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International Researcher IDs

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Publons / Web Of Science ResearcherID: AAI-9918-2021

ScopusID: 25723017700

Yoksis Researcher ID: 181752

Learning Knowledge

Doctorate 2009 - 2013	Gazi University, Fen Bilimleri Enstitüsü, Endüstri Mühendisliği (Dr), Turkey
Postgraduate 2007 - 2009	Gazi University, Fen Bilimleri Enstitüsü, Endüstri Mühendisliği (YI) (Tezli), Turkey
Undergraduate 2002 - 2007	Gazi University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, Turkey

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Aralıklı tip-2 bulanık kümelerle dilsel özetleme, Gazi University, Fen Bilimleri Enstitüsü, Endüstri Mühendisliği (Dr), 2013

Postgraduate, Personel seçimi probleminde sezgisel bulanık küme uygulaması, Gazi University, Fen Bilimleri Enstitüsü, Endüstri Mühendisliği (YI) (Tezli), 2009

Academic Titles / Tasks

Professor 2021 - Continues	Gazi University, Teknoloji Fakültesi, Enerji Sistemleri Mühendisliği
Associate Professor 2018 - 2021	Gazi University, Teknoloji Fakültesi, Enerji Sistemleri Mühendisliği
Associate Professor 2016 - 2018	Gazi University, Mühendislik Fakültesi, Endüstri Mühendisliği

Supported Projects

1. Boran F. E., Rulman O., TUBITAK Project, Akıllı Üretim Varlıkları Yönetimi Sistemi, 2020 - 2022
2. Boran F. E., Rulman O., TUBITAK Project, Gerçek Zamanlı Operasyonel Zeka, 2018 - 2020
3. Kızılkaya Aydoğan E., Boran F. E., TUBITAK Project, GENETİK ALGORİTMA TABANLI GENÇ NESİL MOBİLYASINDA DUYGUSAL TASARIM, 2018 - 2019
4. Akay D., Boran F. E., TUBITAK Project, Tip 2 Bulanık Kümelerle Dilsel Özetleme TUBİTAK 1002 Hızlı Destek Programı Proje No 112M030, 2012 - 2013
5. Kurt M., Boran F. E., Project Supported by Higher Education Institutions, Personel Seçiminde Sezgisel Bulanık Küme Uygulamaları Bilimsel Araştırma Projesi BAP Gazi Üniversitesi Proje No 06 2009 12, 2009 - 2010

Published journal articles indexed by SCI, SSCI, and AHCI

1. **An integrated intuitionistic fuzzy set and stochastic multi-criteria acceptability analysis approach for supplier selection**
İlbaş A., Gürdere A., Boran F. E.
NEURAL COMPUTING & APPLICATIONS, vol.35, no.5, pp.3937-3953, 2023 (SCI-Expanded)
2. **An application of fuzzy linguistic summarization and fuzzy association rule mining to Kansei Engineering: a case study on cradle design**
AKGÜL E., DELİCE Y., KIZILKAYA AYDOĞAN E., BORAN F. E.
Journal of Ambient Intelligence and Humanized Computing, vol.13, no.5, pp.2533-2563, 2022 (SCI-Expanded)
3. **A novel distance measure on q-rung picture fuzzy sets and its application to decision making and classification problems**
Pinar A., Boran F. E.
ARTIFICIAL INTELLIGENCE REVIEW, vol.55, no.2, pp.1317-1350, 2022 (SCI-Expanded)
4. **A possibilistic approach for interval type-2 fuzzy linguistic summarization of time series**
Ozdogan I., BORAN F. E., AKAY D.
ARTIFICIAL INTELLIGENCE REVIEW, vol.54, no.5, pp.3991-4018, 2021 (SCI-Expanded)
5. **Developing a Labeled Affective Magnitude scale and Fuzzy Linguistic scale for tactile feeling**
AKAY D., Duran B. U., Duran E., Henson B., BORAN F. E.
HUMAN FACTORS AND ERGONOMICS IN MANUFACTURING & SERVICE INDUSTRIES, vol.31, no.1, pp.13-26, 2021 (SCI-Expanded)
6. **A q-rung orthopair fuzzy multi-criteria group decision making method for supplier selection based on a novel distance measure**
Pinar A., BORAN F. E.
INTERNATIONAL JOURNAL OF MACHINE LEARNING AND CYBERNETICS, vol.11, no.8, pp.1749-1780, 2020 (SCI-Expanded)
7. **Linguistic summarization of fuzzy social and economic networks: an application on the international trade network**
Genc S., AKAY D., BORAN F. E., Yager R. R.
SOFT COMPUTING, vol.24, no.2, pp.1511-1527, 2020 (SCI-Expanded)
8. **Fuzzy Quantification and Opinion Mining on Qualitative Data using Feature Reduction**
Dundar B., AKAY D., BORAN F. E., Ozdemir S.
INTERNATIONAL JOURNAL OF INTELLIGENT SYSTEMS, vol.33, no.9, pp.1840-1857, 2018 (SCI-Expanded)
9. **An Extension of Fuzzy Linguistic Summarization Considering Probabilistic Uncertainty**
Aydoğan S., Akay D., Boran F. E., Yager R. R.
INTERNATIONAL JOURNAL OF UNCERTAINTY FUZZINESS AND KNOWLEDGE-BASED SYSTEMS, vol.26, no.2, pp.195-215, 2018 (SCI-Expanded)
10. **A new approach for evaluation of renewable energy resources: A case of Turkey**
BORAN F. E.

- ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.13, no.3, pp.196-204, 2018 (SCI-Expanded)
11. **Fuzzy Linguistic Summarization with Genetic Algorithm: An Application with Operational and Financial Healthcare Data**
Altıntop T., Yager R. R., AKAY D., BORAN F. E., ÜNAL M.
INTERNATIONAL JOURNAL OF UNCERTAINTY FUZZINESS AND KNOWLEDGE-BASED SYSTEMS, vol.25, no.4, pp.599-620, 2017 (SCI-Expanded)
 12. **A holistic and structured CPFR roadmap with an application between automotive supplier and its aftermarket customer**
Demiray A., AKAY D., Tekin S., BORAN F. E.
INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, vol.91, pp.1567-1586, 2017 (SCI-Expanded)
 13. **Grey relational analysis between Turkey's macroeconomic indicators and domestic savings**
Duran E., Duran B. U., AKAY D., BORAN F. E.
GREY SYSTEMS-THEORY AND APPLICATION, vol.7, no.1, pp.45-59, 2017 (SCI-Expanded)
 14. **An overview of methods for linguistic summarization with fuzzy sets**
BORAN F. E., AKAY D., Yager R. R.
EXPERT SYSTEMS WITH APPLICATIONS, vol.61, pp.356-377, 2016 (SCI-Expanded)
 15. **Classification of Risks of Occupational Low Back Disorders with Support Vector Machines**
ERDEM M., BORAN F. E., AKAY D.
HUMAN FACTORS AND ERGONOMICS IN MANUFACTURING & SERVICE INDUSTRIES, vol.26, no.5, pp.550-558, 2016 (SCI-Expanded)
 16. **Forecasting Natural Gas Consumption in Turkey Using Grey Prediction**
Boran F. E.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.10, no.2, pp.208-213, 2015 (SCI-Expanded)
 17. **A Probabilistic Framework for Interval Type-2 Fuzzy Linguistic Summarization**
BORAN F. E., AKAY D., Yager R. R.
IEEE TRANSACTIONS ON FUZZY SYSTEMS, vol.22, no.6, pp.1640-1653, 2014 (SCI-Expanded)
 18. **Linguistic Summarization of Europe Brent Spot Price Time Series Along with the Interpretations from the Perspective of Turkey**
Hatipoglu H., BORAN F. E., Avci M., AKAY D.
INTERNATIONAL JOURNAL OF INTELLIGENT SYSTEMS, vol.29, no.10, pp.946-970, 2014 (SCI-Expanded)
 19. **A Generic Method for the Evaluation of Interval Type-2 Fuzzy Linguistic Summaries**
BORAN F. E., AKAY D.
IEEE TRANSACTIONS ON CYBERNETICS, vol.44, no.9, pp.1632-1645, 2014 (SCI-Expanded)
 20. **A biparametric similarity measure on intuitionistic fuzzy sets with applications to pattern recognition**
BORAN F. E., AKAY D.
INFORMATION SCIENCES, vol.255, pp.45-57, 2014 (SCI-Expanded)
 21. **Is Nuclear Power an Optimal Option for Electricity Generation in Turkey?**
Boran F. E., Etoz M., Dizdar E.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.8, no.4, pp.382-390, 2013 (SCI-Expanded)
 22. **A Multidimensional Analysis to Evaluate District Heating Systems**
Boran F. E.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.8, no.2, pp.122-129, 2013 (SCI-Expanded)
 23. **A Multidimensional Analysis of Electricity Generation Options with Different Scenarios in Turkey**
Boran F. E., Dizdar E., Toktas I., Boran K., Eldem C., ASAL Ö.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.8, no.1, pp.44-55, 2013 (SCI-Expanded)
 24. **The Evaluation of Power Plants Investment Alternatives with Grey Relational Analysis Approach for Turkey**
AKAY D., Boran F. E., YILMAZ M., Atak M.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.8, no.1, pp.35-43, 2013 (SCI-Expanded)

25. **Evaluation of Natural Gas Systems: A Comparison Study for Turkey**
Boran F. E., Boran K.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.7, no.3, pp.222-229, 2012 (SCI-Expanded)
26. **A Fuzzy Multi Criteria Decision Making to Evaluate Energy Policy Based on an Information Axiom: A Case Study in Turkey**
Boran F. E., Boran K., Dizdar E.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.7, no.3, pp.230-240, 2012 (SCI-Expanded)
27. **The Evaluation of Renewable Energy Technologies for Electricity Generation in Turkey Using Intuitionistic Fuzzy TOPSIS**
Boran F. E., Boran K., Menlik T.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.7, no.1, pp.81-90, 2012 (SCI-Expanded)
28. **Personnel Selection Based on Intuitionistic Fuzzy Sets**
BORAN F. E., Genc S., AKAY D.
HUMAN FACTORS AND ERGONOMICS IN MANUFACTURING & SERVICE INDUSTRIES, vol.21, no.5, pp.493-503, 2011 (SCI-Expanded)
29. **Optimization of module, shaft diameter and rolling bearing for spur gear through genetic algorithm**
Mendi F., Baskal T., BORAN K., BORAN F. E.
EXPERT SYSTEMS WITH APPLICATIONS, vol.37, no.12, pp.8058-8064, 2010 (SCI-Expanded)
30. **Interval multiplicative transitivity for consistency, missing values and priority weights of interval fuzzy preference relations**
Genc S., BORAN F. E., AKAY D., Xu Z.
INFORMATION SCIENCES, vol.180, no.24, pp.4877-4891, 2010 (SCI-Expanded)
31. **Multi-criteria Axiomatic Design Approach to Evaluate Sites for Grid-connected Photovoltaic Power Plants: A Case Study in Turkey**
Boran F. E., Menlik T., Boran K.
ENERGY SOURCES PART B-ECONOMICS PLANNING AND POLICY, vol.5, no.3, pp.290-300, 2010 (SCI-Expanded)
32. **A multi-criteria intuitionistic fuzzy group decision making for supplier selection with TOPSIS method**
Boran F. E., Genc S., Kurt M., Akay D.
EXPERT SYSTEMS WITH APPLICATIONS, vol.36, no.8, pp.11363-11368, 2009 (SCI-Expanded)

Articles Published in Other Journals

1. **SWOT and Fuzzy Preference Relations Analysis for the Integration of Turkish Armed Forces and Private Sector Logistics**
Gürdere A., İlbaş A., Boran F. E.
JOURNAL OF POLYTECHNIC-POLITEKNIK DERGISI, vol.1, no.1, pp.1-14, 2022 (ESCI)
2. **Modelling and analysis of future energy scenarios on the sustainability axis**
Deger K., ozkaya M. G., Boran F. E.
JOURNAL OF POLYTECHNIC-POLITEKNIK DERGISI, 2021 (ESCI)
3. **Selecting and Analyzing Appropriate Probability Distributions for Reliability of Electrical Transmission Lines**
Kara Y., Canal M. R., Sefa İ., Boran F. E.
Gazi Üniversitesi Fen Bilimleri Dergisi Part: C Tasarım ve Teknoloji, vol.9, no.1, pp.108-121, 2021 (Peer-Reviewed Journal)
4. **Linguistic Summarization of Structured Patent Data**
Esen Yıldız İ., Aydoğan S., Boran F. E., Akay D.
INTERNATIONAL JOURNAL OF COMPUTER AND INFORMATION TECHNOLOGY, vol.11, no.9, pp.1024-1027, 2017 (Peer-Reviewed Journal)
5. **Evaluation of Turkey's Renewable Energy Using Intuitionistic Fuzzy TOPSIS Method**
Damgaci E., BORAN K., BORAN F. E.

JOURNAL OF POLYTECHNIC-POLITEKNİK DERGİSİ, vol.20, no.3, pp.629-637, 2017 (ESCI)

6. **Sezgisel Bulanık TOPSIS Yöntemi Kullanılarak Ergonomik Ürün Konsept Seçimi**
EFE B., BORAN F. E., KURT M.
SÜLEYMAN DEMİREL ÜNİVERSİTESİ MÜHENDİSLİK BİLİMLERİ VE TASARIM DERGİSİ, vol.3, no.3, pp.433-440,
2015 (Peer-Reviewed Journal)
7. **An integrated intuitionistic fuzzy multi criteria decision making method for facility location selection**
BORAN F. E.
MATHEMATICAL AND COMPUTATIONAL APPLICATIONS, vol.16, no.2, pp.487-496, 2011 (Peer-Reviewed Journal)

Books & Book Chapters

1. **3PL Service Provider Selection with q-Rung Orthopair Fuzzy Based CODAS Method**
Pınar A., Boran F. E.
in: q-Rung Orthopair Fuzzy Sets, Harish Garg, Editor, Springer, London/Berlin , Singapore, pp.285-301, 2022

Refereed Congress / Symposium Publications in Proceedings

1. **APPLICATION OF MABAC METHOD IN ENERGY SOURCE SELECTION PROBLEM: THE CASE OF TURKIYE**
Turan M., Boran F. E.
5. INTERNATIONAL SCIENCES AND INNOVATION CONGRESS, Ankara, Turkey, 11 - 12 November 2022, pp.92-93
2. **Linguistic Summarization Of Natural Gas Spot Price**
Tepecik S., İzgeç M. M., Boran F. E.
4.ULUSLARARASI PALANDÖKEN BİLİMSEL ÇALIŞMALAR KONGRESİ , Erzurum, Turkey, 28 April 2022, pp.1
3. **Interval Type-2 Fuzzy Sets Linguistic Summarization using Sugeno Integral**
ÖZDOĞAN İ., BORAN F. E.
5th International Conference on Engineering Sciences (ICES 2019), 19 September 2019
4. **Decision-making with Z-Axiomatic Design**
Aydoğan S., Akay D., Kremer G., Günay E. E., Park K., Boran F. E.
2019 IISE Annual Conference, Florida, United States Of America, 19 - 21 May 2019
5. **Mevsimsel Ototegresif Entegre HareketliOrtalamaYöntemi ve Destek Vektör Regresyon Yönetimi ile Talep Tahmini: Bir Tatlı Firmasının Gelecek Dönemlerdeki Lokum Üretim Miktarının Tahmini**
EINLOU H., BORAN F. E.
3rdInternational Symposium on Innovative Approaches in Scientific Studies, 19 - 22 April 2019
6. **Forecasting Electricity Consumption in Turkey with Bayesian Polynomial Regression Analysis**
ERDEM M., BULKAN S., AKAY D., BORAN F. E.
5. EUROPEAN CONFERENCE ON RENEWABLE ENERGY SYSTEMS, 27 - 30 August 2017
7. **Yapılandırılmış Patent Verilerinin Dilsel Özetlemesi**
İĞDE E. Y., AYDOĞAN S., BORAN F. E., AKAY D.
37. Yöneylem Araştırması ve Endüstri Mühendisliği Ulusal Kongresi, Turkey, 5 - 07 July 2017
8. **OPERASYONEL VE FİNANSAL SAĞLIK VERİSİ İÇİN BULANIK DİLSEL ÖZETLERİN GENETİK ALGORİTMA İLE ÇIKARIMI**
ALTINTOP T., AYDOĞAN S., AKAY D., BORAN F. E., ÜNAL M.
Yöneylem Araştırması ve Endüstri Mühendisliği 36. Ulusal Kongresi, Turkey, 13 - 15 July 2016
9. **Sezgisel Bulanık TOPSIS Yöntemi Kullanılarak Ergonomik Ürün Konsept Seçimi**
EFE B., BORAN F. E., KURT M.
21.ULUSAL ERGONOMİ KONGRESİ, Turkey, 2 - 05 October 2015
10. **Understanding Customers Affective Needs with Linguistic Summarization**
BORAN F. E., EFE B., AKAY D., Henson B.
INTERNATIONAL CONFERENCE ON KANSEI ENGINEERING AND EMOTION RESEARCH KEER2014, 11 - 13 June

Academic and Administrative Experience

2022 - Continues	Rektörlüğe Bağlı Koordinatör	Gazi University, Teknoloji Fakültesi, Enerji Sistemleri Mühendisliği
2021 - 2022	Assistant Coordinator of The Rectorate	Gazi University, Teknoloji Fakültesi, Enerji Sistemleri Mühendisliği

Courses

Yapay Zeka Teknikleri, Undergraduate, 2020 - 2021

Advising Theses

Boran F. E., Prediction of failures on light rail system, Postgraduate, S.GÜLERYÜZ(Student), 2023

Boran F. E., Enerji kaynağı seçimi problemine ileri çok kriterli karar verme yöntemlerinin uygulanması, Postgraduate, M.TURAN(Student), 2023

Boran F. E., SWOT and fuzzy preference relations analysis for the integration of Turkish Armed Forces and private sector logistics, Doctorate, A.GÜRDERE(Student), 2023

Boran F. E., Tedarikçi seçimi için bütünleşik SBTİ-SMAA-2 metodu uygulaması, Doctorate, A.İLBAŞ(Student), 2023

Boran F. E., Doğal Gaz Fiyatlarının Bulanık Kümelerle Dilsel Özetlenmesi, Postgraduate, S.TEPECİK(Student), 2022

BORAN F. E., Performance Evaluation Of Suppliers Based On Q-Rung Orthopair Fuzzy Sets, Doctorate, A.PINAR(Student), 2020

BORAN F. E., Sugeno integrali kullanılarak aralıklı Tip-2 bulanık dilsel özetleme, Postgraduate, İ.ÖZDOĞAN(Student), 2019

BORAN F. E., Demand Estimation By Sariam Method And Support Vector Regression Method Periods, Postgraduate, H.EINLOU(Student), 2019

Activities in Scientific Journals

Gazi Üniversitesi Fen Bilimleri Dergisi Part C: Tasarım ve Teknoloji, Committee Member, 2021 - Continues

ICES Transactions on Neural and Fuzzy Computing, Assistant Editor/Section Editor, 2019 - Continues

IEEE Access, Assistant Editor/Section Editor, 2018 - Continues

Journal of Turkish Operations Management, Committee Member, 2017 - Continues

Energy Sources Part B-Economics Planning and Policy, Committee Member, 2010 - Continues

Scientific Refereeing

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Gazi University, Turkey, September 2020

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Gazi University, Turkey, December 2019

IEEE TRANSACTIONS ON FUZZY SYSTEMS, SCI Journal, January 2019

IEEE TRANSACTIONS ON FUZZY SYSTEMS, SCI Journal, January 2019

Metrics

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H-Index (WoS): 15

H-Index (Scopus): 16

Research Areas

Industrial Engineering