

Industrial Engineering , Optimization Theory and Methods, Linear Programming, Engineering and Technology

### Academic Titles / Tasks

Research Assistant, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, -, 2017 - Continues

### Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Interval valued intuitionistic fuzzy analytic hierarchy process-based green supply chain resilience evaluation methodology in post COVID-19 era**  
AYYILDIZ E.  
Environmental Science and Pollution Research, vol.30, no.15, pp.42476-42494, 2023 (SCI-Expanded)
- II. **An integrated interval-valued intuitionistic fuzzy AHP-TOPSIS methodology to determine the safest route for cash in transit operations: a real case in Istanbul**  
YILDIZ A., GÜNERİ A. F., ÖZKAN C., AYYILDIZ E., TAŞKIN A.  
Neural Computing and Applications, vol.34, no.18, pp.15673-15688, 2022 (SCI-Expanded)
- III. **Forecasting COVID-19 recovered cases with Artificial Neural Networks to enable designing an effective blood supply chain**  
AYYILDIZ E., Erdogan M., TAŞKIN A.  
Computers in Biology and Medicine, vol.139, 2021 (SCI-Expanded)
- IV. **Interval valued intuitionistic fuzzy AHP-WASPAS based public transportation service quality evaluation by a new extension of SERVQUAL Model: P-SERVQUAL 4.0**

Tumsekcali E., AYYILDIZ E., Taskin A.

EXPERT SYSTEMS WITH APPLICATIONS, vol.186, 2021 (SCI-Expanded)

- V. **A Pythagorean fuzzy number-based integration of AHP and WASPAS methods for refugee camp location selection problem: a real case study for Istanbul, Turkey**  
AYYILDIZ E., Erdogan M., TAŞKIN GÜMÜŞ A.  
Neural Computing and Applications, vol.33, no.22, pp.15751-15768, 2021 (SCI-Expanded)
- VI. **Pythagorean fuzzy AHP based risk assessment methodology for hazardous material transportation: an application in Istanbul**  
AYYILDIZ E., TAŞKIN GÜMÜŞ A.  
ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH, vol.28, no.27, pp.35798-35810, 2021 (SCI-Expanded)
- VII. **A novel distance learning ergonomics checklist and risk evaluation methodology: A case of Covid-19 pandemic**  
AYYILDIZ E., TAŞKIN GÜMÜŞ A.  
Human Factors and Ergonomics In Manufacturing, vol.31, no.4, pp.397-411, 2021 (SCI-Expanded)
- VIII. **A two level interval valued neutrosophic AHP integrated TOPSIS methodology for post-earthquake fire risk assessment: An application for Istanbul**  
Gulum P., AYYILDIZ E., TAŞKIN GÜMÜŞ A.  
International Journal of Disaster Risk Reduction, vol.61, 2021 (SCI-Expanded)
- IX. **A Framework to Prioritize the Public Expectations from Water Treatment Plants based on Trapezoidal Type-2 Fuzzy Ahp Method**  
Yıldız A., Ayyıldız E., Taşkın Gümüş A., Özkan C.  
ENVIRONMENTAL MANAGEMENT, vol.67, no.3, pp.439-448, 2021 (SCI-Expanded)
- X. **An Integrated Methodology Using Extended Swara and Dea for the Performance Analysis of Wastewater Treatment Plants: Turkey Case**  
Ayyıldız E., Yıldız A., Taşkın Gümüş A., Özkan C.  
ENVIRONMENTAL MANAGEMENT, vol.67, no.3, pp.449-467, 2021 (SCI-Expanded)
- XI. **Interval-valued Pythagorean fuzzy AHP method-based supply chain performance evaluation by a new extension of SCOR model: SCOR 4.0**  
Ayyıldız E., Taşkın Gümüş A.  
COMPLEX & INTELLIGENT SYSTEMS, vol.7, no.1, pp.559-576, 2021 (SCI-Expanded)
- XII. **Individual credit ranking by an integrated interval type-2 trapezoidal fuzzy Electre methodology**  
AYYILDIZ E., TAŞKIN GÜMÜŞ A., Erkan M.  
SOFT COMPUTING, vol.24, no.21, pp.16149-16163, 2020 (SCI-Expanded)
- XIII. **A novel spherical fuzzy AHP-integrated spherical WASPAS methodology for petrol station location selection problem: a real case study for Istanbul**  
Ayyıldız E., Taşkın Gümüş A.  
ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH, vol.27, no.29, pp.36109-36120, 2020 (SCI-Expanded)
- XIV. **A Modified Balanced Scorecard Based Hybrid Pythagorean Fuzzy AHP-Topsis Methodology for ATM Site Selection Problem**  
YILDIZ A., AYYILDIZ E., TAŞKIN GÜMÜŞ A., ÖZKAN C.  
INTERNATIONAL JOURNAL OF INFORMATION TECHNOLOGY & DECISION MAKING, vol.19, no.2, pp.365-384, 2020 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Drinking water distribution problem for assembly areas after earthquake: A case study in Sakarya, Turkey**  
Yıldız A., Ayyıldız E., Özkan C., Taşkın Gümüş A.  
TURK HIJIYEN VE DENEYSSEL BIYOLOJİ DERGISI. TURKISH BULLETIN OF HYGIENE AND EXPERIMENTAL BIOLOGY, vol.77, no.4, pp.21-34, 2020 (Scopus)

- II. **Ülkelerin Yaşam Kalitelerine Göre Değerlendirilmesi İçin Hibrit Pisagor Bulanık Ahp-Topsis Metodolojisi: Avrupa Birliği Örneği**  
Yıldız A., Ayyıldız E., Taşkın Gümüş A., Özkan C.  
Avrupa Bilim ve Teknoloji Dergisi, vol.17, pp.1383-1391, 2019 (Peer-Reviewed Journal)
- III. **DETERMINING THE MOST VITAL ARCS ON THE SHORTEST PATH FOR FIRE TRUCKS IN TERRORIST ACTIONS THAT WILL CAUSE FIRE**  
AYYILDIZ E., Özçelik G., Gencer C.  
COMMUNICATIONS FACULTY OF SCIENCES UNIVERSITY OF ANKARA-SERIES A1 MATHEMATICS AND STATISTICS, vol.68, no.1, pp.441-450, 2019 (ESCI)
- IV. **Analysis of airports using clustering methods: case study in Turkey**  
Yalçın S., AYYILDIZ E.  
Journal of Management, Marketing and Logistics, vol.5, no.3, pp.194-205, 2018 (Peer-Reviewed Journal)
- V. **TÜRKİYE'DE YER ALAN LOJİSTİK DOSTU ŞEHİRLERİN BÜTÜNLEŞİK ENTROPİ-CODAS KULLANILARAK BELİRLENMESİ**  
AYYILDIZ E., Yalçın S.  
ULUDAĞ ÜNİVERSİTESİ MÜHENDİSLİK FAKÜLTESİ DERGİSİ, vol.23, no.4, pp.127-140, 2018 (Peer-Reviewed Journal)
- VI. **Türkiye Süper Ligi'nin Veri Zarflama Analizi ile Değerlendirilmesi**  
AYYILDIZ E., Murat M.  
Celal Bayar Üniversitesi Beden Eğitimi ve Spor Bilimleri Dergisi, vol.13, no.1, pp.73-86, 2018 (Peer-Reviewed Journal)
- VII. **Amerika Basketbol Ligi (NBA) Maç Sonuçlarının Yapay Sinir Ağları ile Tahmini**  
AYYILDIZ E.  
Gaziantep Üniversitesi Spor Bilimleri Dergisi, vol.3, no.1, pp.40-53, 2018 (Peer-Reviewed Journal)
- VIII. **Evaluation of Wastewater Treatment Performances for Municipalities by Using MCDM Methods: Case Study in Turkey**  
AYYILDIZ E., Özçelik G.  
Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.11, no.2, pp.243-254, 2018 (Peer-Reviewed Journal)
- IX. **MULTIPLE-SINK SHORTEST PATH NETWORK INTERDICTION PROBLEM**  
AYYILDIZ E., Özçelik G., Demirci E.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BİLİMLERİ DERGİSİ, vol.9, no.4, pp.395-403, 2018 (ESCI)
- X. **Türkiye'de Yer Alan Şehirlerin Yaşam Kalitelerinin SWARA Entegreli TOPSIS Yöntemi ile Belirlenmesi**  
AYYILDIZ E., Demirci E.  
PAMUKKALE ÜNİVERSİTESİ SOSYAL BİLİMLER ENSTİTÜSÜ DERGİSİ, vol.2018, no.30, pp.67-87, 2018 (Peer-Reviewed Journal)
- XI. **Türkiye'de Yer Alan Şehirlerin Eğitim Performanslarının Çok Kriterli Karar Verme Yöntemleri Kullanılarak Belirlenmesi**  
AYYILDIZ E., Murat M.  
Kent Akademisi, vol.10, no.2, pp.255-267, 2017 (Peer-Reviewed Journal)
- XII. **INTERSECTION SIGNALING SIMULATION**  
AYYILDIZ E., Murat M., DEMİRCİ E., Demirci E.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BİLİMLERİ DERGİSİ, vol.8, no.4, pp.357-364, 2017 (ESCI)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Zaman Pencereyi Oryantiring Problemi için Kısıt Programlama Yaklaşımı**  
Işık E. E., Ayyıldız E., Taşkın Gümüş A.  
IES'20 International Engineering Symposium | Engineering Applications in Industry, İzmir, Turkey, 05 December

2020, pp.411-418

- II. **DENİZ KİRLİLİĞİ RİSKİNİ GÖZETEN ZAMANA BAĞLI PETROL İSTASYONU İKMAL PROBLEMİ**  
Ayyıldız E., Yıldız A., Taşkın Gümüş A., Özkan C.  
3rd International Water and Health Congress, Antalya, Turkey, 12 - 15 November 2019, pp.1
- III. **DEPREM SONRASI TOPLANMA ALANLARINA İÇİLEBİLİR SU DAĞITIMI ROTALAMA PROBLEMİ**  
Yıldız A., Ayyıldız E., Taşkın Gümüş A., Özkan C.  
3rd International Water and Health Congress, Antalya, Turkey, 12 - 15 November 2019, pp.1
- IV. **İÇME VE KULLANMA SUYU GERİ KAZANIMINDA SU ARITMA TESİSLERİNDEN BEKLENTİLERİN ÖNCELİKLENDİRİLMESİ**  
Yıldız A., Ayyıldız E., Taşkın Gümüş A., Özkan C.  
3rd International Water and Health Congress, Antalya, Turkey, 12 - 15 November 2019, pp.1
- V. **ATIKSU ARITMA TESİSLERİ PERFORMANS ANALİZİ: TÜRKİYE ÖRNEĞİ**  
Yıldız A., Ayyıldız E., Taşkın Gümüş A., Özkan C.  
3rd International Water and Health Congress, Antalya, Turkey, 12 - 15 November 2019, pp.1
- VI. **SİNEMA VE TİYATROLARIN ETKİNLİĞİNİN VERİ ZARFLAMA ANALİZİ İLEİNCELENMESİ**  
Ayyıldız E., Yıldız A., Taşkın Gümüş A., Özkan C.  
KARADENİZ 1. ULUSLARARASI MULTİDİSİPLİNER BİLİMSEL ÇALIŞMALAR KONGRESİ, Giresun, Turkey, 15 March 2019, pp.785-795
- VII. **FINDIK ÜRETİMİ İÇİN KALİTE FONKSİYON YAYILIMI UYGULAMASI**  
Yıldız A., Ayyıldız E., Özkan C., Taşkın Gümüş A.  
KARADENİZ 1. ULUSLARARASI MULTİDİSİPLİNER BİLİMSEL ÇALIŞMALAR KONGRESİ, Giresun, Turkey, 15 March 2019, pp.938-948
- VIII. **KADIN MÜŞTERİLERİN OTOBÜS FİRMALARINA YÖNELİK KALİTE BEKLENTİLERİNİN YAMUK BULANIK AHP İLE ÖNCELİKLENDİRİLMESİ**  
YILDIZ A., AYYILDIZ E., ÖZKAN C., TAŞKIN GÜMÜŞ A.  
KARADENİZ 1. ULUSLARARASI MULTİDİSİPLİNER BİLİMSEL ÇALIŞMALAR KONGRESİ, Giresun, Turkey, 15 March 2019, pp.769-777
- IX. **AVRUPA BİRLİĞİ ÜLKELERİNİN YAŞAM KALİTELERİNE GÖRE ÇKKVYÖNTEMLERİ KULLANILARAK SIRALANMASI**  
Ayyıldız E., Yıldız A., Taşkın Gümüş A., Özkan C.  
KARADENİZ 1. ULUSLARARASI MULTİDİSİPLİNER BİLİMSEL ÇALIŞMALAR KONGRESİ, Giresun, Turkey, 15 March 2019, pp.750-759
- X. **A Mathematical Modeling Approach to Multiple Bin Packing Problem:An Application in Household Appliances Sector**  
AYYILDIZ E., TAŞKIN GÜMÜŞ A., ŞEN A.  
XIII. Balkan Conference on Operational Research, Belgrad, Serbia And Montenegro, 25 May 2018, pp.48
- XI. **An Individual Credit Risk Assessment Framework by Interval Type-2 Trapezoidal Fuzzy-AHP**  
AYYILDIZ E., TAŞKIN GÜMÜŞ A., ERKAN M.  
XIII. Balkan Conference on Operational Research, Belgrad, Serbia And Montenegro, 25 May 2018, pp.4
- XII. **An Integrated Novel Fuzzy AHP-CODAS MCDM Method for the Evaluation of Customer Satisfaction Level for Public Bus Alternatives in İstanbul**  
AYYILDIZ E., TAŞKIN GÜMÜŞ A.  
1. International Conference on Intelligent and Transportation Systems, Balıkesir, Turkey, 19 April 2018, pp.106-107
- XIII. **Estimation of Flight Delays Using Artificial Neural Networks**  
AYYILDIZ E., TAŞKIN GÜMÜŞ A.  
1. International Conference on Intelligent and Transportation Systems, Balıkesir, Turkey, 19 April 2018, pp.205-206
- XIV. **Data Envelopment Analysis for Effectiveness of Health Care Systems of Provinces: A Case Study in Turkey**  
Murat M., AYYILDIZ E., Özçelik G., Özşahin Ş.

- 3rd International Researchers, Statistician and Young Statisticians Congress, Konya, Turkey, 24 May 2017, pp.47
- XV. **An Application on the Similarity of Turkey to the EU in terms of the Quality of Life Using Clustering Analysis**  
AYYILDIZ E., Murat M., Özşahin Ş., Özçelik G.  
3rd International Researchers, Statistician and Young Statisticians Congress, Konya, Turkey, 24 May 2017, pp.48
- XVI. **Shortest Path Network Interdiction Problem with Multiple Starting Nodes**  
AYYILDIZ E., Özçelik G.  
3rd International Conference on Engineering and Natural Sciences, Budapeşte, Hungary, 03 May 2017, pp.406
- XVII. **Yangına Mahal Veren Terör Eylemlerinde İtfaiye Araçları için En Kısa Yol Güzergâhlarındaki Riskli Yolların Belirlenmesi**  
AYYILDIZ E., Özçelik G., Gencer C.  
2. Uluslararası Su ve Sağlık Kongres, Antalya, Turkey, 13 February 2017, pp.1
- XVIII. **Türkiye'deki Büyükşehir Belediyelerinin Sağladıkları Atık Su Arıtma Hizmeti Performanslarının Entropi Entegreli SAW, MOORA ve TOPSIS Yöntemleri ile Değerlendirilmesi**  
AYYILDIZ E., Özçelik G.  
2. Uluslararası Su ve Sağlık Kongres, Antalya, Turkey, 13 February 2017, pp.566-569
- XIX. **Kavşak Sinyalizasyon Simülasyonu**  
AYYILDIZ E., Murat M.  
Transist 2016 İstanbul Ulaşım Kongresi ve Fuarı, İstanbul, Turkey, 01 December 2016, pp.566-572

## Supported Projects

Taşkın Gümüş A., Özkan C., Ayyıldız E., Yıldız A., Project Supported by Higher Education Institutions, Belirsizlik ve Risk Altında Petrol Dağıtım Problemi Optimizasyonu: Bir Uygulama Çalışması, 2020 - 2022

## Metrics

Publication: 46

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