

Assoc. Prof. ERCAN AVŞAR

Personal Information

Email: ercan.avsar@deu.edu.tr

Web: <https://avesis.deu.edu.tr/ercan.avsar>

International Researcher IDs

ScholarID: YQhToYMAAAAJ

ORCID: 0000-0002-1356-2753

Publons / Web Of Science ResearcherID: J-4670-2018

ScopusID: 56347551100

Yoksis Researcher ID: 57577

Education Information

Doctorate, Cukurova University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği (Dr) (İngilizce), Turkey 2010 - 2016

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Biyomedikal Mühendisliği (YI) (Tezli), Turkey 2007 - 2009

Undergraduate, Cukurova University, Mühendislik-Mimarlık Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü (İngilizce), Turkey 2003 - 2007

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Simulation of a ring fixator system with patient-specific bone modeling, Cukurova University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği (Dr) (İngilizce), 2016

Postgraduate, Tek sınıf destek vektör makineleri kullanılarak epileptik EEG işaretlerinin sınıflandırılması, Istanbul Technical University, Fen Bilimleri Enstitüsü, Biyomedikal Mühendisliği (YI) (Tezli), 2009

Research Areas

Pattern Recognition and Image Processing, Neural Networks

Academic Titles / Tasks

Assistant Professor, Dokuz Eylul University, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2021 - Continues

Assistant Professor, Cukurova University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, 2018 - 2021

Research Assistant, Cukurova University, Mühendislik-Mimarlık Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü (İngilizce), 2012 - 2018

Research Assistant, Osmaniye Korkut Ata University, Faculty Of Engineering, Department Of Electrical And Electronics

Courses

SIGNALS AND SYSTEMS FOR COMPUTER ENGINEERING, Undergraduate, 2021 - 2022
Transform Based Image Processing, Postgraduate, 2021 - 2022
INTRODUCTION TO DIGITAL IMAGE PROCESSING, Undergraduate, 2021 - 2022
YLEE-201 SPECIAL AREA COURSE, Postgraduate, 2019 - 2020, 2018 - 2019
ME255 ELECTRICAL AND ELECTRONICS ENG. FUND., Undergraduate, 2019 - 2020, 2018 - 2019
EES415 INTRODUCTION TO INTERNET OF THINGS, Undergraduate, 2019 - 2020, 2018 - 2019
EE-585 PROJECT WORK-1, Postgraduate, 2019 - 2020, 2018 - 2019
YLEE-203 SPECIAL AREA COURSE, Postgraduate, 2019 - 2020, 2018 - 2019
EE-0007 Probability Theory and Stochastic Processes, Postgraduate, 2019 - 2020
EEE113 INTRODUCTION TO ELECTRICAL ENGINEERING, Undergraduate, 2019 - 2020, 2018 - 2019
AEN160 Electrical And Electronics Engineering Fund., Undergraduate, 2017 - 2018
OMZ110 Elektrik-Elektronik Mühendisliği Temelleri, Undergraduate, 2017 - 2018

Advising Theses

Avşar E., A novel framework for severity level detection of diabetic retinopathy based on mobile edge computing and deep learning ensembles, Postgraduate, A.Al(Student), 2021
AVŞAR E., INVESTIGATION OF MACHINE LEARNING METHODS FOR PREDICTION OF OZONE CONCENTRATION TO DETERMINE OUTDOOR AIR QUALITY LEVEL, Postgraduate, W.KHALID(Student), 2021
AVŞAR E., Detection of calcium deficiency and physiological status in strawberry leaves using deep learning, Postgraduate, M.HARİRİ(Student), 2021
AVŞAR E., A method for brain tumor classification from mri images using deep learning and image enhancement techniques, Postgraduate, K.SALÇIN(Student), 2019

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Wireless communication protocols in smart agriculture: A review on applications, challenges and future trends**
Avşar E., Mowla M. N.
AD HOC NETWORKS, vol.136, pp.1-25, 2022 (SCI-Expanded)
- II. **Tipburn disorder detection in strawberry leaves using convolutional neural networks and particle swarm optimization**
Hariri M., AVŞAR E.
MULTIMEDIA TOOLS AND APPLICATIONS, vol.81, no.8, pp.11795-11822, 2022 (SCI-Expanded)
- III. **Moving vehicle detection and tracking at roundabouts using deep learning with trajectory union**
AVŞAR E., ÖZİNAL AVŞAR Y.
MULTIMEDIA TOOLS AND APPLICATIONS, vol.81, no.5, pp.6653-6680, 2022 (SCI-Expanded)
- IV. **Overview of smart home concepts through energy management systems, numerical research, and future perspective**
Buyuk M., AVŞAR E., Inci M.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, 2022 (SCI-Expanded)
- V. **Determination of particular singular configurations of Stewart platform type of fixator by the stereographic projection method**
DÖNMEZ D., AKÇALI İ. D., AVŞAR E., AYDIN A., MUTLU H.

INVERSE PROBLEMS IN SCIENCE AND ENGINEERING, vol.29, no.13, pp.2925-2943, 2021 (SCI-Expanded)

- VI. **EVALUATION OF AN ELECTRONIC IRRIGATION SYSTEM WITH INTERNET CONNECTION IN STRAWBERRY CULTIVATION**
AVŞAR E., Bulus K., SARIDAŞ M. A., KAPUR B.
ENVIRONMENTAL ENGINEERING AND MANAGEMENT JOURNAL, vol.20, no.9, pp.1487-1497, 2021 (SCI-Expanded)
- VII. **Artificial intelligence techniques for the vibration, noise, and emission characteristics of a hydrogen-enriched diesel engine**
Yildirim S., TOSUN E., ÇALIK A., ULUOCAK İ., AVŞAR E.
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.41, no.18, pp.2194-2206, 2019 (SCI-Expanded)
- VIII. **An analytical method to create patient-specific deformed bone models using X-ray images and a healthy bone model**
ÜN M. K., AVŞAR E., AKÇALI İ. D.
COMPUTERS IN BIOLOGY AND MEDICINE, vol.104, pp.43-51, 2019 (SCI-Expanded)
- IX. **Dimensionality reduction for predicting CO conversion in water gas shift reaction over Pt-based catalysts using support vector regression models**
AVŞAR E.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.42, no.36, pp.23326-23333, 2017 (SCI-Expanded)

Articles Published in Other Journals

- I. **COVID-19 and pneumonia diagnosis from chest X-ray images using convolutional neural networks**
Hariri M., Avsar E.
NETWORK MODELING AND ANALYSIS IN HEALTH INFORMATICS AND BIOINFORMATICS, vol.12, no.1, 2023 (ESCI)
- II. **Short-term traffic state estimation using breakpoint flow calculation and machine learning methods**
Özinal Avşar Y., Avşar E.
Scientific Journal of Silesian University of Technology. Series Transport, no.115, pp.121-134, 2022 (ESCI)
- III. **Parking lot occupancy prediction using long short-term memory and statistical methods**
Avşar E., Anar Y. C., Polat A. Ö.
Manas Journal of Engineering, vol.10, no.1, pp.35-41, 2022 (Peer-Reviewed Journal)
- IV. **Stacked Cross Validation with Deep Features: A Hybrid Method for Skin Cancer Detection**
Al-Karawi A., Avsar E.
TEHNICKI GLASNIK-TECHNICAL JOURNAL, vol.16, no.1, pp.33-39, 2022 (ESCI)
- V. **Image processing based autonomous landing zone detection for a multi-rotor drone in emergency situations**
Turan V., Avşar E., Asadihendoustani D., Avşar Aydın E.
Turkish Journal of Engineering, vol.5, no.4, pp.193-200, 2021 (Peer-Reviewed Journal)
- VI. **One Step Ahead Prediction of Ozone Concentration for Determination of Outdoor Air Quality Level**
Mahmood W. K., Avşar E.
Manas Journal of Engineering, vol.9, no.1, pp.45-54, 2021 (Peer-Reviewed Journal)
- VII. **Performance Evaluation of Various Regression Models and Features for Prediction of Ozone Concentration**
Dümen S., Avşar E., Çevik U.
Çukurova Üniversitesi Mühendislik Mimarlık Fakültesi Dergisi, vol.35, no.3, pp.567-573, 2020 (Peer-Reviewed Journal)
- VIII. **Detection and classification of brain tumours from MRI images using faster R-CNN**
AVŞAR E., Salçın K.
Tehnički glasnik, vol.13, no.4, pp.337-342, 2019 (ESCI)
- IX. **Automatic 3D modeling and simulation of bone fixator system in a novel graphical user interface**
AVŞAR E., ÜN M. K.

Informatics in Medicine Unlocked, vol.2, pp.78-91, 2016 (Scopus)

X. Tekil Olmayan Fiksator Otomasyonu

Aydın A., AKÇALI İ. D., AVŞAR E., ÜN M. K., MUTLU H., İBRİKÇİ T., BİÇER Ö. S., ÖZKAN C., Durmaz A.
ÇUKUROVA ÜNİVERSİTESİ MÜHENDİSLİK-MİMARLIK FAKÜLTESİ DERGİSİ, vol.30, no.2, 2015 (Peer-Reviewed Journal)

XI. Ortopedik Uygulamalarda Bilgisayarlı Denetim Sistemi

AVŞAR E., AKÇALI İ. D., Aydın A., ÜN M. K., MUTLU H., İBRİKÇİ T., ÖZKAN C., BİÇER Ö. S.
ÇUKUROVA ÜNİVERSİTESİ MÜHENDİSLİK-MİMARLIK FAKÜLTESİ DERGİSİ, vol.30, no.2, 2015 (Peer-Reviewed Journal)

Books & Book Chapters

I. Yeni Bir Fiksator Teknolojisi

AKÇALI İ. D., AVŞAR E., MUTLU H., AYDIN A.

in: Kontrol, Otomasyon ve Robotikte Yeni Teknolojiler, MMO İstanbul Şubesi, Editor, Yapım Tanıtım Yayıncılık San. ve Tic. Ltd. Şti., İstanbul, pp.143-199, 2017

Refereed Congress / Symposium Publications in Proceedings

I. Effects of Image Preprocessing on the Performance of Convolutional Neural Networks for Pneumonia Detection

Avşar E.

International Conference on INnovations in Intelligent SysTems and Applications (INISTA) , 25 - 27 August 2021, pp.1-5

II. Lambda Fixator: A Novel Robotic System in Orthopedics

AKÇALI İ. D., AYDIN A., AVŞAR E., MUTLU H.

The 4th International Conference on Control, Robotics and Cybernetics, Tokyo, Japan, 27 - 30 September 2019, pp.65-69

III. Direct Kinematics for a Novel Robotic System Used as External Fixator

AKÇALI İ. D., AVŞAR E., MUTLU H., AYDIN A.

1st WRC Symposium on Advanced Robotics and Automation, Pekin, China, 15 August - 19 October 2018, pp.214-219

IV. Development of a Cloud-Based Automatic IrrigationSystem: a Case Study on Strawberry Cultivation

AVŞAR E., BULUŞ K., SARIDAŞ M. A., KAPUR B.

2018 7th International Conference on Modern Circuits and Systems Technologies (MOCAST), 7 - 09 May 2018

V. Remaining Useful Life Estimation from Fuel Cell Data Using Support Vector Regression Models

AVŞAR E., YILDIRIM S., ÇALIK A.

2nd International Mediterranean Science and Engineering Congress (IMSEC 2017), 25 - 27 October 2017, pp.1563

VI. A Novelty Detection Approach to Classification of Breast Tissue Containing Microcalcifications

AVŞAR E., BULUŞ K.

International Conference on Research in Adaptive and Convergent Systems (RACS 'xx17), Krakow, Poland, Poland, 20 - 23 September 2017, pp.100-103

VII. Prediction of carbon monoxide conversion of water gas shiftreactions using support vector machines

AVŞAR E.

1st International Mediterranean Science and Engineering Congress (IMSEC 2016), Adana, Turkey, 26 - 28 October 2016, pp.3568

VIII. Detection of Cancerous Pap Smear Images Using One Class Support Vector Machines and Minimum Redundancy Maximum Relevance Feature Selection Method

AVŞAR E.

International Conference on Natural Science and Engineering (ICNASE'16), Kilis, Turkey, 19 - 20 March 2016, pp.442-447

IX. Fiksatorün En Yakın Noktalar Yaklaşımıyla Tekillik Denetimi

AKÇALI İ. D., AVŞAR E., Durmaz A., Sağdıç İ., Aydın A., ÜN M. K., MUTLU H., İBRİKÇİ T., ÖZKAN C., BİÇER Ö. S.
Tıp Teknolojileri Ulusal Kongresi, TIPTEKNO'15, Muğla, Turkey, 15 - 18 October 2015, pp.404-407

X. Singularity Detection in an External Fixator of Gough Stewart Platform Type

AKÇALI İ. D., AVŞAR E., Durmaz A., Aydın A., ÜN M. K., İBRİKÇİ T., MUTLU H., ÖZKAN C., BİÇER Ö. S.
International Conference on Innovative Technologies, IN-TECH 2015, Dubrovnik, Croatia, 9 - 11 September 2015, pp.284-287

XI. Displacement Analysis of Robotic Frames for Reliable and Versatile Use as External Fixator

AKÇALI İ. D., AVŞAR E., ÜN M. K., Aydın A., İBRİKÇİ T., MUTLU H., BİÇER Ö. S., ÖZKAN C., Durmaz A.
IEEE International Conference on Cyber Technology in Automation, Control and Intelligent Systems, Hong Kong, Hong Kong, 4 - 06 June 2014, pp.180-185

XII. A Graphical User Interface for an External Fixation System

AVŞAR E., ÜN M. K., AKÇALI İ. D.

IEEE-EMBS International Conference on Biomedical and Health Informatics (BHI), Valensiya, Spain, 1 - 04 June 2014, pp.480-483

Metrics

Publication: 33

Citation (WoS): 98

Citation (Scopus): 9

H-Index (WoS): 5

H-Index (Scopus): 2