

Assoc. Prof. İBRAHİM ETHEM SAÇU

Personal Information

Office Phone: [+90 352 207 6666](tel:+903522076666) Extension: 32204;13015

Email: iesacu@erciyes.edu.tr

Web: <https://avesis.erciyes.edu.tr/iesacu>

Address: Erciyes Üniversitesi, Mühendislik Fak., Elektrik-Elektronik Müh. Böl., 38039, Melikgazi/Kayseri

International Researcher IDs

ScholarID: YLOd81EAAAAJ

ORCID: 0000-0002-8627-8278

Publons / Web Of Science ResearcherID: AAL-7014-2021

ScopusID: 56040188700

Yoksis Researcher ID: 165068

Education Information

Doctorate, Erciyes University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, Turkey 2012 - 2019

Postgraduate, Erciyes University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, Turkey 2010 - 2012

Undergraduate, Erciyes University, Mühendislik Fakültesi, Elektrik- Elektronik Mühendisliği, Turkey 2005 - 2010

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Fraksiyonel Dereceden Elektronik Devreler ve Uygulamaları, Erciyes Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, 2019

Postgraduate, MEMS' lerin biyomedikal alanındaki uygulamalarının incelenmesi, Erciyes Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, 2012

Research Areas

Electrical and Electronics Engineering, Electronic, Electronic Circuits, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Erciyes University, Rektörlük, 2023 - Continues

Lecturer PhD, Erciyes University, Rektörlük, Klinik Müh. Arş. Ve Uyg. Mrk., 2018 - 2023

Research Assistant, Erciyes University, Mühendislik Fakültesi, Biyomedikal Mühendisliği, 2011 - 2014

Academic and Administrative Experience

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **A practical synthesis and analysis of the fractional-order FitzHugh-Nagumo neuronal model**
SAÇU İ. E.
Journal of Computational Electronics, vol.23, no.1, pp.188-207, 2024 (SCI-Expanded)
- II. **Dynamics and synchronization control of fractional conformable neuron system**
SAÇU İ. E.
Cognitive Neurodynamics, vol.18, no.1, pp.247-263, 2024 (SCI-Expanded)
- III. **Effects of high-order interactions on synchronization of a fractional-order neural system**
Saçu İ. E.
COGNITIVE NEURODYNAMICS, vol.1, no.1, pp.1-17, 2024 (SCI-Expanded)
- IV. **An alternative perspective on determining the optimum fractional orders of the synaptic coupling functions for the simultaneous neural patterns**
Korkmaz N., Saçu İ. E.
Nonlinear Dynamics, vol.110, no.4, pp.3791-3806, 2022 (SCI-Expanded)
- V. **An effective method for the reduction of the device utilization amount in experimental realization of a fractional-order system**
SAÇU İ. E., KORKMAZ N.
NONLINEAR DYNAMICS, vol.108, no.3, pp.2369-2384, 2022 (SCI-Expanded)
- VI. **A Practical Fractional-Order Sinusoidal Oscillator Design and Implementation**
SAÇU İ. E.
Journal of Circuits, Systems and Computers, vol.30, 2021 (SCI-Expanded)
- VII. **An Electronically Controllable Fractional Multivibrator**
SAÇU İ. E., ALÇI M.
IETE JOURNAL OF RESEARCH, vol.67, no.3, pp.313-321, 2021 (SCI-Expanded)
- VIII. **Design and realisation of a fractional-order sinusoidal oscillator**
Saçu İ. E., Alçı M.
IET CIRCUITS DEVICES & SYSTEMS, vol.14, no.8, pp.1173-1184, 2020 (SCI-Expanded)
- IX. **An Electronically Adjustable Waveform Generator**
SAÇU İ. E.
Journal of Circuits, Systems and Computers, vol.29, 2020 (SCI-Expanded)
- X. **A Current Mode Design of Fractional Order Universal Filter**
Saçu I. E., Alçı M.
ADVANCES IN ELECTRICAL AND COMPUTER ENGINEERING, vol.19, pp.71-78, 2019 (SCI-Expanded)
- XI. **Low-power OTA-C Based Tuneable Fractional Order Filters**
SAÇU I. E., ALÇI M.
INFORMACIJE MIDEM-JOURNAL OF MICROELECTRONICS ELECTRONIC COMPONENTS AND MATERIALS, vol.48, no.3, pp.135-144, 2018 (SCI-Expanded)

Articles Published in Other Journals

- I. **Ritmik desen üreteçleri için Rayleigh osilatörünün fraksiyonel versiyonu ve devre sentezi**
Korkmaz N., Saçu İ. E.
Niğde Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.11, no.3, pp.584-591, 2022 (Peer-Reviewed Journal)
- II. **An alternative approach for the circuit synthesis of the fractional-order FitzHugh-Nagumo neuron model**

Korkmaz N., Saçu İ. E.

PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSİTESİ MUHENDİSLİK BİLİMLERİ DERGİSİ, vol.28, no.2, pp.248-254, 2022 (Peer-Reviewed Journal)

III. Fractional Integration Based Feature Extractor for EMG Signals

Saçu İ. E.

Balkan Journal of Electrical and Computer Engineering, vol.10, no.2, pp.132-138, 2022 (Peer-Reviewed Journal)

IV. An Efficient Design Procedure to Implement the Fractional-order Chaotic Jerk Systems with the Programmable Analog Platform

Korkmaz N., Saçu İ. E.

Chaos Theory and Applications, vol.3, no.2, pp.59-66, 2021 (Peer-Reviewed Journal)

V. The Circuit Synthesis of the Fractional-Order Chaotic Lorenz System

Saçu İ. E., Korkmaz N.

Avrupa Bilim ve Teknoloji Dergisi, no.21, pp.42-46, 2021 (Peer-Reviewed Journal)

VI. DESIGN OF A BASIC PIEZORESISTIVEMICROCANTILEVER BIOSENSOR

SAÇU İ. E., ALÇI M.

ISTANBUL UNIVERSITY-JOURNAL OF ELECTRICAL AND ELECTRONICS ENGINEERING, vol.13, pp.1641-1645, 2013 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

I. Saçu İ. E.

ICIAS 2022 1st International Conference on Innovative Academic Studies, Konya, Turkey, 10 - 13 September 2022, pp.299

II. DEVELOPMENT OF A SMART BALANCE DEVICE FOR USE IN PHYSICAL THERAPY AND REHABILITATION

Padak G. E., Saçu İ. E., Danişman K.

9. ULUSLARARASI İSTANBUL BİLİMSEL ARAŞTIRMALAR KONGRESİ, İstanbul, Turkey, 14 - 15 May 2022, pp.1013-1019

III. Çok Kanatlı Bir Kaotik Sistemin Fraksiyonel Versiyonu ve Devre Sentezi

Saçu İ. E., Korkmaz N.

29. IEEE Sinyal İşleme ve İletişim Uygulamaları Kurultayı (SIU2021), İstanbul, Turkey, 9 - 11 June 2021, pp.1-4

IV. The Circuit Synthesis of the Fractional-order Chaotic Rössler System

Saçu İ. E., Korkmaz N.

International Symposium of Scientific Research and Innovative Studies (ISSRIS 2021), Balıkesir, Turkey, 22 - 25 February 2021, pp.489-498

V. Closed-Loop Control of Blood Glucose Level in Type-1 Diabetics: A Simulation Study

SOYLU S., DANIŞMAN K., SAÇU İ. E., ALÇI M.

8th International Conference on Electrical and Electronics Engineering (ELECO), Bursa, Turkey, 28 - 30 November 2013, pp.371-375

VI. Piezorezistif Tabanlı Mikrokiriş Kullanılarak Biyosensör Tasarımı

SAÇU İ. E., ALÇI M.

ELECO 'xx2012 Elektrik - Elektronik ve Bilgisayar Mühendisliği Sempozyumu,, Bursa, Turkey, 29 November - 01 December 2012

VII. MEMS' lerin Tıp Alanında Kullanılması Üzerine Bir İnceleme

SAÇU İ. E., ALÇI M.

Tıp Teknolojileri Ulusal Kongresi 2011, Antalya, Turkey, 13 - 16 October 2011

Supported Projects

SAÇU İ. E., AL S., DANIŞMAN K., AYDIN Ö., AHMED A. O., Project Supported by Higher Education Institutions, Biyoteknoloji Uygulamaları için Ayarlanabilir Elektroporasyon Cihaz Prototopinin Geliştirilmesi ve Test Edilmesi, 2023 - Continues
ALÇI M., SAÇU İ. E., Project Supported by Higher Education Institutions, Fraksiyonel Dereceden Elektronik Devreler ve Uygulamaları, 2018 - 2019

Metrics

Publication: 24
Citation (WoS): 28
Citation (Scopus): 44
H-Index (WoS): 3
H-Index (Scopus): 4

Congress and Symposium Activities

ELEKTRİK - ELEKTRONİK ve BİLGİSAYAR MÜHENDİSLİĞİ SEMPOZYUMU (ELECO), Attendee, Bursa, Turkey, 2012
TIP TEKNOLOJİLERİ ULUSAL KONGRESİ (TIPTEKNO), Attendee, Antalya, Turkey, 2011

Non Academic Experience

Other Public Institution, Teiaş 11. Bölge Müdürlüğü
Türkiye Elektrik İletim A. Ş.