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International Researcher IDs

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Publons / Web Of Science ResearcherID: ABG-4453-2020

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Education Information

Doctorate, Eskişehir Osmangazi University, FEN BİLİMLERİ ENSTİTÜSÜ, Elektrik-Elektronik Mühendisliği (Dr), Turkey 1990 - 1999

Postgraduate, Anadolu University, Institute Of Science, Elektrik-Elektronik Mühendisliği (YI) (Tezli), Turkey 1987 - 1990

Undergraduate, Anadolu University, Faculty Of Engineering-Architecture, Department Of Electrical And Electronic Engineering, Turkey 1983 - 1987

Research Areas

Artificial Intelligence, Computer Learning and Pattern Recognition

Academic Titles / Tasks

Professor, Eskişehir Osmangazi University, MÜHENDİSLİK-MİMARLIK FAKÜLTESİ, ELEKTRİK-ELEKTRONİK MÜHENDİSLİĞİ BÖLÜMÜ, 2016 - Continues

Associate Professor, Eskişehir Osmangazi University, MÜHENDİSLİK-MİMARLIK FAKÜLTESİ, ELEKTRİK-ELEKTRONİK MÜHENDİSLİĞİ BÖLÜMÜ, 2012 - 2016

Assistant Professor, Eskişehir Osmangazi University, MÜHENDİSLİK-MİMARLIK FAKÜLTESİ, ELEKTRİK-ELEKTRONİK MÜHENDİSLİĞİ BÖLÜMÜ, 2000 - 2011

Research Assistant, Eskişehir Osmangazi University, MÜHENDİSLİK-MİMARLIK FAKÜLTESİ, ELEKTRİK-ELEKTRONİK MÜHENDİSLİĞİ BÖLÜMÜ, 1993 - 2000

Academic and Administrative Experience

Head of Department, Eskişehir Osmangazi University, MÜHENDİSLİK-MİMARLIK FAKÜLTESİ, ELEKTRİK-ELEKTRONİK MÜHENDİSLİĞİ BÖLÜMÜ, 2023 - Continues

Vice Rector, Eskişehir Osmangazi University, MÜHENDİSLİK-MİMARLIK FAKÜLTESİ, ELEKTRİK-ELEKTRONİK MÜHENDİSLİĞİ BÖLÜMÜ, 2019 - 2022

Rector's Advisor, Eskisehir Osmangazi University, MÜHENDİSLİK-MİMARLIK FAKÜLTESİ, ELEKTRİK-ELEKTRONİK MÜHENDİSLİĞİ BÖLÜMÜ, 2019 - 2019

Head of Department, Eskisehir Osmangazi University, MÜHENDİSLİK-MİMARLIK FAKÜLTESİ, ELEKTRİK-ELEKTRONİK MÜHENDİSLİĞİ BÖLÜMÜ, 2016 - 2019

Jury Memberships

Post Graduate, Post Graduate, Afyon Kocatepe Üniversitesi, December, 2021

Associate Professor Exam, Associate Professor Exam, Eskisehir Osmangazi University, May, 2021

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Are deep learning classification results obtained on CT scans fair and interpretable?**
Ashames M. M. A., DEMİR A., Gerek O. N., Fidan M., GÜLMEZOĞLU M. B., ERGİN S., EDİZKAN R., Koc M., Barkana A., Calisir C.
PHYSICAL AND ENGINEERING SCIENCES IN MEDICINE, vol.47, no.3, pp.967-979, 2024 (SCI-Expanded)
- II. **Neural network representations for the inter- and intra-class common vector classifiers**
EDİZKAN R., Barkana A., Koc M., GÜLMEZOĞLU M. B., Ashames M. M., ERGİN S., Fidan M., DEMİR A., Calisir C., Gerek O. N.
Digital Signal Processing: A Review Journal, vol.142, 2023 (SCI-Expanded)
- III. **Two Pseudo-Common Vectors for Pattern Recognition**
KOÇ M., GÜLMEZOĞLU M. B., ERGİN S., EDİZKAN R., Barkana A.
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, vol.45, no.12, pp.10621-10635, 2020 (SCI-Expanded)
- IV. **Use of gradient and normal vectors for face recognition**
KOÇ M., ERGİN S., GÜLMEZOĞLU M. B., EDİZKAN R., Barkana A.
IET IMAGE PROCESSING, vol.14, no.10, pp.2121-2129, 2020 (SCI-Expanded)
- V. **Novel short term solar irradiance forecasting models**
AKARSLAN E., HOCAOĞLU F. O., EDİZKAN R.
RENEWABLE ENERGY, vol.123, pp.58-66, 2018 (SCI-Expanded)
- VI. **A comprehensive comparison of features and embedding methods for face recognition**
YAVUZ H. S., ÇEVİKALP H., EDİZKAN R.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.24, no.1, pp.313-340, 2016 (SCI-Expanded)
- VII. **Use of wavelet-based two-dimensional scaling moments and structural features in cascade neuro-fuzzy classifiers for handwritten digit recognition**
Cetisli B., EDİZKAN R.
NEURAL COMPUTING & APPLICATIONS, vol.26, no.3, pp.613-624, 2015 (SCI-Expanded)
- VIII. **A novel M-D (multi-dimensional) linear prediction filter approach for hourly solar radiation forecasting**
AKARSLAN E., HOCAOĞLU F. O., EDİZKAN R.
ENERGY, vol.73, pp.978-986, 2014 (SCI-Expanded)
- IX. **Estimation of adaptive neuro-fuzzy inference system parameters with the expectation maximization algorithm and extended Kalman smoother**
Cetisli B., EDİZKAN R.
NEURAL COMPUTING & APPLICATIONS, vol.20, no.3, pp.403-415, 2011 (SCI-Expanded)
- X. **Use of center of gravity with the common vector approach in isolated word recognition**
GÜLMEZOĞLU M. B., EDİZKAN R., ERGİN S., BARKANA A.
EXPERT SYSTEMS WITH APPLICATIONS, vol.38, no.4, pp.3690-3696, 2011 (SCI-Expanded)
- XI. **The search for optimal feature set in power quality event classification**

GÜNAL S., GEREK Ö. N., ECE D. G., EDİZKAN R.

EXPERT SYSTEMS WITH APPLICATIONS, vol.36, no.7, pp.10266-10273, 2009 (SCI-Expanded)

XII. Subspace based feature selection for pattern recognition

GÜNAL S., EDİZKAN R.

INFORMATION SCIENCES, vol.178, no.19, pp.3716-3726, 2008 (SCI-Expanded)

XIII. The common vector approach and its comparison with other subspace methods in case of sufficient data

Gulmezoglu M. B., Dzhafarov V., Edizkan R., Barkana A.

COMPUTER SPEECH AND LANGUAGE, vol.21, no.2, pp.266-281, 2007 (SCI-Expanded)

Articles Published in Other Journals

I. RAISING SITUATIONAL AWARENESS WITH RELIABILITY ANALYSIS ON SERIAL PRODUCTION LINES

ÖZ D., EDİZKAN R., YAZICI A.

Eskişehir Osmangazi Üniversitesi mühendislik ve mimarlık fakültesi dergisi (online), vol.31, no.2, pp.630-643, 2023 (Peer-Reviewed Journal)

II. A TIGHTLY COUPLED HEADING AND POSITIONING SYSTEM FOR INDOOR NAVIGATION OF MOBILE ROBOTS

Yücel H., Edizkan R., Yazıcı A.

Eskişehir Osmangazi Üniversitesi mühendislik ve mimarlık fakültesi dergisi (online), vol.29, no.3, pp.346-355, 2021 (Peer-Reviewed Journal)

III. A CNN BASED ROTATION INVARIANT FINGERPRINT RECOGNITION SYSTEM

Mayadagli T. C., SAATÇI E., EDİZKAN R.

ISTANBUL UNIVERSITY-JOURNAL OF ELECTRICAL AND ELECTRONICS ENGINEERING, vol.17, no.2, 2017 (ESCI)

Books & Book Chapters

I. Alternative Current RLC Circuits

Edizkan R., Canbek S., Peker M., Gürcan Y. F., Aybek A. Ş., Zor M., Turan E., Köse S., Kul M. (Editor)

in: Circuit Analysis Laboratory, Metin Kul, Editor, Anadolu Yayınları, Eskişehir, pp.1-223, 2019

Refereed Congress / Symposium Publications in Proceedings

I. Real-Time Detection of Bearing Faults in Induction Motor Using Edge AI and Piezo Microphone

Akdağlı E., Çolak A. R., Şahin B., Erden M. B., Çınar E., Edizkan R.

8th International Symposium on Innovative Approaches in Smart Technologies, Ankara, Turkey, 6 - 08 December 2024, pp.1-6

II. Detection of Tomato Brown Rugose Fruit Virus in Anadol Peppers Using Deep Neural Networks and Multispectral Imaging

Yılmaz F., Edizkan R., Yavuz H. S., Gerek Ö. N.

2024 8th International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), Ankara, Turkey, 7 - 09 November 2024, pp.1-6

III. Computer Vision-Based Fall Detection With Voice-Assisted Elderly Care Robot

Sevim A., Tekin A., Başeğmez B. G., Karadoğan E., Edizkan R.

International Yeditepe Scientific Research Congress, İstanbul, Turkey, 7 - 08 September 2024, pp.23-24

IV. Detection of tomato brown rugose fruit virus in greenhouses using machine learning and computer vision

Yılmaz F., Edizkan R., Keleş Öztürk P., Yavuz H. S., Gerek Ö. N., Önder S., Yavuz Ş., Keleş D.

4th International Conference on Research of Agricultural and Food Technologies (I-CRAFT 2024), Toskent, Uzbekistan, 11 - 13 September 2024, pp.135

- V. **Elderly Fall Detection System with ESP32 Module and Edge Impulse Studio**
Za O., Bayar D., Aridici C., Metin Y. S., Edizkan R.
7th International Symposium on Innovative Approaches in Smart Technologies (ISAS 2023), İstanbul, Turkey, 23 November 2023
- VI. **Fuzzy-based Health Monitoring and Voice Assistance Featured Autonomous Elderly Care Service Robot**
Yelaldı M. B., Öztürk V., Gün A., Küçükşagır B., Erdoğan A. K., Yayan U., Edizkan R.
2021 Innovations in Intelligent Systems and Applications Conference (ASYU), Elazığ, Turkey, 6 - 08 October 2021, pp.1-6
- VII. **Interactive Digital Notice Board**
Yasa C., Mermer S., Koksall B., EDİZKAN R.
2020 Innovations in Intelligent Systems and Applications Conference, ASYU 2020, İstanbul, Turkey, 15 - 17 October 2020
- VIII. **Development of Intelligent Companion Robot for Hospitals**
Kok D., Guduk I., Genç P., Sicim E. S., EDİZKAN R.
2020 Innovations in Intelligent Systems and Applications Conference, ASYU 2020, İstanbul, Turkey, 15 - 17 October 2020
- IX. **Improvement of Skin Cancer Detection Performance Using Deep Learning Technique**
Yılmaz F., Edizkan R.
28. IEEE SİNYAL İŞLEME ve İLETİŞİM UYGULAMALARI KURULTAYI, Gaziantep, Turkey, 5 - 07 October 2020, pp.1-4
- X. **Performance analysis of pulsed doppler radar for multiple target case**
Irmak M. R., EDİZKAN R.
EURASIANSCIENTECH 2018, 22 - 23 November 2018
- XI. **Gezgin Robotlara Yük Taşıma Görevinde Batarya Akımı Değişimine Göre Durum Farkındalığı Kazandırılması**
Helvacı M., Ağdere M., Akdeniz Ş., Yaldiran B., Kolsuz F., YAYAN U., EDİZKAN R., YAZICI A.
Türkiye Robotbilim Konferansı (TORK) 2018, İstanbul, Turkey, 12 - 14 April 2018, vol.1, pp.7-12
- XII. **Heterogeneous Image Matching in Visible and Thermal Spectrum for Object Recognition**
TORUNOĞLU O., EDİZKAN R.
International Conference on Advanced Technology and Science (ICAT 2016), Konya, Turkey, 1 - 03 September 2016
- XIII. **Design of Collision Warning System for Non Signaled Rail Lines in Turkey**
Biçer İ., YAZICI A., EDİZKAN R.
International Conference on Engineering and Natural Science (ICENS 2016), Saraybosna, Albania, 24 - 28 May 2016
- XIV. **Effect of Photometric Preprocessing on Thermal - Visible Face Recognition Performance**
Torunoglu O., Saraydemir S., EDİZKAN R.
24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.393-396
- XV. **EVALUATION OF IMAGE DESCRIPTORS IN SUBSPACE-BASED CLASSIFIERS FOR TRAFFIC SIGN RECOGNITION**
Ozdamar M., EDİZKAN R.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.574-577
- XVI. **A SURVEY OF INDOOR LOCALIZATION SYSTEMS**
Yucel H., YAZICI A., EDİZKAN R.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.1267-1270
- XVII. **Bird strike warning system**

- Aydogan E., EDİZKAN R.
2013 Aviation Technology, Integration, and Operations Conference, Los Angeles, CA, United States Of America, 12 - 14 August 2013
- XVIII. **DCV based Face Recognition System and Its Application On the Embedded Development Board**
EDİZKAN R., ÇEVİKALP H., YAVUZ H. S.
3rd World Conference on Innovation and Computer Science (INSODE-2013), Antalya, Turkey, 26 - 28 April 2013
- XIX. **Automatic face recognition from frontal images**
YAVUZ H. S., ÇEVİKALP H., EDİZKAN R.
21st Signal Processing and Communications Applications Conference (SIU), CYPRUS, 24 - 26 April 2013
- XX. **İç Ortamlar için Konumlandırma Sistemi (İÇKON)'nde Kodlayıcı Desteği ile Performans İyileştirme**
YAYAN U., YAZICI A., EDİZKAN R.
Otomatik Kontrol Türk Milli Komitesi 2012 Ulusal Toplantısı, Niğde, Turkey, 04 September 2012, vol.2, pp.552-557
- XXI. **Development of indoor positioning system with ultrasonic and infrared signals**
YÜCEL H., ÖZKIR T., EDİZKAN R., YAZICI A.
Innovations in Intelligent Systems and Applications (INISTA), 2 - 04 July 2012
- XXII. **Ses Komut Tanıma ile Gezgin Araç Kontrolü**
EDİZKAN R., BÜTÜKCAN T., TİRYAKİ B., UZUN İ.
Akademik Bilişim 2007, Kütahya, Turkey, 31 January 2007
- XXIII. **Comparisons of features for automatic eye and mouth localization**
ÇEVİKALP H., YAVUZ H. S., EDİZKAN R., GÜNDÜZ H., KANDEMİR C. M.
2011 International Symposium on Innovations in Intelligent Systems and Applications, Istanbul, Turkey, 15 - 18 June 2011
- XXIV. **Performance improvement in distributed Turkish continuous speech recognition system using packet loss concealment techniques**
Uzun I., EDİZKAN R.
2011 International Symposium on INnovations in Intelligent SysTems and Applications, INISTA 2011, Istanbul-Kadikoy, Turkey, 15 - 18 June 2011, pp.375-378
- XXV. **Comparisons of Features for Automatic Eye and Mouth Localizations**
ÇEVİKALP H., YAVUZ H. S., GÜNDÜZ H., EDİZKAN R.
International Symposium on INnovations in Intelligent SysTems and Applications (INISTA 2011), 15 - 18 June 2011
- XXVI. **Phonem-based isolated Turkish word recognition using subspace classifier**
EDİZKAN R., KESER S.
2009 IEEE 17th Signal Processing and Communications Applications Conference, Turkey, 9 - 11 April 2009
- XXVII. **Phonem-Based Isolated Turkish Word Recognition With Subspace Classifier**
Keser S., EDİZKAN R.
IEEE 17th Signal Processing and Communications Applications Conference, Antalya, Turkey, 9 - 11 April 2009, pp.363-364
- XXVIII. **Performance improvement of distributed Turkish continuous speech recognition system in case of burst packet losses Dağıtık yapıdaki Türkçe sürekli konuşma tanıma sisteminin patlamalı paket kaybı durumunda başarımının İyileştirilmesi**
Uzun I., EDİZKAN R.
2008 IEEE 16th Signal Processing, Communication and Applications Conference, SIU, Aydın, Turkey, 20 - 22 April 2008
- XXIX. **Feature selection for power quality event classification Güç kalitesi olaylarının sınıflandırılması için öznelik seçimi**
Günel S., EDİZKAN R., Gerek Ö. N., Ece D. G.
2008 IEEE 16th Signal Processing, Communication and Applications Conference, SIU, Aydın, Turkey, 20 - 22 April 2008
- XXX. **Feature Selection for Power Quality Event Classification**
Günel S., EDİZKAN R., Gerek Ö. N., Ece D. G.
IEEE 16th Signal Processing and Communications Applications Conference, Aydın, Turkey, 20 - 22 April 2008,

- pp.288-291
- XXXI. **Performance Improvement of Distributed Turkish Continuous Speech Recognition System in Case of Burst Packet Losses**
Uzun I., EDİZKAN R.
IEEE 16th Signal Processing and Communications Applications Conference, Aydın, Turkey, 20 - 22 April 2008, pp.260-263
- XXXII. **Isolated speech recognition over Internet Protocol in distributed systems**
Uzun I., EDİZKAN R.
IEEE 15th Signal Processing and Communications Applications Conference, Eskişehir, Turkey, 11 - 13 June 2007, pp.358-361
- XXXIII. **Use of novel feature extraction technique with subspace classifiers for speech recognition**
GÜNAL S., EDİZKAN R.
IEEE International Conference on Pervasive Services, İstanbul, Turkey, 15 - 20 July 2007, pp.80-81
- XXXIV. **Analysis and compensation of sparse packet losses in distributed Turkish continuous speech recognition system**
Uzun I., Arisoy E., EDİZKAN R., SARAÇLAR M.
IEEE 15th Signal Processing and Communications Applications Conference, Eskişehir, Turkey, 11 - 13 June 2007, pp.471-472
- XXXV. **Endpoint detection of isolated words using center of gravity method**
GÜLMEZOĞLU M. B., EDİZKAN R., ERGİN S., BARKANA A.
IEEE 15th Signal Processing and Communications Applications Conference, Eskişehir, Turkey, 11 - 13 June 2007, pp.762-763
- XXXVI. **Improvements on Common Vector Approach for Multi Class Problems**
EDİZKAN R., GÜLMEZOĞLU M. B., ERGİN S., ATALAY B.
13th European Signal Processing Conference, Antalya, Turkey, 4 - 08 September 2005, pp.2246-2249
- XXXVII. **Improvements on Isolated Word Recognition Using Subspace Methods**
GÜLMEZOĞLU M. B., EDİZKAN R., ERGİN S., ATALAY B.
13th European Signal Processing Conference, Antalya, Turkey, 4 - 08 September 2005, pp.317-320
- XXXVIII. **Common Vector Approach in Multi Class Problems and Its Relation to Fisher's Linear Discriminant Analysis**
GÜLMEZOĞLU M. B., VAKIF D., EDİZKAN R., ATALAY B.
Second International Conference on Electrical and Electronics Engineering, Bursa, Turkey, 7 - 11 November 2001, pp.117-121

Supported Projects

Yazıcı A., Sarıççek İ., Edizkan R., Dımdış G., TUBITAK Project, Otomotiv Endüstrisi için Akıllı Üretim Yönetim Sistemi - IoToPro, 2018 - 2021

Yazıcı A., Sarıççek İ., Edizkan R., Çevikalp H., Sipahioğlu A., TUBITAK Project, Development of Autonomous Transport Vehicles and Human-Machine / Machine-Machine Interfaces for Smart Factories, 2017 - 2021

Edizkan R., Torunoğlu O., Project Supported by Higher Education Institutions, Heterojen Yüz Tanıma, 2016 - 2018

EDİZKAN R., Project Supported by Higher Education Institutions, Heterojen Yüz Tanıma, 2016 - 2017

EDİZKAN R., ÖZKAN K., YAZICI A., Industrial Thesis Project, Araç Algılama ve Uyarı Sistemi, 2014 - 2016

TAMYÜREK B., EDİZKAN R., TUBITAK Project, E1000 tipi Elektrikli Lokomotif Geliştirilmesi, 2011 - 2016

Edizkan R., Anlak S., TUBITAK Project, Demiryolu Makas Isıtıcı Sistemi, 2015 - 2015

Edizkan R., Söyleyici C., TUBITAK Project, Gerçek Zamanlı Görüntü İşleme ve Ses üstü Konumlama ile Otonom Forklift Kontrolü, 2015 - 2015

Edizkan R., Güneş Z., TUBITAK Project, Zaman ve Enerji Tasarrufu için Harita ve Sesli Otopark Yönlendirme Sistemi, 2015 - 2015

Yavuz H. S., Edizkan R., Çevikalp H., Kandemir C. M., Project Supported by Higher Education Institutions, Görünüş Tabanlı

Yüz Tanıma Yöntemleri Kullanarak Zaman Devamlılık Yönetim Sistemi Tasarımı, 2009 - 2012

Gülmezoğlu M. B., Edizkan R., Ergin S., Project Supported by Higher Education Institutions, Ayrık Kelime Tanıma Oranlarının İyileştirilmesi, 2003 - 2004

Edizkan R., Barkana A., Gülmezoğlu M. B., Künkçü Ü., Ecevit Künkçü Ş., TUBITAK Project, Sınırlı Sayıda Kelimenin Bilgisayar Tarafından Tanınması, 1993 - 1995

Memberships / Tasks in Scientific Organizations

İstanbul İktisadi KOSGEB Directorate R&D, P&D and Innovation Support Program Evaluation and Decision Board, Member, 2023 - Continues, Turkey

(MÜDEK) Mühendislik Eğitim Programları Değerlendirme ve Akreditasyon Derneği, Member, 2017 - Continues, Turkey

TMMOB ELEKTRİK MÜHENDİSLERİ ODASI, Member, 2015 - Continues, Turkey

Scientific Refereeing

Eskişehir Osmangazi Üniversitesi mühendislik ve mimarlık fakültesi dergisi (online), National Scientific Refreed Journal, December 2023

Eskişehir Osmangazi Üniversitesi mühendislik ve mimarlık fakültesi dergisi (online), National Scientific Refreed Journal, November 2023

Eskişehir Technical University Journal of Science and and Technology A- Applied Sciences and Engineering, National Scientific Refreed Journal, November 2021

Metrics

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H-Index (Scopus): 7

Non Academic Experience

BICOM Inc., USA

BICOM Inc., USA