

Assoc. Prof. RUKİYE KARAKİŞ

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: ABD-2098-2021

ScopusID: 23466700600

Yoksis Researcher ID: 105788

Education Information

Post Doctorate, McGill University, Medicine Faculty, Canada 2019 - 2020

Doctorate, Gazi University, Bilişim Enstitüsü, Elektronik Ve Bilgisayar Eğitimi Anabilim Dalı (Disiplinlerarası), Turkey
2009 - 2015

Postgraduate, Gazi University, Bilişim Enstitüsü, Elektronik Ve Bilgisayar Eğitimi Anabilim Dalı (Disiplinlerarası), Turkey
2006 - 2009

Undergraduate, Ondokuz Mayıs University, Faculty Of Education, Department Of Computer And Education Technologies
Education, Turkey 1998 - 2002

Foreign Languages

English, B1 Intermediate

Dissertations

Doctorate, Epileptik MRI ve EEG verileri için bulanık mantık tabanlı steganografi uygulaması, Gazi Üniversitesi, Bilişim
Enstitüsü, Elektronik Ve Bilgisayar Eğitimi Anabilim Dalı (Disiplinlerarası), 2015

Postgraduate, Yapay sinir ağları ve lojistik regresyon yöntemleri ile meme kanseri koltuk altı lenf nodu durumunun
belirlenmesi, Gazi Üniversitesi, Bilişim Enstitüsü, Elektronik Ve Bilgisayar Eğitimi Anabilim Dalı (Disiplinlerarası), 2009

Research Areas

Hiding Information, Artificial Intelligence, Computer Learning and Pattern Recognition, Pattern Recognition and Image
Processing, Neural Networks, Biomedical Image Processing

Academic Titles / Tasks

Assistant Professor, Sivas Cumhuriyet University, Teknoloji Fakültesi, Yazılım Mühendisliği Bölümü, 2016 - Continues

Research Assistant, Sivas Cumhuriyet University, Teknik Eğitim Fakültesi, Bilgisayar Sistemleri Öğr., 2015 - 2016

Research Assistant, Gazi University, Bilişim Enstitüsü, Elektronik Ve Bilgisayar Eğitimi Anabilim Dalı (Disiplinlerarası),

2006 - 2015

Research Assistant, Sivas Cumhuriyet University, Teknik Eğitim Fakültesi, Bilgisayar Sistemleri Öğr., 2005 - 2006

Academic and Administrative Experience

Head of Department, Sivas Cumhuriyet University, Teknoloji Fakültesi, Yazılım Mühendisliği Bölümü, 2017 - 2019

Courses

Deep Learning, Postgraduate, 2020 - 2021

Artificial Intelligence, Undergraduate, 2020 - 2021

Yapay Zeka, Undergraduate, 2018 - 2019

Bilgisayar Mimarisi, Undergraduate, 2018 - 2019

Bilgisayar Mimarisi, Undergraduate, 2018 - 2019

Otomatik Kontrol, Undergraduate, 2018 - 2019

Uzmanlık Alan Dersi, Postgraduate, 2018 - 2019

Yapay Zeka, Undergraduate, 2018 - 2019

Sistem Dinamiği ve Denetimi, Undergraduate, 2017 - 2018

Sistem Dinamiği ve Denetimi, Undergraduate, 2017 - 2018

Seminer Dersi, Postgraduate, 2018 - 2019

VERİ YAPILARI, Undergraduate, 2017 - 2018, 2016 - 2017

BİLGİSAYAR MİMARİSİ, Undergraduate, 2017 - 2018, 2016 - 2017

YAPAY ZEKA, Undergraduate, 2017 - 2018, 2016 - 2017

Bilgisayar -1, Undergraduate, 2016 - 2017

Yazılım Mühendisliği, Undergraduate, 2016 - 2017

Yazılım Mühendisliği, Undergraduate, 2016 - 2017

Temel Bilgisayar Teknolojileri Kullanımı, Undergraduate, 2016 - 2017

Bilgisayar - I, Undergraduate, 2016 - 2017

Temel Bilgi Teknolojileri Kullanımı, Undergraduate, 2016 - 2017

Bilgisayar - I, Undergraduate, 2016 - 2017

Bilgisayar - II, Undergraduate, 2015 - 2016

Temel Bilgi Teknolojileri Kullanımı, Undergraduate, 2016 - 2017

Bilgisayar - II, Undergraduate, 2015 - 2016

Published journal articles indexed by SCI, SSCI, and AHCI

- I. Comparison of deep learning methods for the radiographic detection of patients with different periodontitis stages
Güler Ayyıldız B., Karaklış R., Terzioğlu B., Özdemir D.
DENTOMAXILLOFACIAL RADIOLOGY, vol.53, no.1, pp.32-42, 2024 (SCI-Expanded)
- II. Deep learning prediction of motor performance in stroke individuals using neuroimaging data
Karakış R., Gürkahraman K., Mitsis G. D., Boudrias M.
JOURNAL OF BIOMEDICAL INFORMATICS, vol.141, pp.1-13, 2023 (SCI-Expanded)
- III. Improving Brain Tumor Classification with Deep Learning Using Synthetic Data
Yapıcı M. M., Karaklış R., Gurkahraman K.
COMPUTERS, MATERIALS AND CONTINUA, vol.74, no.3, pp.5049-5067, 2023 (SCI-Expanded)
- IV. MI-STEG: A Medical Image Steganalysis Framework Based on Ensemble Deep Learning
Karakış R.

- COMPUTERS, MATERIALS AND CONTINUA, vol.74, pp.4649-4666, 2023 (SCI-Expanded)
- V. Real-time detection of acromegaly from facial images with artificial intelligence
Kizilgul M., Karakış R., Dogan N., Bostan H., Yapıcı M. M., Gul U., Ucan B., Duman E., Duger H., Cakal E., et al.
EUROPEAN JOURNAL OF ENDOCRINOLOGY, vol.188, no.1, pp.1-8, 2023 (SCI-Expanded)
- VI. Brain tumors classification with deep learning using data augmentation
Gürkahraman K., Karakış R.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.36, no.2, pp.997-1011, 2021 (SCI-Expanded)
- VII. Evaluation of segmented brain regions for medical image steganography
Karakış R., Gürkahraman K., Çiğdem B., Öztoprak İ., Topaktas A. S.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.36, no.4, pp.2301-2314, 2021 (SCI-Expanded)
- VIII. A novel fuzzy logic-based image steganography method to ensure medical data security
Karalcis R., Guler J., Capraz I., Bilir E.
COMPUTERS IN BIOLOGY AND MEDICINE, vol.67, pp.172-183, 2015 (SCI-Expanded)
- IX. A genetic algorithm model based on artificial neural network for prediction of the axillary lymph node status in breast cancer
KARAKIŞ R., Tez M., KILIÇ Y. A., Kuru Y., Guler I.
ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE, vol.26, no.3, pp.945-950, 2013 (SCI-Expanded)
- X. Postgraduate students attitudes towards distance learning The case study of Gazi University
İŞIK A. H., KARAKIŞ R., GÜLER İ.
Procedia - Social and Behavioral Sciences, vol.9, pp.218-222, 2010 (SSCI)
- XI. Interpretation of MR images using self-organizing maps and knowledge-based expert systems
Gueller I., Demirhan A., Karakış R.
DIGITAL SIGNAL PROCESSING, vol.19, no.4, pp.668-677, 2009 (SCI-Expanded)
- XII. MR images restoration with the use of fuzzy filter having adaptive membership parameters
Guler I., Toprak A., Demirhan A., Karakış R.
JOURNAL OF MEDICAL SYSTEMS, vol.32, no.3, pp.229-234, 2008 (SCI-Expanded)

Articles Published in Other Journals

- I. A Novel Color Image Watermarking Method with Adaptive Scaling Factor Using Similarity-Based Edge Region
Gürkahraman K., Karakış R., Takci H.
COMPUTER SYSTEMS SCIENCE AND ENGINEERING, vol.47, no.1, pp.55-77, 2023 (Scopus)
- II. EDGE-BASED WATERMARKING IN REGIONS OF NONE INTEREST FOR THE SECURITY OF MEDICAL IMAGES
Karakış R., Gürkahraman K.
Adiyaman Üniversitesi Mühendislik Bilimleri Dergisi, vol.8, no.14, pp.154-168, 2021 (Peer-Reviewed Journal)
- III. Steganalysis with Deep Learning on Medical Images
Karakış R., Gürkahraman K.
INTERNATIONAL JOURNAL OF INFORMATICS TECHNOLOGIES, vol.14, no.2, pp.151-159, 2021 (Peer-Reviewed Journal)
- IV. Use of Hybrid Methods in Medical DICOM Data Security
Balci D., Karakış R., Güler I.
Düzce Üniversitesi Bilim ve Teknoloji Dergisi, vol.8, no.2, pp.1295-1306, 2020 (Peer-Reviewed Journal)
- V. EEG Source Localization Using a Genetic Algorithm Based Artificial Neural Network
Karakış R., Çapraz İ., Bilir E., Güler İ.
Recent Patents on Biomedical Engineering, vol.6, no.3, pp.188-194, 2014 (Peer-Reviewed Journal)
- VI. Semantic Wiki A Tool for Collaborative Learning Environment in Computer Engineering Education

Books & Book Chapters

- I. **5. Bölüm: Destek Vektör Makinesi**
KARAKİŞ R.
in: Teori ve Uygulamada Makine Öğrenmesi, Serkan Savaş, Selim Buyrukoğlu, Editor, Nobel Akademik Yayıncılık, Ankara, pp.93-117, 2022
- II. **Chapter 10: Data Augmentation in the Analysis of Neuroimages with Deep Learning**
KARAKİŞ R., GÜRKAHRAMAN K.
in: Artificial Intelligence Applications in Medicine, FUAT TÜRK, Editor, Hipokrat Yayıncılık-MediHealth Academy, Ankara, pp.79-88, 2022
- III. **Steganography and Medical Data Security**
KARAKİŞ R., GÜLER İ.
in: Cryptographic and Information Security Approaches for Images and Videos, S. Ramakrishnan, Editor, CRC Press, pp.629-662, 2018

Refereed Congress / Symposium Publications in Proceedings

- I. **DEVELOPING A DESKTOP APPLICATION FOR REAL TIME DETECTION OF ACROMEGALY FROM FACIAL IMAGES WITH ARTIFICIAL INTELLIGENCE**
ÖZEL M., DOĞAN N., KARAKİŞ R., KIZILGÜL M., YAPICI M. M., DUMAN E.
International Conference on Engineering Technologies (ICENTE'23), Konya, Turkey, 23 November 2023, pp.11
- II. **GENERATING SYNTHETIC BRAIN MRI IMAGES WITH GENERATIVE ADVERSARIAL NETWORKS**
YILDIZ Ü., ÜNSAL E., KARAKİŞ R.
International Conference on Engineering Technologies (ICENTE'23), Konya, Turkey, 23 November 2023, pp.27
- III. **Yapay Zeka ile Panoramik Radyograflar Üzerinden Periodontal Hastalık Evrelendirmesi**
Terzioğlu B., Güler Ayyıldız B., Karaklış R., Özdemir D.
Türk Periodontoloji Derneği 52. Bilimsel Kongresini ve 30. Bilimsel Sempozyumu, İzmir, Turkey, 21 - 23 September 2023, pp.216-217
- IV. **Yoğun Artık Bağlantılarla İyileştirilen U-Net Kullanılarak Beyin Görüntülerindeki Gürültülerin Giderilmesi**
Topdağ T., Karaklış R.
11. Uluslararası Akademik Araştırmalar Kongresi (ICAR), Ankara, Turkey, 25 - 27 July 2023, pp.312-313
- V. **Mermer Sınıflandırma Problemi İçin Güvenilir Veri Seti Oluşturulması**
SEÇKİN B., TORUN Y., KARAKİŞ R.
CAIAC'22 The Proceedings of The International Cumhuriyet Artificial Intelligence Applications Conference 2022, Sivas, Turkey, 08 December 2022, vol.1, pp.35-38
- VI. **Real-time detection of Acromegaly from facial images with artificial intelligence**
KIZILGÜL M., DOĞAN N., GÜL Ü., YAPICI M. M., BOSTAN H., DUMAN E., UÇAN B., KARAKİŞ R., DÜĞER H., AKIN Ö., et al.
20th Congress of the European NeuroEndocrine Association, Lyon, France, 07 September 2022
- VII. **Yapay zekâ ile yüz görüntülerinden akromegali hastığının gerçek zamanlı olarak tespiti**
KIZILGÜL M., DOĞAN N., GÜL Ü., YAPICI M. M., BOSTAN H., DUMAN E., UÇAN B., KARAKİŞ R., DÜĞER H., AKIN Ö., et al.
43. Türkiye Endokrinoloji ve Metabolizma Hastalıkları Kongresi, Antalya, Turkey, 18 May 2022, pp.164-165
- VIII. **Edge-Based Image Watermarking Method with Weighted Discrete Cosine Transform Coefficients Ayrik Kosinüs Dönüşümü Katsayılarının Ağırlandırdığı Kenar Tabanlı Görüntü Damgalama**

Yöntemi

Karakış R., Gürkahraman K.

30th Signal Processing and Communications Applications Conference, SIU 2022, Safranbolu, Turkey, 15 - 18 May 2022

IX. Medical Image Steganalysis using Deep Convolutional Neural Network

Karakış R.

International Conference on Engineering Technologies (ICENTE'21) , Konya, Turkey, 18 - 20 November 2021, pp.88-92

X. Steganalysis on Medical Images with Support Vector Machine

MAROOF ÖZCAN F. B., KARAKIŞ R., GÜLER İ.

2020 28th Signal Processing and Communications Applications Conference (SIU), Gaziantep, Turkey, 5 - 07 October 2020

XI. Classification of Brain Tumors using Convolutional Neural Network from MR Images Evrisimsel Sinir Agı Kullanılarak MR Görüntülerinden Beyin Tumorlerinin Siniflandırılması

Gungen C., POLAT Ö., KARAKIŞ R.

28th Signal Processing and Communications Applications Conference, SIU 2020, Gaziantep, Turkey, 5 - 07 October 2020

XII. FPGA TABANLI ÜÇ BOYUTLU LAZER TARAYICI TASARIMI

Gedik M. İ., Karakış R., Ünsal E.

ULUSLARARASI 19 MAYIS YENİLİKÇİ BİLİMSEL YAKLAŞIMLAR KONGRESİ, Samsun, Turkey, 27 December 2019 - 29 December 2020, pp.797-805

XIII. Hibrit Yöntemlerle Medikal Görüntülerin Güvenliğinin Sağlanması Üzerine Araştırma

BALCI D., KARAKIŞ R., GÜLER İ.

INTERNATIONAL CONGRESS on ENGINEERING and ARCHITECTURE, Alanya, Turkey, 14 - 16 November 2018, pp.882-889

XIV. Hiding Patient Information Into Magnetic Resonance Images Using DNA Based Wavelet Transform

KARAKIŞ R., GÜRKAHRAMAN K., ÇİĞDEM B., ÖZTOPRAK İ., TOPAKTAŞ A. S.

The International Journal of Arts Sciences' (IJAS) American Canadian Conference for Engineering and Technology, Montreal, Canada, 30 May - 02 June 2018

XV. IMPROVEMENT OF INCORRECT VELOCITY VECTORS IN PARTICLE IMAGE VELOCIMETRY USING ORDER STATISTICAL METHOD

GÜRKAHRAMAN K., KARAKIŞ R., TEMEL Ü. N.

International Conference on Engineering Technologies (ICENTE'17), Konya, Turkey, 7 - 09 December 2017, pp.30

XVI. Embedding Patient Information into Region of Non Interests for Medical Images Using DNA Encryption

KARAKIŞ R., GÜRKAHRAMAN K.

International Conference on Engineering Technologies (ICENTE'17), Konya, Turkey, 7 - 09 December 2017, pp.33

XVII. Survival Analysis of Gastric Cancer Patients by Pattern Recognition Techniques

KARAKIŞ R., GÜNDÖĞDU S. B., TEZ M., GÜLER İ.

The 8th International Advanced Technologies Symposium (IATS'17), Elazığ, Turkey, 19 - 22 October 2017, pp.2326-2332

XVIII. Image Steganography Tool for Different Images Types

KARAKIŞ R., GÜLER İ.

The 8th International Advanced Technologies Symposium (IATS'17), Elazığ, Turkey, 19 - 22 October 2017, pp.2333-2339

XIX. An Implementation of DNA based Security Model in Medical Data

KARAKIŞ R., GÜRKAHRAMAN K.

The 3rd International Conference on Engineering and Natural Sciences (ICENS 2017), Budapest, Hungary, 4 - 06 May 2017, pp.1105-1110

XX. Medikal Görüntülerin Güvenliği için Bulanık Mantık Tabanlı Steganografi Yöntemi

KARAKIŞ R., GÜLER İ., ÇAPRAZ İ., BİLİR E.

- IEEE 2015 23rd Signal Processing and Communications Applications Conference (SIU 2015), Malatya, Turkey, 19 - 23 May 2015, pp.176-179
- XXI. **Medikal Sinyaller için Benzerlik Tabanlı Görüntü Steganografi Uygulaması**
KARAKİŞ R., GÜLER İ., ÇAPRAZ İ., BİLİR E.
Akademik Bilişim 2015, Turkey, 20 - 24 January 2015, pp.375-381
- XXII. **Medikal Dicom Görüntüler için Steganografi Uygulaması**
KARAKİŞ R., GÜLER İ.
7th International Conference on Information Security and Cryptology, İstanbul, Turkey, 22 - 25 October 2014, pp.340-344
- XXIII. **Bulanık Mantık Tabanlı Görüntü Steganografi Uygulaması**
KARAKİŞ R., GÜLER İ.
IEEE 2014 22nd Signal Processing and Communications Applications Conference (SIU 2014), Trabzon, Turkey, 23 - 26 April 2014, pp.156-159
- XXIV. **Feature Selection in Pulmonary Function Test Data with Machine Learning Methods**
KARAKİŞ R., İŞIK A. H., GÜLER İ.
2013 IEEE 21th Signal Processing and Communications Applications Conference (SIU 2013), Cyprus (Kktc), 23 - 27 April 2013, pp.1-4
- XXV. **A wiki application for artificial neural network course in engineering education**
ÇETİN G., KARAKİŞ R.
Interactive Collaborative Learning (ICL) 2012 15th International Conference on, Villach, Austria, 26 - 28 September 2012, pp.1-4
- XXVI. **Gazi Üniversitesi Bilişim Enstitüsü Web Sayfasının Kullanılabilirlik Analizi**
İŞIK A. H., KARAKİŞ R., GÜLER İ.
2nd International Conference on New Trends in Education and Their Implications ICONTE 2011, Antalya, Turkey, 27 - 29 April 2011, pp.607-614
- XXVII. **Classification The Axillary Lymph Node Status of Breast Cancer Patients with the Analysis of Pattern Recognition**
Karakış R., Tez M., Güler İ.
2011 IEEE 19th Signal Processing and Communications Applications Conference (SIU 2011), Antalya, Turkey, 24 - 28 April 2011, pp.988-991
- XXVIII. **Postgraduate students attitudes towards distance learning The case study of Gazi University**
İşik A. H., Karakış R., Güler İ.
World Conference on Learning, Teaching and Educational Leadership 2010, Cairo, Egypt, 29 - 31 October 2010, pp.218-222

Supported Projects

- Karakış R., Gürkahraman K., Çiğdem B., Ünsal E., Project Supported by Higher Education Institutions, A Deep Learning Framework for Early Detection of Alzheimer and Mild Cognitive Impairment Diseases Using Neuroimages: DeepBrain, 2023 - 2025
- Torun Y., Karakış R., TUBITAK Project, MERMER PLAKA SINIFLANDIRMA SISTEM TASARIMI, 2022 - 2023
- Karakış R., Boudrias M., TUBITAK Project, Derin Öğrenme ile İnme Hastaları ve Sağlıklı Bireylere ait NöroGörüntülerin Değerlendirilmesi, 2019 - 2020
- Karakış R., Project Supported by Higher Education Institutions, FPGA Tabanlı 3D Lazer Tarayıcı Tasarımı ve Gerçekleştirimi, 2018 - 2020
- Karakış R., Gürkahraman K., Çiğdem B., Öztoprak İ., Topaktaş A. S., Project Supported by Higher Education Institutions, Epileptik Hastalara ait Elektroensefalogram ve Manyetik Rezonans Görüntüsü Verileri için Veri Gizleme Uygulaması, 2017 - 2019
- Güler İ., Karakış R., Project Supported by Higher Education Institutions, Beyin Fonksiyonlarının Oluştuğu Yerlerin Imge Çekştirme ve Örüntü Tanıma Teknikleri ile fMRG İmgelerinden Belirlenmesi, 2012 - 2013

Güler İ., Demirhan A., Karakış R., Project Supported by Higher Education Institutions, MR Görüntülerinin Bilgi Tabanlı Yapay Zeka Teknikleri Kullanılarak Yorumlanması, 2007 - 2013

Scientific Refereeing

COMPUTERS IN BIOLOGY AND MEDICINE, SCI Journal, May 2021

NEUROCOMPUTING, SCI Journal, June 2018

INFORMATION SCIENCES, SCI Journal, June 2017

JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, SCI Journal, June 2016

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, SCI Journal, June 2016

INFORMATION SCIENCES, SCI Journal, June 2016

ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE, SCI Journal, June 2015

Metrics

Publication: 51

Citation (WoS): 75

Citation (Scopus): 191

H-Index (WoS): 4

H-Index (Scopus): 7

Scholarships

2219 - Yurt Dışı Doktora Sonrası Araştırma Burs Programı, TUBITAK, 2019 - 2020

Non Academic Experience

McGill University-Medicine Faculty

MİLLİ EĞİTİM BAKANLIĞI