

## Assoc. Prof. MUHAMMET EMİN ŞAHİN

### Personal Information

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### International Researcher IDs

ORCID: 0000-0001-7729-990X

Yoksis Researcher ID: 114361

### Education Information

Doctorate, Firat University, Institute Of Science, Turkey 2015 - 2020

### Research Areas

Engineering and Technology

### Academic Titles / Tasks

Research Assistant, Yozgat Bozok University, Mühendislik-Mimarlık Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2018 - Continues

Research Assistant, Firat University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, 2016 - Continues

Research Assistant, Yozgat Bozok University, Mühendislik-Mimarlık Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2013 - 2016

### Academic and Administrative Experience

Deputy Head of Department, Yozgat Bozok University, Mühendislik-Mimarlık Fakültesi, Bilgisayar Mühendisliği, 2021 - Continues

### Courses

Yapay zeka, Undergraduate, 2022 - 2023

Görüntü işleme, Postgraduate, 2022 - 2023

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

- Sugar beet farming goes high-tech: a method for automated weed detection using machine learning and deep learning in precision agriculture**  
ORTATAŞ F. N., Ozkaya U., ŞAHİN M. E., ULUTAŞ H.  
Neural Computing and Applications, vol.36, no.9, pp.4603-4622, 2024 (SCI-Expanded)

- II. **Smart hydropower management: utilizing machine learning and deep learning method to enhance dam's energy generation efficiency**  
ŞAHİN M. E., ÖZBAY KARAKUŞ M.  
Neural Computing and Applications, 2024 (SCI-Expanded)
- III. **Use of memristor-based chaotic circuits in AM-DCSK and FM-DCSK modulation**  
Şahin M. E., Kolumban G., Hamamcı S. E., Güler H.  
PHYSICA SCRIPTA, vol.98, no.10, pp.1-14, 2023 (SCI-Expanded)
- IV. **Classification of cucumber leaf diseases on images using innovative ensembles of deep neural networks**  
ULUTAŞ H., Emin Sahin M.  
Journal of Electronic Imaging, vol.32, no.5, 2023 (SCI-Expanded)
- V. **Application of a novel deep learning technique using CT images for COVID-19 diagnosis on embedded systems**  
ULUTAŞ H., ŞAHİN M., Karakus M. O.  
Alexandria Engineering Journal, vol.74, pp.345-358, 2023 (SCI-Expanded)
- VI. **Detection and classification of COVID-19 by using faster R-CNN and mask R-CNN on CT images**  
ŞAHİN M., ULUTAŞ H., Yuce E., ERKOÇ M. F.  
Neural Computing and Applications, vol.35, no.18, pp.13597-13611, 2023 (SCI-Expanded)
- VII. **Image processing and machine learning-based bone fracture detection and classification using X-ray images**  
Şahin M. E.  
INTERNATIONAL JOURNAL OF IMAGING SYSTEMS AND TECHNOLOGY, vol.0, no.0, pp.1-13, 2023 (SCI-Expanded)
- VIII. **Deep learning-based approach for detecting COVID-19 in chest X-rays**  
Emin Sahin M. E.  
Biomedical Signal Processing and Control, vol.78, 2022 (SCI-Expanded)
- IX. **Design of a hyperchaotic memristive circuit based on wien bridge oscillator**  
Sahin M. E., Demirkol A. S., GÜLER H., HAMAMCI S. E.  
COMPUTERS & ELECTRICAL ENGINEERING, vol.88, 2020 (SCI-Expanded)
- X. **Design and Realization of a Hyperchaotic Memristive System for Communication System on FPGA**  
ŞAHİN M. E., GÜLER H., HAMAMCI S. E.  
TRAITEMENT DU SIGNAL, vol.37, no.6, pp.939-953, 2020 (SCI-Expanded)
- XI. **Application and Modeling of a Novel 4D Memristive Chaotic System for Communication Systems**  
ŞAHİN M. E., ÇAM TAŞKIRAN Z. G., GÜLER H., HAMAMCI S. E.  
CIRCUITS SYSTEMS AND SIGNAL PROCESSING, vol.39, no.7, pp.3320-3349, 2020 (SCI-Expanded)
- XII. **Simulation and implementation of memristive chaotic system and its application for communication systems**  
Sahin M. E., Taskiran Z. G. C., Guler H., HAMAMCI S. E.  
SENSORS AND ACTUATORS A-PHYSICAL, vol.290, pp.107-118, 2019 (SCI-Expanded)

## Articles Published in Other Journals

- I. **A deep learning-based technique for diagnosing retinal disease by using optical coherence tomography (OCT) images**  
ŞAHİN M. E.  
Firat Universitesi, 2022 (Peer-Reviewed Journal)
- II. **A deep learning approach for detecting pneumonia in chest X-rays**  
Şahin M. E., Ulutaş H., Yüce E.  
Avrupa Bilim ve Teknoloji Dergisi, vol.28, pp.562-567, 2021 (Peer-Reviewed Journal)
- III. **Memristor Based Filter Design and Implementation for ECG Signal**  
ŞAHİN M. E., KARAKAYA B., GÜLER H., GÜLTEN A., HAMAMCI S. E.

Bitlis Eren Üniversitesi Fen Bilimleri Dergisi, vol.9, no.2, pp.756-765, 2020 (Peer-Reviewed Journal)

**IV. An implementation of chaotic circuits with Multisim-LabVIEW**

ŞAHİN M. E., Bulut G. G., GÜLER H.

International Advanced Researches and Engineering Journal, vol.2, no.3, pp.304-308, 2018 (Peer-Reviewed Journal)

**V. Memristör Tabanlı Kaotik Devre Modelinin FPGA Ortamında Tasarımı ve Gerçeklenmesi**

KARAKAYA B., ŞAHİN M. E., GÜLER H., GÜLTEN A.

Fırat Üniversitesi Fen Bilimleri Dergisi, vol.29, no.2, pp.39-44, 2017 (Peer-Reviewed Journal)

**VI. TiO<sub>2</sub> Memristor Modelling with LabVIEW**

ŞAHİN M. E., GÜLER H.

Turkish Journal of Science Technology, vol.12, no.2, pp.79-83, 2017 (Peer-Reviewed Journal)

**VII. LabVIEW Model Of Memristor With Nonlinear Dopant Drift**

ŞAHİN M. E., GÜLER H., KAYA T.

EUROPEAN JOURNAL OF TECHNIC, vol.6, no.2, pp.124-130, 2016 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

**I. A New Approach to Determine the Milk Lines of Silage Corn Using Image Processing Techniques**

Şahin M. E., Ulutaş H., Ortataş F. N.

8. Uluslararası Bilgisayar Bilimleri ve Mühendisliği Konferansı (UBMK 2023), Burdur, Turkey, 13 - 15 September 2023

**II. House Price Prediction Using Ensemble Learning Techniques**

ULUTAŞ H., ŞAHİN M. E.

2023: International Conference on Recent and Innovative Results in Engineering and Technology, Konya, Turkey, 16 - 18 August 2023, pp.103-108

**III. Classification of White Blood Cells Using Deep Learning Methods**

Şahin M. E., Yüce E.

10. Uluslararası Akademik Araştırmalar Kongresi , Ankara, Turkey, 27 January 2023, pp.95

**IV. Autonomous Mapping and Spraying in Precision Agriculture using Unmanned Ground Vehicles**

ORTATAŞ F. N., ULUTAŞ H., ŞAHİN M. E., Ciftci F.

2023 Innovations in Intelligent Systems and Applications Conference, ASYU 2023, Sivas, Turkey, 11 - 13 October 2023

**V. Memristor Based Chaotic Circuit Modelling With LabVIEW**

ŞAHİN M. E., KARAKAYA B., GÜLER H., GÜLTEN A.

International Advanced Researches Engineering Congress-2017, 16 - 18 November 2017

**VI. Memristor Based True Random Number Generator**

KARAKAYA B., ŞAHİN M. E., GÜLER H., GÜLTEN A.

6th International Conference on "Advances in Engineering and Technology" (AET-17), 2 - 04 May 2017

**VII. The Design of Memristor Based High Pass Filter Circuit**

Sahin M. E., Guler H.

24th IEEE International Conference on Electronics, Circuits and Systems (ICECS), Batumi, Georgia, 5 - 08 December 2017, pp.494-497

## Supported Projects

Ulutaş H., Karakaya B., Şahin M. E., TUBITAK Project, Memristif Kaotik Devrelere Dayalı Görüntü Şifreleme Tekniği ve Gerçek Zamanlı Uygulaması, 2022 - 2024

Ulutaş H., Şahin M. E., Erkoç M. F., Project Supported by Higher Education Institutions, Yapay zeka teknikleri kullanılarak servikal intervertebral disk sinyal intensitesinin tespit edilmesi, 2023 - 2023

ŞAHİN M. E., Varol A., Project Supported by Higher Education Institutions, MAKİNE ÖĞRENİMİ ALGORİTMALARINI KULLANARAK HASTALIK TAHMİNİNİN GÖMÜLÜ SİSTEMLERDE GERÇEKLENMESİ, 2022 - 2022

ŞAHİN M. E., Project Supported by Higher Education Institutions, Memristör Tabanlı Aktif Filtre ve Kaotik Devrelerin LabVIEW Ortamında Gerçekleştirilmesi, 2016 - 2017

ŞAHİN M. E., Project Supported by Higher Education Institutions, EEG Sinyali Almak İçin Sistem Tasarımı, 2014 - 2015

## Metrics

Publication: 34

Citation (WoS): 68

Citation (Scopus): 131

H-Index (WoS): 5

H-Index (Scopus): 6