

# Prof. HACI HASAN ÖRKÜ

## Personal Information

**Email:** hhorkcu@gazi.edu.tr

**Web:** <https://avesis.gazi.edu.tr/hhorkcu>

## International Researcher IDs

ScholarID: mNBEmr0AAAAJ

ORCID: 0000-0002-2888-9580

Publons / Web Of Science ResearcherID: AAA-8571-2020

ScopusID: 14123783500

Yoksis Researcher ID: 27434

## Education Information

Doctorate, Gazi University, Fen Bilimleri Enstitüsü, İstatistik (Dr), Turkey 2004 - 2009

Postgraduate, Gazi University, Fen Bilimleri Enstitüsü, İstatistik (YI) (Tezli), Turkey 2001 - 2004

Undergraduate, Gazi University, Fen-Edebiyat Fakültesi, İstatistik Pr., Turkey 1997 - 2001

## Foreign Languages

English, C1 Advanced

## Dissertations

Doctorate, Ayırma analizine matematiksel programlama ve yapay sinir ağları yaklaşımları, Gazi University, Fen Bilimleri Enstitüsü, İstatistik (Dr), 2009

Postgraduate, Etkinlik analizinde ağırlık dağılımı problemine çok kriterli bir yaklaşım, Gazi University, Fen Bilimleri Enstitüsü, İstatistik (YI) (Tezli), 2004

## Research Areas

Statistics, Statistical Analysis and Applications, Natural Sciences

## Academic Titles / Tasks

Professor, Gazi University, Fen Fakültesi, İstatistik, 2019 - Continues

Associate Professor, Gazi University, Fen Fakültesi, İstatistik, 2014 - 2019

Assistant Professor, Gazi University, Fen Fakültesi, İstatistik, 2011 - 2014

Research Assistant, Gazi University, Fen Fakültesi, İstatistik, 2002 - 2010

## Academic and Administrative Experience

Rectorate Commissioner, Gazi University, Fen Fakültesi, İstatistik, 2022 - Continues  
Head of Department, Gazi University, Fen Fakültesi, İstatistik, 2021 - Continues  
Bölüm Akademik Teşvik Değerlendirme Komisyonu Üyesi, Gazi University, Fen Fakültesi, İstatistik, 2016 - Continues  
Rectorate Commissioner, Gazi University, Fen Fakültesi, İstatistik, 2021 - 2023  
Vice Dean, Gazi University, Fen Fakültesi, İstatistik, 2021 - 2023  
Rektörlük Stratejik Plan Komisyonu Üyesi, Gazi University, Fen Fakültesi, İstatistik, 2020 - 2023  
Fakülte Kurulu Üyesi, Gazi University, Fen Fakültesi, İstatistik, 2019 - 2022  
Deputy Head of Department, Gazi University, Fen Fakültesi, İstatistik, 2016 - 2021  
Fakülte Yönetim Kurulu Üyesi, Gazi University, Fen Fakültesi, İstatistik, 2016 - 2019  
Gazi University, Fen Fakültesi, İstatistik Bölümü, 2013 - 2016  
Gazi University, Fen Fakültesi, İstatistik Bölümü, 2011 - 2013

## Courses

Yöneylem Araştırması II, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019  
Operations Research, Undergraduate, 2022 - 2023, 2021 - 2022  
Optimizasyon, Postgraduate, 2023 - 2024  
Optimization Techniques I, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021  
Simulation Techniques, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017  
Stochastic Processes, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017  
Optimizasyon Teknikleri II, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019  
İstatistikte Sezgisel Optimizasyon, Postgraduate, 2020 - 2021, 2019 - 2020

## Advising Theses

ÖRKCÜ H. H., ODTÜ Teknokent' te faaliyet gösteren firmaların etkinliğinin veri zarflama analizi ile incelenmesi, Postgraduate, Ö.SEVİM(Student), 2020  
ÖRKCÜ H. H., A Study On A New Copula Function Based On Utility Copula For Dependent Actuarial Risks, Doctorate, K.DURUKAN(Student), 2019  
ÖRKCÜ H. H., Bıclustering Method In The Analysis Of Criminal Data: An Application On Smuggling Data, Doctorate, R.ARSLAN(Student), 2018  
ÖRKCÜ H. H., Portfolio Optimization With Data Envelopment Analysis Based Particle Swarm Algorithm: An Application In Istanbul Stock Exchange Index (Bist100), Postgraduate, T.ÖZSOY(Student), 2017  
ÖRKCÜ H. H., Türk yenilenebilir enerji sektörünün analizi: Bir bootstrap-veri zarflama analizi yaklaşımı, Postgraduate, E.BETÜL(Student), 2017  
ÖRKCÜ H. H., New Approach To Classification Problems Based On Artificial Neural Networks And Data Envelopment Analysis, Doctorate, M.İSA(Student), 2016  
ÖRKCÜ H. H., The Evaluation Of The Efficiency Of The Provinces In Turkey With Socio-Economic Main Indicators By Data Envelopment Analysis, Postgraduate, E.ÇAKMAK(Student), 2016  
ÖRKCÜ H. H., Ankara'daki hastanelerin etkinliğinin iki aşamalı veri zarflama analizi ile incelenmesi, Postgraduate, M.KANDEMİR(Student), 2016  
ÖRKCÜ H. H., The Efficiency Investigation Of Turkish Airport By Malmquist Index And Multi-Period Two-Stage Data Envelopment Analysis, Postgraduate, M.KEMAL(Student), 2015  
ÖRKCÜ H. H., Service, construction and manufacturing sectors performance analysis with data envelopment analysis, Postgraduate, E.AKTAŞ(Student), 2014  
ÖRKCÜ H. H., The investigation of electricity distribution companies efficiency in Turkey by the data envelopment analysis, Postgraduate, O.DÖNMEZÇELİK(Student), 2014

ÖRKÜ H. H., A branch of the public bank of the performance evaluation with data envelopment analysis, Postgraduate, S.KARATAŞ(Student), 2014

ÖRKÜ H. H., Forecasting an economic growth model using artificial neural networks and application of Turkey, Postgraduate, M.İSA(Student), 2012

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

- I. **Towards net zero emissions target: Energy modelling of the transport sector in Türkiye**  
Dönmezçelik O., KOÇAK E., ÖRKÜ H. H.  
ENERGY, vol.279, 2023 (SCI-Expanded)
- II. **A multi-objective programming approach to Weibull parameter estimation**  
KOÇAK E., DEMİR YURTSEVEN E., ÖRKÜ H. H.  
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.51, no.2, pp.543-558, 2022 (SCI-Expanded)
- III. **A multi-objective programming-based approach to material life prediction: Weibull distribution application**  
KOÇAK E., ÖRKÜ H. H.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.37, no.4, pp.1783-1792, 2022 (SCI-Expanded)
- IV. **A minimax approach for selecting the overall and stage-level most efficient unit in two stage production processes**  
Ozsoy V. S., ÖRKÜ M., ÖRKÜ H. H.  
ANNALS OF OPERATIONS RESEARCH, vol.300, no.1, pp.137-169, 2021 (SCI-Expanded)
- V. **Structural and operational management of Turkish airports: a bootstrap data envelopment analysis of efficiency**  
Ozsoy V. S., ÖRKÜ H. H.  
UTILITIES POLICY, vol.69, 2021 (SCI-Expanded)
- VI. **A simplistic approach without epsilon to choose the most efficient unit in data envelopment analysis**  
Ozsoy V. S., ÖRKÜ H. H., ÖRKÜ M.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.168, 2021 (SCI-Expanded)
- VII. **Structural, morphological and gas sensing properties of Zn<sub>1-x</sub>Sn<sub>x</sub>O thin films by SILAR method**  
Er I. K., YILDIRIM M. A., ÖRKÜ H. H., ATEŞ A., ACAR S.  
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.127, no.4, 2021 (SCI-Expanded)
- VIII. **Use of the heuristic optimization in the parameter estimation of generalized gamma distribution: comparison of GA, DE, PSO and SA methods**  
Ozsoy V. S., ÜNSAL M. G., ÖRKÜ H. H.  
COMPUTATIONAL STATISTICS, vol.35, no.4, pp.1895-1925, 2020 (SCI-Expanded)
- IX. **An optimistic-pessimistic DEA model based on game cross efficiency approach**  
ÖRKÜ M., Ozsoy V. S., ÖRKÜ H. H.  
RAIRO-OPERATIONS RESEARCH, vol.54, no.4, pp.1215-1230, 2020 (SCI-Expanded)
- X. **A neutral cross efficiency approach for basic two stage production systems**  
ÖRKÜ H. H., Ozsoy V. S., ÖRKÜ M., BAL H.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.125, pp.333-344, 2019 (SCI-Expanded)
- XI. **A novel network data envelopment analysis model for performance measurement of Turkish electric distribution companies**  
Petridis K., ÜNSAL M. G., Dey P. K., ÖRKÜ H. H.  
ENERGY, vol.174, pp.985-998, 2019 (SCI-Expanded)
- XII. **A new approach based on regression analysis and mathematical programming to multi-group classification problems**  
DOĞAN M. İ., Orman A., ÖRKÜ M., ÖRKÜ H. H.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.34, no.4, pp.1939-

1955, 2019 (SCI-Expanded)

- XIII. **Particle Swarm Optimization Applied to Parameter Estimation of the Four-Parameter Burr III Distribution**  
Ozsoy V. S., ÖRKÜ H. H., BAL H.  
IRANIAN JOURNAL OF SCIENCE AND TECHNOLOGY TRANSACTION A-SCIENCE, vol.42, pp.895-909, 2018 (SCI-Expanded)
- XIV. **A modified test for detecting influential decision-making units in data envelopment analysis**  
Acarlar I., ŞAHİN TEKİN S. T., ÖRKÜ H. H.  
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.47, no.1, pp.129-144, 2018 (SCI-Expanded)
- XV. **Ranking decision making units with the integration of the multi-dimensional scaling algorithm into PCA-DEA**  
ÜNSAL M. G., ÖRKÜ H. H.  
HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.46, no.6, pp.1187-1197, 2017 (SCI-Expanded)
- XVI. **A note for weight restriction in the ARIII model based on correlation coefficients**  
ÜNSAL M. G., ÖRKÜ H. H.  
APPLIED MATHEMATICAL MODELLING, vol.40, pp.10820-10827, 2016 (SCI-Expanded)
- XVII. **An evaluation of the operational efficiency of turkish airports using data envelopment analysis and the Malmquist productivity index: 2009-2014 case**  
ÖRKÜ H. H., Balıkcı C., Dogan M. I., GENÇ A.  
TRANSPORT POLICY, vol.48, pp.92-104, 2016 (SSCI)
- XVIII. **A modification of a mixed integer linear programming (MILP) model to avoid the computational complexity**  
ÖRKÜ H. H., ÜNSAL M. G., BAL H.  
ANNALS OF OPERATIONS RESEARCH, vol.235, no.1, pp.599-623, 2015 (SCI-Expanded)
- XIX. **Estimating the parameters of 3-p Weibull distribution using particle swarm optimization: A comprehensive experimental comparison**  
ÖRKÜ H. H., Ozsoy V. S., AKSOY E., Dogan M. I.  
APPLIED MATHEMATICS AND COMPUTATION, vol.268, pp.201-226, 2015 (SCI-Expanded)
- XX. **Estimating the parameters of 3-p Weibull distribution through differential evolution**  
ÖRKÜ H. H., AKSOY E., Dogan M. I.  
APPLIED MATHEMATICS AND COMPUTATION, vol.251, pp.211-224, 2015 (SCI-Expanded)
- XXI. **Subset selection in multiple linear regression models: A hybrid of genetic and simulated annealing algorithms**  
ÖRKÜ H. H.  
APPLIED MATHEMATICS AND COMPUTATION, vol.219, no.23, pp.11018-11028, 2013 (SCI-Expanded)
- XXII. **Goal programming approaches for data envelopment analysis cross efficiency evaluation**  
ÖRKÜ H. H., BAL H.  
APPLIED MATHEMATICS AND COMPUTATION, vol.218, no.2, pp.346-356, 2011 (SCI-Expanded)
- XXIII. **Comparing performances of backpropagation and genetic algorithms in the data classification**  
ÖRKÜ H. H., BAL H.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.38, no.4, pp.3703-3709, 2011 (SCI-Expanded)
- XXIV. **A new mathematical programming approach to multi-group classification problems**  
BAL H., ÖRKÜ H. H.  
COMPUTERS & OPERATIONS RESEARCH, vol.38, no.1, pp.105-111, 2011 (SCI-Expanded)
- XXV. **Improving the discrimination power and weights dispersion in the data envelopment analysis**  
BAL H., ÖRKÜ H. H., Celebioglu S.  
COMPUTERS & OPERATIONS RESEARCH, vol.37, no.1, pp.99-107, 2010 (SCI-Expanded)
- XXVI. **A new method based on the dispersion of weights in data envelopment analysis**  
BAL H., ÖRKÜ H. H., Celebioglu S.  
COMPUTERS & INDUSTRIAL ENGINEERING, vol.54, no.3, pp.502-512, 2008 (SCI-Expanded)
- XXVII. **DATA ENVELOPMENT ANALYSIS APPROACH TO TWO-GROUP CLASSIFICATION PROBLEMS AND AN**

## EXPERIMENTAL COMPARISON WITH SOME CLASSIFICATION MODELS

BAL H., ÖRKÜ H. H.

HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, vol.36, no.2, pp.169-180, 2007 (SCI-Expanded)

### XXVIII. **An experimental comparison of the new goal programming and the linear programming approaches in the two-group discriminant problems**

Bal H., ÖRKÜ H. H., Celebioglu S.

COMPUTERS & INDUSTRIAL ENGINEERING, vol.50, no.3, pp.296-311, 2006 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Modeling of wind speed using differential evolution: Istanbul case**  
Koçak E., Özsoy V. S., Örkü H. H.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES, vol.42, no.3, pp.1, 2024 (ESCI)
- II. **Influence Of Finishing Procedures On Surface Roughness and Biaxial Flexural Strength Of High-translucent 4 Y-PSZ, 5 Y-PSZ, and 6Y-PSZ Monolithic Zirconia**  
Uzoneyüpoğlu G., Demiralp E., Koçak E., Örkü H. H., Aydın C., Yılmaz H.  
CLINICAL AND EXPERIMENTAL HEALTH SCIENCES, no., pp.1-11, 2023 (ESCI)
- III. **Analysis of the performance of METU Technoparks firms with data envelopment analysis models**  
ÖRKÜ H. H., Sevim O.  
JOURNAL OF POLYTECHNIC-POLITEKNİK DERGISI, 2022 (ESCI)
- IV. **Performance management of OECD countries on Covid-19 pandemic: a criticism using data envelopment analysis models**  
DOĞAN M. İ., Ozsoy V. S., ÖRKÜ H. H.  
JOURNAL OF FACILITIES MANAGEMENT, vol.19, no.4, pp.479-499, 2021 (ESCI)
- V. **Measuring the Efficiency of Turkish State Universities Based on a Two-Stage DEA Model**  
KOÇAK E., ÖRKÜ H. H.  
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.34, no.4, pp.1210-1220, 2021 (ESCI)
- VI. **Parametre Tahmininde Farklı Doğrusal Programlama Modellerinin Karşılaştırılması**  
Koçak E., Örkü H. H.  
Gazi Üniversitesi Fen Fakültesi Dergisi (GÜFFD), vol.1, pp.22-35, 2020 (Peer-Reviewed Journal)
- VII. **The most efficient supplier selection with mixed-integer two-stage data envelopment analysis model**  
Ozsoy V. S., ÖRKÜ M., Orkcu H. H.  
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSİTESİ MUHENDİSLİK BİLİMLERİ DERGISI, vol.26, no.4, pp.758-767, 2020 (ESCI)
- VIII. **RISK PREMIUM FOR DEPENDENT RISKS USING UTILITY COPULAS AND RISK AVERSION**  
DURUKAN K., ÖRKÜ H. H., KIZILOK KARA E.  
İSTATİSTİK: JOURNAL OF THE TURKISH STATISTICAL ASSOCIATION, vol.12, 2019 (Peer-Reviewed Journal)
- IX. **Şehirlerin Suç Türlerine Göre İkili Kümeleme Yöntemi ile Gruplandırılması: Türkiye Örneği**  
ALTUNKAYNAK B., ÖRKÜ H. H., ARSLAN R.  
Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.22, pp.110-120, 2018 (Peer-Reviewed Journal)
- X. **TÜRKİYE'DE SEKTÖRLERİN ÖLÜMLÜ KAZA TÜRLERİNE GÖRE KÜMELENMESİ: İKİLİ KÜMELEME YÖNTEMİ**  
KOCATÜRK A., ALTUNKAYNAK B., ÖRKÜ H. H.  
Uluslararası İktisadi ve İdari İncelemeler Dergisi, pp.871-882, 2018 (Peer-Reviewed Journal)
- XI. **Kaçakçılıkta Yakalanan Malzeme Türlerine Göre Suçluların Kümelenmesi: İkili Kümeleme Yöntemi**  
ARSLAN R., ÖRKÜ H. H., ALTUNKAYNAK B.  
Uluslararası İktisadi ve İdari İncelemeler Dergisi, vol.18, 2018 (Peer-Reviewed Journal)
- XII. **Türkiye deki İllerin Etkinliğinin Sosyo Ekonomik Göstergelerle Veri Zarflama Analizi Kullanılarak İncelenmesi**  
Çakmak E., ÖRKÜ H. H.

- Karabük Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, vol.6, no.1, pp.30-48, 2016 (Peer-Reviewed Journal)
- XIII. **Estimating the Parameters of Nonlinear Regression Models Through Particle Swarm Optimization**  
Ozsoy V. S., ÖRKÜ H. H.  
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.29, no.1, pp.187-199, 2016 (ESCI)
- XIV. **Veri Zarflama Analizi Tabanlı Yeni Bir Hibrid İki Gruplu Sınıflandırma Modeli**  
ÖRKÜ H. H., DOĞAN M. İ.  
Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.19, no.3, pp.26-38, 2015 (Peer-Reviewed Journal)
- XV. **Data Envelopment Analysis Cross Efficiency Evaluation Approach to the Technology Selection**  
ÖRKÜ H. H., ÖRKÜ M.  
Gazi University Journal of Science Part A: Engineering and Innovation, vol.3, no.1, pp.1-14, 2015 (Peer-Reviewed Journal)
- XVI. **A Hybrid Applied Optimization Algorithm for Training Multi Layer Neural Networks in the Data Classification**  
ÖRKÜ H. H., DOĞAN M. İ., ÖRKÜ M.  
Gazi University Journal of Science, vol.28, no.1, pp.115-132, 2015 (Scopus)
- XVII. **A Hybrid Applied Optimization Algorithm for Training Multi-Layer Neural Networks in Data Classification**  
ÖRKÜ H. H., Dogan M. I., ÖRKÜ M.  
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.28, no.1, pp.115-132, 2015 (ESCI)
- XVIII. **Simulation study on copulas**  
ŞAHİN TEKİN S. T., najjari v., ÖRKÜ H. H.  
Sahand Communications in Mathematical Analysis, vol.1, no.2, pp.55-63, 2014 (ESCI)
- XIX. **A New Approach to Cross Efficiency in Data Envelopment Analysis and Performance Evolution of Turkey Cities**  
ÖRKÜ H. H., BAL H.  
G.U. Journal of Science, vol.25, no.1, pp.107-117, 2012 (Peer-Reviewed Journal)
- XX. **A Combining Mathematical Programming Method for Multi Group Data Classification**  
ÖRKÜ H. H., BAL H.  
G.U. Journal of Science, vol.24, no.1, pp.77-84, 2011 (Peer-Reviewed Journal)
- XXI. **Düzenli Hiyerarşik Karar Verme Birimlerinin Etkinlik Değerlendirmesi Üzerine Bir Monte Carlo Çalışması**  
ÖRKÜ H. H., ALP İ.  
Milli Produktivite Merkezi, Verimlilik Dergisi, vol.7, no.3, pp.41-56, 2007 (Peer-Reviewed Journal)
- XXII. **A Goal Programming Approach to Weight Dispersion Problem in Data Envelopment Analysis and Simulation Study**  
BAL H., ÖRKÜ H. H.  
Gazi University Journal of Science, vol.20, no.4, pp.117-125, 2007 (ESCI)
- XXIII. **The Comparison of Principal Component Analysis and Data Envelopment Analysis in Ranking of Decision Making Units**  
KARDİYEN F., ÖRKÜ H. H.  
G.U. Journal of Science, vol.19, no.2, pp.127-133, 2006 (Peer-Reviewed Journal)
- XXIV. **An Alternative Model to Fisher and Linear Programming Approaches in Two Group Classification Problem Minimizing Deviations from the Group Median**  
BAL H., ÖRKÜ H. H., ÇELEBİOĞLU S.  
G.U. Journal of Science, vol.19, no.1, pp.49-55, 2006 (Peer-Reviewed Journal)
- XXV. **Comparison of Principal Component Analysis and Data Envelopment Analysis in Ranking of Decision Making Units**  
KARDİYEN F., ÖRKÜ H. H.  
Gazi University Journal of Science, vol.19, no.2, pp.127-133, 2006 (Peer-Reviewed Journal)
- XXVI. **İllerin Gelişmişlik Düzeylerini Sıralama ve Sınıflama Bakımından Veri Zarflama Analizi ve Çok**

## Değişkenli İstatistiksel Yöntemlerin Karşılaştırılması Üzerine bir Çalışma

ÖRKÜ H. H., KARDİYEN F.

Hacettepe Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, vol.24, no.2, pp.127-152, 2006 (Peer-Reviewed Journal)

### XXVII. Combining the Discriminant Analysis and Data Envelopment Analysis in View of Multiple Criteria Decision Making A New Model

BAL H., ÖRKÜ H. H.

G.U. Journal of Science, vol.18, no.3, pp.355-364, 2005 (Peer-Reviewed Journal)

### XXVIII. Veri Zarflama Analizi nde Karar Verme Birimlerinin Sıralanması İçin Sınıflandırma Kriteri Tabanlı Yeni Bir Model

BAL H., ÖRKÜ H. H.

TÜİK İstatistik Araştırma Dergisi, vol.4, no.2, pp.15-25, 2005 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Türkiye'de Bulunan Havalimanı Performanslarının İki Aşamalı Veri Zarflama Analizi İle İncelenmesi**  
ÖRKÜ H. H., KOÇAK E.  
in: Verimlilik Ölçümünde Güncel Yaklaşımlar, Koçak Deniz, Editor, Adalet Yayınevi, Ankara, pp.63-73, 2021
- II. **ÇOK GRUPLU SINIFLANDIRMA PROBLEMLERİ İÇİN MATEMATİKSELPROGRAMLAMA YAKLAŞIMLARI**  
ÖRKÜ M., ÖRKÜ H. H.  
in: ACADEMIC STUDIESIN MATHEMATICS AND NATURAL SCIENCES-2019/2, Prof. Dr. Rıdvan KARAPINAR, Editor, IVPE, pp.66-80, 2019
- III. **VERİ ZARFLAMA ANALİZİNDE İYİMSER VE KÖTÜMSER KARAR TEORİLERİNEDAYANAN YENİ BİR YAKLAŞIM**  
ÖRKÜ M., ÖRKÜ H. H.  
in: GELECEĞİN DÜNYASINDA BİLİMSEL VE MESLEKİ ÇALIŞMALAR2019MATEMATİK VE FEN BİLİMLERİ, PROF. DR. CEM CÜNEYT ERSANLIDOÇ. DR. AYHAN ERCİYESDR. CANAN BAŞLAK, Editor, Ekin Yayınevi, Ankara, pp.68-82, 2019
- IV. **Basit Doğrusal Regresyon ve Korelasyon**  
BALİBEYOĞLU J., AYDIN C., EKİZ O. U., EKİZ M., ÖRKÜ H. H., GÜRBÜZSEL E., GÜNEY H., ÇELİK B., ŞAHİN TEKİN S. T., KARDİYEN F., et al.  
in: Mühendisler ve Fen Bilimciler için Olasılık ve İstatistik, M.Akif Bakır, Editor, Palme Yayıncılık, pp.389-442, 2016
- V. **15. Bölüm: 2^k Faktöriyel Deneyler ve Kesirler (sayfa 597-654)**  
Gündüz Tekin N., Aydın C., Başar E., Balibeyoğlu J., Örkü H. H., Özdemir Güler Z., Altunkaynak B., Kardiyen F., Şahin Tekin S. T., Çelik B., et al.  
in: Mühendisler ve Fen Bilimciler için Olasılık ve İstatistik, BAKIR,Mehmet Akif, Editor, PALME Yayıncılık, Ankara, pp.597-654, 2016

## Refereed Congress / Symposium Publications in Proceedings

- I. **ARIMA ve LSTM Modelleri Kullanarak Hisse Senedi Fiyat Tahmini**  
AKSEL B., ÖRKÜ H. H., KASAP R.  
41.Yöneylem Araştırması ve Endüstri Mühendisliği Ulusal Kongresi, Denizli, Turkey, 26 September 2022
- II. **Determination of The Most Efficient Cement Producer of Turkey using Mixed Integer Linear Programming Model**  
ÖZSOY V. S., Özsoy M. Ü., ÖRKÜ H. H.  
20th International Symposium on Econometrics, Operations Research and Statistics, 12 - 14 February 2020
- III. **ON DETERMINATION OF THE MOST EFFICIENT DECISION MAKING UNIT IN DATA ENVELOPMENT ANALYSIS: PERFORMANCE ANALYSIS OF METU TECHNOPOLIS COMPANIES**

Sevim Ö., ÖRKÜ H. H.

IV. ULUSLARARASIBİLİMSEL VE MESLEKİÇALIŞMALAR KONGRESİ – FEN VE SAĞLIK(BILMES SH 2019 - ANKARA),  
7 - 10 November 2019

IV. **Elektrik Dağıtım Yatırımlarının Belirlenmesinde Veri Zarflama Analizi Tabanlı Bir Yöntem**

ÖRKÜ H. H., dönmezçelik o.

3rd International Symposium on Multidisciplinary Studies and Innovative Technologies, 10 - 12 October 2019

V. **GENETİK ALGORITMA İLE LEVY DAĞILIMININ PARAMETRELERİNİN TAHMİNİDİLMESİ: BİR  
SİMÜLASYON ÇALIŞMASI**

DEMİR E., ÖZSOY V. S., ÖRKÜ H. H.

3rd INTERNATIONAL CONGRESS OF APPLIED SCIENCES, 28 - 30 June 2019

VI. **Cross Efficiency Model in Network Data Envelopment Analysis Models**

ÖRKÜ H. H., ÖZSOY V. S., ÖRKÜ M.

6th International Symposium on Academic Studies in Science, Engineering and Architecture Sciences, 13 - 15 June  
2019

VII. **Estimation of Parameters of Rayleigh Distribution by Differential Evolution Algorithm: A Simulation  
Study**

ÖRKÜ H. H., ÖZSOY V. S.

6th International Symposium on Academic Studies in Science, Engineering and Architecture Sciences, Ankara,  
Turkey, 13 - 15 June 2019

VIII. **Turkish Energy Sector Analysis: A Bootstrap Data Envelopment Analysis Approach**

Kınacı E. B., Örkü H. H., Bal H.

11. International Statistics Days Conference, Muğla, Turkey, 3 - 07 October 2018, pp.301

IX. **RTM: Interactive estimation tool for modeling real-time wind speed**

ÖZSOY V. S., ÖRKÜ H. H., BAL H.

5th International Conference on Management Information Systems (IMISC 2018), 24 - 26 October 2018

X. **İki Gruplu Sınıflandırma Problemi İçin Bulanık Programlama Yaklaşımı**

TÜZÜNER Z., BAL H., ÖRKÜ H. H.

19. Uluslararası Ekonometri, Yöneylem Araştırması ve İstatistik Sempozyumu, 17 - 20 October 2018

XI. **Bivariate Risk Aversion and Risk Premium Based on Various Utility Copula Functions**

DURUKAN K., KIZILOK KARA E., ÖRKÜ H. H.

10th International Statistics Congress (ISC2017), Ankara, Turkey, 6 - 08 December 2017

XII. **The Health Performances of the Turkey Cities by the Mixed Integer DEA Models**

TÜZÜNER Z., ÖRKÜ H. H., BAL H., ÖZSOY V. S., KOÇAK E.

10th International Statistics Congress, 6 - 08 December 2017, pp.130

XIII. **Suç verilerinin analizinde kullanılan veri madenciliği yöntemleri ve kaçakçılık suçlarıyla ilgili bir  
uygulama**

KOCATÜRK A., ALTUNKAYNAK B., ÖRKÜ H. H., ARSLAN R.

2nd International Mediterranean SCIENCE AND ENGINEERING CONGRESS, 25 - 27 October 2017

XIV. **A New Weights Method for Cross Efficiency Based on Goal Programming in Data Envelopment  
Analysis**

BAL H., ÖZSOY V. S., ÖRKÜ H. H.

International Conference on Computational and Statistical Methods in Applied Sciences (COSTAS 2017), 9 - 11  
November 2017, pp.169

XV. **Türkiye’de Sektörlerin Ölümlü Kaza Türlerine Göre Kümelenmesi: İkili Kümeleme Yöntemi**

KOCATÜRK A., ALTUNKAYNAK B., ÖRKÜ H. H.

XVIII. Uluslararası Ekonometri, Yöneylem Araştırması ve İstatistik, 5 - 07 October 2017

XVI. **Kaçakçılıkta Yakalanan Malzeme Türlerine Göre Suçluların Kümelenmesi: İkili Kümeleme Yöntemi**

ARSLAN R., ÖRKÜ H. H., ALTUNKAYNAK B.

XVIII. Uluslararası Ekonometri, Yöneylem Araştırması ve İstatistik, 5 - 07 October 2017

XVII. **The Efficiency Investigation of Turkish Manufacturing Industry by Multi-Period Two-Stage Data  
Envelopment Analysis**

- Avşar B., EBEGİL M., ÖRKCÜ H. H.  
International Conference on Mathematics and Mathematics Education(ICMME-2017), 11 - 13 May 2017
- XVIII. **Bivariate Risk Aversion For Utility Copula Functions**  
DURUKAN K., KIZILOK KARA E., ÖRKCÜ H. H.  
International Researchers, Statisticians and Young Statisticians Congress 2017, Konya, Turkey, 24 - 26 May 2017, pp.257
- XIX. **Evaluation of Dynamic Performance of Electricity Distribution Companies in Turkey using Window Analysis**  
ÖZSOY V. S., ÖRKCÜ H. H., DOĞAN M. İ., BAL H.  
3rd International Researchers, Statisticians and Young Statisticians Congress (IRSYSC 2017), 24 - 26 May 2017
- XX. **Simulation study of estimating the unknown parameters in distributions using Particle Swarm Optimization**  
ÖZSOY V. S., ÖRKCÜ H. H., DOĞAN M. İ., BAL H.  
3rd International Researchers, Statisticians and Young Statisticians Congress (IRSYSC 2017), 24 - 26 May 2017
- XXI. **A New Two-Group Classification Method Based on Data Envelopment Analysis**  
DOĞAN M. İ., ÖRKCÜ H. H., ÖZSOY V. S., BAL H.  
3rd International Researchers, Statisticians and Young Statisticians Congress (IRSYSC 2017), 24 - 26 May 2017
- XXII. **Efficiency Analysis of Manufacturing Firms In Turkey: The Application of Malmquist Index**  
APAYDIN AVŞAR B., EBEGİL M., ÖRKCÜ H. H.  
3rd INTERNATIONAL RESEARCHERS, STATISTICIANS AND YOUNG STATISTICIANS CONGRESS (IRSYSC-2017), Konya, Turkey, 24 - 26 May 2017, pp.129
- XXIII. **A Hybrid Method for Multi-Group Classification Problem**  
DOĞAN M. İ., ÖRKCÜ H. H., ÖZSOY V. S., BAL H.  
3rd International Researchers, Statisticians and Young Statisticians Congress (IRSYSC 2017), 24 - 26 May 2017
- XXIV. **Measuring the efficiency in the Turkish Banking Industry: Application of Data Envelopment Analysis and Malmquist Productivity Index**  
ÖZSOY V. S., ÖRKCÜ H. H., DOĞAN M. İ., BAL H.  
3rd International Researchers, Statisticians and Young Statisticians Congress (IRSYSC 2017), 24 - 26 May 2017
- XXV. **The Efficiency Invetication of Turkish Manufacturing Industry by Multi-Period Two-Stage Data Envelopment Analysis**  
APAYDIN AVŞAR B., EBEGİL M., ÖRKCÜ H. H.  
International Conference on Mathematics and Mathematics Education (ICMME-2017), Şanlıurfa, Turkey, 11 - 13 May 2017, pp.624-625
- XXVI. **Türkiye nin Enerji Etkinliğinin Enerji Bileşenleri Bakımından Değerlendirilmesi**  
Kınacı E. B., Örkücü H. H., Kınacı H.  
Xth International Statistics Days Conference, Samsun, Turkey, 7 - 09 October 2016
- XXVII. **New approaches to cross efficiency in DEA and performance evaluation of Turkey s cities**  
ÖRKCÜ H. H., ÖZSOY V. S.  
International Conference on Applied Mathematics and Analysis (ICAMA2016), 11 - 13 July 2016
- XXVIII. **Measuring the efficiency of Turkey airports with various dataenvelopment analysis models**  
ÖZSOY V. S., ÖRKCÜ H. H.  
International Conference on Applied Mathematics and Analysis (ICAMA2016), 11 - 13 July 2016
- XXIX. **Benzetilmiş Tavlama Algoritması İle Üç Parametrelili Weibull Dağılımının Parametrelerinin Tahmin Edilmesi**  
ÖZSOY V. S., ÖRKCÜ H. H.  
17th International Symposium on Econometrics, Operations Research and Statistics (ISEOS 2016), 2 - 04 June 2016
- XXX. **A goal programming method selection of weights in Data Envelopment Analysis An evaluation of efficiency of Turkish airports case**  
BAL H., ÖZSOY V. S., ÖRKCÜ H. H.  
2nd International Researchers-Statisticians and Young Statisticians Congress, 4 - 08 May 2016

- XXXI. **Assesing productive efficiency of banks using malmquist DEA and Bootstrap DEA A case of Turkish banks**  
DOĞAN M. İ., ÖZSOY V. S., ÖRKÜ H. H.  
2nd International Researchers-Statisticans and Young Statisticans (IRSYSC 2016), 4 - 08 May 2016
- XXXII. **Estimating the unknown parameters of the four parameter BurrIII distribution through Differential Evolution**  
ÖRKÜ H. H., ÖZSOY V. S.  
2nd International Researchers-Statisticans and Young Statisticans (IRSYSC 2016), 4 - 08 May 2016
- XXXIII. **A goal programming method selection of weights in Data Envelopment Analysis An evaluation of efficiency of Turkish airport case**  
BAL H., ÖZSOY V. S., ÖRKÜ H. H.  
2nd International Researchers-Statisticans and Young Statisticans (IRSYSC 2016), 4 May - 08 April 2016
- XXXIV. **Parçacık Sürü Optimizasyonu ile Veri Zarflama Analizi Tabanlı Optimal Portföy Değerlendirmesi İMKB 30 Endeksi Üzerine Bir Uygulama**  
Tuğcan Ö., ÖRKÜ H. H.  
Uluslararası 9. İstatistik Günleri Kongresi, 28Ekim-1Kasım 2015, Antalya, Türkiye, 28 October - 01 November 2015
- XXXV. **İki Aşamalı Veri Zarflama Analizi ile Ankara daki Devlet Hastanelerinin Performanslarının İncelenmesi**  
Merve K., ÖRKÜ H. H.  
Uluslararası 9. İstatistik Günleri Kongresi, 28Ekim-1Kasım 2015, Antalya, Türkiye, 28 October - 01 November 2015
- XXXVI. **Zaman Modülasyonlu Dizilerde Yanbant Bastırım Eniyilemesi Üzerine İstatistiksel Regresyon Analizine Dayalı Bir Değerlendirme**  
AKSOY E., ÖRKÜ H. H., DOĞAN M. İ.  
URSI-TÜRKİYE'2014 VII. Bilimsel Kongresi (URSI'xx2014), Turkey, 28 - 30 August 2014
- XXXVII. **Türkiye deki Elektrik Enerjisi Etkinliğinin Veri Zarflama Analizi ile İncelemesi**  
Dönmezçelik O., ÖRKÜ H. H., DOĞAN M. İ.  
15th International Symposium on Econometrics, Operations Research and Statistics (ISEOS 2014), 16 - 20 May 2014
- XXXVIII. **Ekonomik Bir Büyüme Modelinin Yapay Sinir Ağları ile Tahmini ve Türkiye Uygulaması**  
DOĞAN M. İ., ÖRKÜ H. H.  
15th International Symposium on Econometrics, Operations Research and Statistics (ISEOS 2014), 16 - 20 May 2014
- XXXIX. **Bir Devlet Bankasının Şubelerinin Veri Zarflama Analizi ile Performans İncelemesi**  
Sercan K., ÖRKÜ H. H., DOĞAN M. İ.  
15th International Symposium on Econometrics, Operations Research and Statistics (ISEOS 2014), 16 - 20 May 2014
- XL. **Avrupa Ülkelerinin Büyüme Dinamiklerinin Etkinliği**  
DOĞAN M. İ., ÖRKÜ H. H.  
15th International Symposium on Econometrics, Operations Research and Statistics (ISEOS 2014), 16 - 20 May 2014
- XLI. **An Alternative Approach for Data Envelopment Analysis Cross Efficiency Evalution**  
ÜNSAL M. G., BAL H., ÖRKÜ H. H.  
11th International Conference on Data Envelopment Analysis, Performance Management and Measurement (DEA 2013), 26 - 30 June 2013
- XLII. **The performance investigation trade sevice, construction and manufacturing sectors in Turkey by The Data Envelopment Analysis**  
ÖRKÜ H. H., Aktaş E., ŞAHİN TEKİN S. T.  
11th International Confrence on Data Envelopment Analysis(DEA2013), Samsun, Turkey, 27 June - 30 March 2013, pp.11-12
- XLIII. **Investigation of Electrical Energy Efficiency of Turkey by the Data Envelopment Analysis Model**  
ÖRKÜ H. H., Onur D.

- 11th International Conference on Data Envelopment Analysis, Performance Management and Measurement (DEA 2013), 26 - 30 June 2013
- XLIV. **Incidence of Inefficiency and Bayesian Approaches**  
ÜNSAL M. G., BAL H., ÖRKÇÜ H. H., Reşat K.  
11th International Conference on Data Envelopment Analysis, Performance Management and Measurement (DEA 2013), 26 - 30 June 2013
- XLV. **The Performance Investigation Trade Service Construction and Manufacturing Sectors By Using Turkey by the Data Envelopment Analysis**  
ÖRKÇÜ H. H., Aktaş E., ŞAHİN TEKİN S. T.  
11th International Conference on Data Envelopment Analysis, Performance Management and Measurement (DEA 2013), 26 - 30 June 2013
- XLVI. **The Performance Investigation of a Public Bank Branches in Turkey by the Data Envelopment Analysis**  
ÖRKÇÜ H. H., Sercan K.  
11th International Conference on Data Envelopment Analysis, Performance Management and Measurement (DEA 2013), 26 - 30 June 2013
- XLVII. **OECD Countries Socio Economic Performances by the Goal Programming Data Envelopment Analysis Model**  
ÖRKÇÜ H. H., DOĞAN M. İ.  
11th International Conference on Data Envelopment Analysis, Performance Management and Measurement (DEA 2013), 26 - 30 June 2013
- XLVIII. **Ankara'nın Başkent Oluşununun 80 yılında Nüfus İstatistikleri Üzerine Bir Çalışma**  
ÇELEBİOĞLU S., OLMUŞ H., GÖKPINAR F., ÖRKÇÜ H. H.  
Cumhuriyetin 80. yılı Sempozyumu, Turkey, 24 - 28 May 2013, pp.5-74
- XLIX. **Benchmarking of OECD Countries By Different Energy Efficiency Measurement Approaches**  
BAL H., ÖRKÇÜ H. H., ÜNSAL M. G.  
10th International Conference on Sustainable Energy Technologies, 13 - 17 September 2011
- L. **A New Approach Based on MILP Model and Measurement of Energy Efficiency**  
ÜNSAL M. G., BAL H., ÖRKÇÜ H. H.  
10th International Conference on Data Envelopment Analysis, Performance Management and Measurement (DEA 2012), 28 August - 02 September 2011
- LI. **Cross Efficiency Method Based on Minimization of Weights and Evolution of Turkey Cities**  
ÖRKÇÜ H. H., BAL H.  
9th International Conference on Data Envelopment Analysis, Performance Management and Measurement (DEA 2011), 28 August - 01 September 2011
- LII. **The Energy and Electricity Efficiency Evaluation of Balkan Countries by Data Envelopment Analysis Method**  
BAL H., ÖRKÇÜ H. H., ÜNSAL M. G.  
9th International Conference on Knowledge, Economy & Management Proceedings, 24 - 30 July 2011
- LIII. **An Analysis of Technical Efficiency and Productivity Changes in Turkish Airports Using the Malmquist Index**  
BAL H., ÖRKÇÜ H. H., ÜNSAL M. G.  
9th International Conference on Knowledge, Economy & Management Proceedings, 24 - 30 July 2011
- LIV. **Türk Devlet ve Özel Bankalarının VZA ve Malmquist Index Temelli Etkinlik Analizi**  
BAL H., ÖRKÇÜ H. H., ÜNSAL M. G.  
12th International Symposium on Econometrics Statistics and Operations Research, 26 - 30 April 2011
- LV. **Performance Evaluation of International Airports in Turkey Cross Efficiency Approach Based on Goal Programming**  
BAL H., ÖRKÇÜ H. H.  
8th International Conference on Data Envelopment Analysis, Performance Management and Measurement (DEA 2010), 30 May - 02 June 2010

## Supported Projects

Örkcü H. H., Acar S., TUBITAK Project, Astım Hastalığının Tayininde Kullanılan Elektronik Burun Sistemi İçin Yüksek Duyarlıklılı Kompakt Zeolit Modifiyeli Gaz Sensörünün Tasarımı, Üretimi Ve Karakterizasyonu, 2015 - 2017

Örkcü H. H., Bal H., TUBITAK Project, New approaches for ranking units in data envelopment analysis, 2010 - 2011

## Activities in Scientific Journals

Gazi Üniversitesi Fen Fakültesi Dergisi, Editor, 2021 - Continues

HACETTEPE JOURNAL OF MATHEMATICS AND STATISTICS, Editor, 2020 - Continues

Gazi University Journal of Science, Editor, 2013 - Continues

## Scientific Refereeing

RAIRO-OPERATIONS RESEARCH, Journal Indexed in SCI-E, January 2021

EXPERT SYSTEMS WITH APPLICATIONS, Journal Indexed in SCI-E, December 2020

ANNALS OF OPERATIONS RESEARCH, Journal Indexed in SCI-E, September 2020

CENTRAL EUROPEAN JOURNAL OF OPERATIONS RESEARCH, Journal Indexed in SCI-E, January 2020

## Metrics

Publication: 117

Citation (WoS): 455

Citation (Scopus): 544

H-Index (WoS): 11

H-Index (Scopus): 12