Res. Asst. FIRAT ORHAN BULUCU

Personal Information

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International Researcher IDs ScholarID: zBTwQPUAAAAJ ORCID: 0000-0003-4558-9667 Publons / Web Of Science ResearcherID: HJH-7831-2023 ScopusID: 57283560800 Yoksis Researcher ID: 302742

Education Information

Doctorate, Erciyes University, Fen Bilimleri Enstitüsü, Turkey 2021 - Continues Postgraduate, Erciyes University, Fen Bilimleri Enstitüsü, Turkey 2017 - 2020 Undergraduate, Erciyes University, Mühendislik Fakültesi, Elektrik- Elektronik Mühendisliği , Turkey 2018 - 2019 Undergraduate, Erciyes University, Mühendislik Fakültesi, Biyomedikal Mühendisliği , Turkey 2013 - 2017

Dissertations

Postgraduate, Amyotrofik Lateral Skleroz (ALS) hastalığının tespiti için görsel uyaranlar ile elde edilen olay ilişkili potansiyel sinyallerinin incelenmesi, Erciyes University, Fen Bilimleri Enstitüsü, -, 2020

Research Areas

Biomedical Engineering, Engineering and Technology

Academic Titles / Tasks

Research Assistant, Inonu University, Mühendislik Fakültesi, Biyomedikal Mühendisliği, 2019 - Continues

Academic and Administrative Experience

Internship Committee Member, Inonu University, Mühendislik Fakültesi, Biyomedikal Mühendisliği, 2019 - Continues Member of Department Promotion and Alumni Relations Commission, Inonu University, Mühendislik Fakültesi, Biyomedikal Mühendisliği, 2019 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

I. High-performance classification of STEMI and NSTEMI by automatic feature selection from ECG

signals: a triple approach

Latifoğlu F., İçer S., Güven A., Zhusupova A., Avşaroğulları Ö. L., Keleşoğlu Ş., Kalay N., Orhan Bulucu F., İnce M., Ertürk A., et al.

SIGNAL, IMAGE AND VIDEO PROCESSING, vol.19, no.4, pp.1-13, 2025 (SCI-Expanded)

II. A novel approach for Parkinson's disease detection using Vold-Kalman order filtering and machine learning algorithms

Latifoğlu F., Penekli S., Orhan Bulucu F., Chowdhury M. E. H.

NEURAL COMPUTING AND APPLICATIONS, vol.36, no.16, pp.9297-9311, 2024 (SCI-Expanded)

- III. A New Hybrid Approach Based on Time Frequency Images and Deep Learning Methods for Diagnosis of Migraine Disease and Investigation of Stimulus Effect
 Orhan Bulucu F., Latifoğlu F., Baydemir R.
 DIAGNOSTICS, vol.13, no.11, pp.1887-1901, 2023 (SCI-Expanded)
- IV. Early diagnosis of pancreatic cancer by machine learning methods using urine biomarker combinations

Acer İ., Orhanbulucu F., Içer S., Latifoğlu F.

Turkish Journal of Electrical Engineering and Computer Sciences, vol.31, no.1, pp.112-125, 2023 (SCI-Expanded)

- V. Detection of amyotrophic lateral sclerosis disease from event-related potentials using variational mode decomposition method
 - Orhanbulucu F., LATİFOĞLU F.

COMPUTER METHODS IN BIOMECHANICS AND BIOMEDICAL ENGINEERING, vol.25, no.8, pp.840-851, 2022 (SCI-Expanded)

VI. Detection of amyotrophic lateral sclerosis disease by variational mode decomposition and convolution neural network methods from event-related potential signals LATİFOĞLU F., Orhanbulucu F., Ileri R.

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.29, pp.2840-2854, 2021 (SCI-Expanded)

Articles Published in Other Journals

- I. Analysis of Coronary Heart Diseases by Kinetic Features: Applying Variational Mode Decomposition to ECG Signals and Classification Using Machine Learning Algorithms Orhan Bulucu F., Latifoğlu F., Güven A., Içer S., Zhusupova A. International Journal of Multidisciplinary Studies and Innovative Technologies, vol.8, no.2, pp.133-137, 2024 (Peer-**Reviewed Journal**) II. 12-Lead ECG Signal Analysis for Myocardial Infarction Diagnosis: Empirical Mode Decomposition and Machine Learning Application Latifoğlu F., İçer S., Güven A., Orhan Bulucu F., Zhusupova A. JOURNAL OF ELECTRICAL SYSTEMS, vol.20, no.11, pp.2361-2367, 2024 (ESCI) III. Development of a Machine Learning Based Clinical Decision Support System for Classification of **Migraine Types: A Preliminary Study** Orhan Bulucu F., Latifoğlu F. International Journal of Advanced Natural Sciences and Engineering Researches, vol.8, no.2, pp.323-332, 2024 (Peer-Reviewed Journal) IV. Classification Mental Workload Levels from EEG Signals with 1D Convolutional Neural Network Baydemir R., Latifoğlu F., Orhan Bulucu F. The European Journal of Research and Development, vol.2, no.4, pp.13-23, 2022 (Peer-Reviewed Journal)
- V. Analysis and Classification of Schizophrenia Using Event Related Potential Signals Aksöz A., Akyüz D., Bayır F., Yıldız N. C., Orhan Bulucu F., Latifoğlu F.
 Anatolian Science - Bilgisayar Bilimleri Dergisi, 2022 (Peer-Reviewed Journal)
- VI. Investigation of Covid-19 Infection with Clinical Data Using Decision Trees

ORHAN BULUCU F., LATİFOĞLU F.

Avrupa Bilim ve Teknoloji Dergisi, 2022 (Peer-Reviewed Journal)

- VII. Predicting Liver Disease Using Decision Tree Ensemble Methods
 ORHAN BULUCU F., ACER İ., LATİFOĞLU F., İÇER S.
 Erciyes Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.38, no.2, pp.261-267, 2022 (Peer-Reviewed Journal)
- VIII. Electrocardiography Device with PIC18F4550 Microcontroller Using Different Communication Protocols
 Çam F., Orhanbulucu F., Gökçe S., Böyük M., Akyürek H., Saraçoğlu Ö. G.

Anatolian Science - Journal of Computer Sciences, vol.6, no.3, pp.145-151, 2021 (Peer-Reviewed Journal)

- IX. 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)
- X. Analysis of Attention to Potential Signals of ALS Patients by Using the K-Means Clustering Method Orhanbulucu F., Latifoğlu F., Baş A.
 Avrupa Bilim ve Teknoloji Dergisi, pp.239-244, 2020 (Peer-Reviewed Journal)

Papers Published in Refereed Scientific Meetings

I. Effect of Demographic Characteristics on Tension Type Headache and Migraine: A Machine Learning Based Analysis

LATİFOĞLU F., ORHAN BULUCU F.

2024 Innovations in Intelligent Systems and Applications Conference (ASYU), Ankara, Turkey, 16 - 18 October 2024

 II. Automatic Diagnosis of Atrial Fibrillation Based on Tunable Q-Factor Wavelet Transform and Artificial Neural Networks: Analysis of 12-Lead ECG Signals
 Doğan E., Sari M. E., Polat R., Kocatepe Y., Orhanbulucu F., Latifoğlu F.
 2024 Innovations in Intelligent Systems and Applications Conference (ASYU), Ankara, Turkey, 16 - 18 October
 2024, pp.1-6

III. EVALUATION OF P300 WAVE BY VARIATION COEFFICIENT IN ALS PATIENTS
 Orhanbulucu F., Latifoğlu F.
 MAS 11th INTERNATIONAL EUROPEAN CONFERENCE ON MATHEMATICS, ENGINEERING, NATURAL & MEDICAL
 SCIENCES, Tokat, Turkey, 13 - 15 March 2020, pp.108-109

IV. Determination Of Attention Status In ALS Patients With Evoked Potentials Latifoğlu F., Orhanbulucu F. MAS 11th INTERNATIONAL EUROPEAN CONFERENCE ON MATHEMATICS, ENGINEERING, NATURAL & MEDICAL SCIENCES, Tokat, Turkey, 13 - 15 March 2020, pp.148-154

Supported Projects

ZENGİN R., ORHAN BULUCU F., Project Supported by Higher Education Institutions, İşitme ve Görme Engelliler için Eldiven Tasarımı, 2020 - 2022

Peer Reviews in Scientific Publications

BMC MEDICAL INFORMATICS AND DECISION MAKING, SCI Journal, November 2024 Discover Applied Sciences, Journal Indexed in ESCI, September 2024 SCIENTIFIC REPORTS, SCI Journal, September 2024 Discover Computing, SCI Journal, August 2024 Digital Health, SCI Journal, May 2024 SAKARYA UNIVERSITY JOURNAL OF SCIENCE, National Scientific Refreed Journal, December 2023 Digital Health, SCI Journal, December 2023

Metrics

Publication: 20

Congress and Symposium Activities

2024 Innovations in Intelligent Systems and Applications Conference (ASYU), Attendee, Ankara, Turkey, 2024 4th International Symposium on Multidisciplinary Studies and Innovative Technologies, Audience, Ankara, Turkey, 2020 11th MAS INTERNATIONAL EUROPEAN CONFERENCE ON MATHEMATICS, ENGINEERING, NATURAL&MEDICAL SCIENCES, Attendee, Tokat, Turkey, 2020

International Conference On Access To Recent Advances In Engineering And Digitalization, Attendee, Kayseri, Turkey, 2020

Non Academic Experience

Public Hospital, Ankara Gülhane Eğitim ve Araştırma Hastanesi, Biyomedikal ve Klinik Mühendisliği, Mesleki Subay (Biyomedikal Mühendisi)