Asst. Prof. REYHAN ZENGİN

Personal Information

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International Researcher IDs
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Education Information

Post Doctorate, Middle East Technical University, Faculty Of Engineering, Elektrik-Elektronik Mühendisliği, Turkey 2013 - 2014
Doctorate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Elektrik-Elektronik Mühendisliği, Turkey 2004 - 2012
Undergraduate, Inonu University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, Turkey 1997 - 2001

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, ELECTRICAL IMPEDANCE TOMOGRAPHY USING LORENTZ FIELDS, Middle East Technical University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, 2012

Research Areas

Biomedical Engineering, Biomedical Image Processing, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Inonu University, Mühendislik Fakültesi, Biyomedikal Mühendisliği, 2018 - Continues
Assistant Professor, Inonu University, Mühendislik Fakültesi, Biyomedikal Mühendisliği, 2017 - 2018
Research Assistant PhD, Selcuk University, Faculty Of Engıneerıng, Elektrik-Elektronik Mühendisliği, 2013 - 2017
Research Assistant, Middle East Technical University, Faculty Of Engineering, Elektrik-Elektronik Mühendisliği, 2003 - 2013

Courses

Advanced Medical Imaging, Postgraduate, 2021 - 2022
Bioelectricity and Biomagnetism, Postgraduate, 2022 - 2023
Medikal Elektronik, Undergraduate, 2019 - 2020
Elektronik, Undergraduate, 2018 - 2019
Elektronik Laboratuvarı, Undergraduate, 2018 - 2019
Tıbbi Görüntüleme Sistemleri, Undergraduate, 2019 - 2020
Devre Laboratuvarı, Undergraduate, 2018 - 2019
Devre Teorisi, Undergraduate, 2018 - 2019

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Development electrically conductive PAAm/Alg/CNC/rGO/PANI hydrogel composites and investigation their bioelectronic properties**
Oruç S., Boztepe C., Zengin R.
MATERIALS TODAY COMMUNICATIONS, vol.36, pp.106540-106552, 2023 (SCI-Expanded)
II. **Data acquisition system for MAET with magnetic field measurements**
Kaboutari K., Tetik A. O., Ghalichi E., Gozu M. S., Zengin R., GENÇER N. G.
PHYSICS IN MEDICINE AND BIOLOGY, vol.64, no.11, 2019 (SCI-Expanded)
III. **Numerical implementation of magneto-acousto-electrical tomography (MAET) using a linear phased array transducer**
Gozu M. S., Zengin R., GENÇER N. G.
PHYSICS IN MEDICINE AND BIOLOGY, vol.63, no.3, 2018 (SCI-Expanded)
IV. **Lorentz force electrical impedance tomography using magnetic field measurements**
Zengin R., GENÇER N. G.
PHYSICS IN MEDICINE AND BIOLOGY, vol.61, no.16, pp.5887-5905, 2016 (SCI-Expanded)

Articles Published in Other Journals

I. **Epileptic Activity Detection using Mean Value, RMS, Sample Entropy, and Permutation Entropy Methods**
Canyurt C., Zengin R.
The Journal of Cognitive Systems, vol.8, no.1, pp.16-27, 2023 (Peer-Reviewed Journal)
II. **Epileptic seizure detection combining power spectral density and high-frequency oscillations**
Tutuk R., Zengin R.
vol.11, no.2, pp.117-127, 2023 (Peer-Reviewed Journal)
III. **Glove Design Assistant With Hearing and Speech Difficulties**
Orhanbulucu F., Zengin R., Kurt F., Karadeniz K., Ergüleç M. E.
Avrupa Bilim ve Teknoloji Dergisi, pp.228-231, 2020 (Peer-Reviewed Journal)

Books & Book Chapters

I. **NON-SURGICAL WOUND HEALING METHODS**
Çalış A., ZENGİN R.
in: International Research in Health Sciences-December 2022, , Editor, Serüven Yayınevi, İzmir, pp.355-371, 2023

Refereed Congress / Symposium Publications in Proceedings

I. **Güç spektral yoğunluğu yöntemi baz alınarak EEG de jeneralize epileptik anormalliklerin tespit**

edilmesine yönelik yazılım aracılı otomatik okuma modeli algoritmasının geliştirilmesi
ADIGÜZEL A., BASA N., ZENGİN R., CANYURT C., Tutuk R.
39. ULUSAL KLİNİK NÖROFİZYOLOJİ EEG-EMG KONGRESİ, Antalya, Turkey, 18 - 22 October 2023

II. **Numerical Analysis of Spinal Cord Stimulation with an Eight-Shape Electrode Model**
Aydın E. F., Zengin R.
2022 Medical Technologies Congress, TIPTEKNO'22, Antalya, Turkey, 31 October - 02 November 2022, vol.1, no.94, pp.345-348

III. **Heat Analysis in Magneto-Acousto Electrical Impedance Tomograhy**
Ghalichi E., ZENGİN R., GENÇER N. G.
18TH INTERNATIONAL CONFERENCE ON BIOMEDICAL APPLICATIONS OFELECTRICALIMPEDANCE TOMOGRAPHY, 21 - 24 June 2017

IV. **An Experimental Study for Magneto-Acousto Electrical Impedance Tomography using Magnetic Field Measurement**
Kaboutori K., Tetik A. Ö., Ghalichi E., Gözü M. S., ZENGİN R., GENÇER N. G.
18TH INTERNATIONAL CONFERENCE ON BIOMEDICAL APPLICATIONS OFELECTRICALIMPEDANCE TOMOGRAPHY, 21 - 24 June 2017

V. **A Numerical Analysis of Magneto-Acousto Electrical Tomography with a Simplified Breast Model**
ZENGİN R., GENÇER N. G.
The 13th IASTED International Conference onBiomedical Engineering, 20 - 21 February 2017

VI. **Numerical Analysis of Spinal Cord Stimulation with Triple Leads with Guarded Cathode**
Durlu C., Zengin R., GENÇER N. G., Kucukdeveci F.
19th National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 5 - 06 November 2015

VII. **Numerical Analysis of Spinal Cord Stimulation with a 2-Electrode Percutaneous Lead**
Zengin R., GENÇER N. G., Kucukdeveci F.
18th National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 16 - 17 October 2014

VIII. **Numerical Studies for Hall Effect Imaging Using Linear Phased Array Transducer**
Gozu M. S., Zengin R., GENÇER N. G.
18th National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 16 - 17 October 2014

IX. **Sensitivity matrix analysis for contactless electrical conductivity imaging Dokunmasiz yolla elektriksel iletkenlik görüntülemesi için duyarlilik matrisi analizi**
Zengin R., GENÇER N. G.
2010 15th National Biomedical Engineering Meeting, BIYOMUT2010, Antalya, Turkey, 21 - 24 April 2010

X. **Forward Problem Solution for Contactless Electrical Conductivity Imaging with Realistic Head Model**
Zengin R., GENÇER N. G.
14th National Biomedical Engineering Meeting, İzmir, Turkey, 20 - 22 May 2009, pp.183-184

Supported Projects

Zengin R., Tekin S., Tekin Ç., TUBITAK Project, Wound Healing Method with Lorentz Fields, 2022 - 2024
Gençer N. G., Zengin R., TUBITAK Project, MR Ortamında Çoklu Frekanslı Lorentz Alanları ve Manyetik Alan Ölçümleri ile Elektriksel Empedans Görüntülenmesi, 2019 - 2023
ZENGİN R., ORHAN BULUCU F., Project Supported by Higher Education Institutions, İşitme ve Görme Engelliler için Eldiven Tasarımı, 2020 - 2022
KIZILASLAN O., ZENGİN R., KIRAT G., ŞİMŞEK M., ÖZGÜVEN Ö., DOĞAN B., BİLGİLİ H., AKSAN M. A., ERDOĞAN A., Project Supported by Higher Education Institutions, RF PÜSKÜRTME TEKNİĞİ İLE HİDROKSİAPATİT VE FLORAPATİT KAPLANMIŞ ORTODONTİK ŞEKİL HAFIZALI NİTİ TELLERİN HAZIRLANMASI, 2018 - 2021
Gençer N. G., Zengin R., TUBITAK Project, Lorentz Alanları Ve Manyetik Alan Ölçümleri Ile Elektriksel Empedans Görüntülemesi, 2014 - 2018

Patent

Gençer N. G., Zengin R., MULTIFREQUENCY ELECTRICAL IMPEDANCE IMAGING USING LORENTZ FIELDS, Patent, CHAPTER A Human Needs, The Invention Registration Number: 3021757 , Standard Registration, 2020

Metrics

Publication: 18
Citation (WoS): 33
Citation (Scopus): 17
H-Index (WoS): 3
H-Index (Scopus): 2