

## Assoc. Prof. UĞURHAN KUTBAY

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: AAP-8534-2020

ScopusID: 55257135600

Yoksis Researcher ID: 52833

### Biography

Ugurhan Kutbay received his B.Sc., M.Sc. and Ph.D. degrees in electrical and electronics engineering from the Gazi University, Ankara, Turkey, in 2009, 2011 and 2015, respectively. He worked at Electrical and Electronics Engineering Dept. Gazi University as the research assistant between 2010-2021. He has working as Assoc Prof in Electrical and Electronics Engineering department since 2021.

His current research interests include biomedical decision support systems, image and video processing, and artificial intelligence. He has many current and completed projects and papers on these topics.

He also provides consultancy to HUAWEI R&D Department (Turkey Division) and some firms working on aeronauticals, defence and sports tech firms.

### Education Information

Doctorate, Gazi University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği (Dr), Turkey 2012 - 2015

Postgraduate, Gazi University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği (YI) (Tezli), Turkey 2010 - 2012

Undergraduate, Gazi University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, Turkey 2004 - 2009

### Dissertations

Doctorate, Kuanterniyon vektörü kullanılarak elektriksel yer altı haritasının modellenmesi ve analizi, Gazi University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği (Dr), 2015

Postgraduate, Sayısal görüntü segmentasyonunda bulanık C-Mean kümelendirme ile level set yaklaşımı, Gazi University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği (YI) (Tezli), 2011

### Research Areas

Electrical and Electronics Engineering, Engineering and Technology

## Academic Titles / Tasks

Associate Professor, Gazi University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği, 2021 - Continues  
Research Assistant, Gazi University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği, 2010 - 2021

## Courses

Internet of Things, Undergraduate, 2021 - 2022  
Computer Programming, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018  
Elektrik Mühendisliği Prensipleri, Undergraduate, 2017 - 2018  
Logic Circuit Design, Undergraduate, 2017 - 2018

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

- I. **Enhancing Fault Detection and Classification in MMC-HVDC Systems: Integrating Harris Hawks Optimization Algorithm with Machine Learning Methods**  
Hazim Hameed Hameed O., KUTBAY U., Rahebi J., HARDALAÇ F., Mahariq I.  
International Transactions on Electrical Energy Systems, vol.2024, 2024 (SCI-Expanded)
- II. **P183/344 Real-time quantitative radial force measurements of WEB devices**  
Algin O., Kutbay U.  
JOURNAL OF NEUROINTERVENTIONAL SURGERY, vol.15, no.Suppl 2, pp.1, 2023 (SCI-Expanded)
- III. **Hybrid Gray Wolf Optimization–Proportional Integral Based Speed Controllers for Brush-Less DC Motor**  
Younus S. M. Y., Kutbay U., Rahebi J., Hardalaç F.  
Energies, vol.16, no.4, pp.1-18, 2023 (SCI-Expanded)
- IV. **Quantitative radial force measurements of Woven EndoBridge devices**  
KUTBAY U., ALGIN O.  
Interventional Neuroradiology, 2023 (SCI-Expanded)
- V. **A Novel Real-Time Clip Force Measurement Device Design for Cerebral Aneurysm Surgeries**  
Kutbay U., Hardalac F., Ozisik P. A., Unay E., Yildirim C.  
IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, vol.7, pp.1-8, 2022 (SCI-Expanded)
- VI. **Fracture Detection in Wrist X-ray Images Using Deep Learning-Based Object Detection Models**  
HARDALAÇ F., UYSAL F., Peker O., ÇİÇEKLİDAĞ M., TOLUNAY T., TOKGÖZ N., KUTBAY U., Demirciler B., Mert F.  
SENSORS, vol.22, no.3, 2022 (SCI-Expanded)
- VII. **Classification of neonatal jaundice in mobile application with noninvasive image processing methods**  
Hardalaç F., Aydın M., Kutbay U., Ayturan K., Akyel A., Caglar A., Hai B., Mert F.  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.29, no.4, pp.2116-2126, 2021 (SCI-Expanded)
- VIII. **Microcontroller-Based Clip Force Reading System for Brain Aneurysms**  
KUTBAY U.  
JOURNAL OF MEDICAL AND BIOLOGICAL ENGINEERING, vol.40, no.5, pp.748-756, 2020 (SCI-Expanded)
- IX. **Automated hemangioma detection using Otsu based binarized Kaze features**  
Kutbay U.  
MULTIMEDIA TOOLS AND APPLICATIONS, vol.79, pp.24781-24793, 2020 (SCI-Expanded)
- X. **A novel comparative study using multi-resolution transforms and convolutional neural network (CNN) for contactless palm print verification and identification**  
Hardalaç F., Yasar H., Akyel A., Kutbay U.  
MULTIMEDIA TOOLS AND APPLICATIONS, vol.79, pp.22929-22963, 2020 (SCI-Expanded)
- XI. **A novel method for robust object tracking with K-means clustering using histogram back-projection**

## **technique**

Hardalaç F., Kutbay U., Sahin I., Akyel A.

MULTIMEDIA TOOLS AND APPLICATIONS, vol.77, no.18, pp.24059-24072, 2018 (SCI-Expanded)

**XII. Development of a multiprobe electrical resistivity tomography prototype system and robust underground clustering**

Kutbay U., Hardalaç F.

EXPERT SYSTEMS, vol.34, no.3, 2017 (SCI-Expanded)

**XIII. A Computer-Aided Diagnosis System for Measuring Carotid Artery Intima-Media Thickness (IMT) Using Quaternion Vectors**

Kutbay U., Hardalaç F., Akbulut M., Akaslan U., Serhathoglu S.

JOURNAL OF MEDICAL SYSTEMS, vol.40, no.6, 2016 (SCI-Expanded)

**XIV. The rate of mucosal healing by azathioprine therapy and prediction by artificial systems**

Hardalaç F., Başaranoğlu M., Yuksel M., Kutbay U., Kaplan M., Ozin Y. O., Kilic Z. M. Y., Demirbag A. E., Coskun O., Aksoy A., et al.

TURKISH JOURNAL OF GASTROENTEROLOGY, vol.26, no.4, pp.315-321, 2015 (SCI-Expanded)

**XV. Analyses of a Cirrhotic Patient's Evolution Using Self Organizing Mapping and Child-Pugh Scoring**

Serhathoğlu S., Hardalaç F., Kutbay U., Kocaoz O.

JOURNAL OF MEDICAL SYSTEMS, vol.39, no.2, 2015 (SCI-Expanded)

**XVI. CLASSIFICATION OF DRUG DRUG INTERACTIONS USING JORDAN ELMAN NETWORKS**

Hardalaç F., Kutbay U.

JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.29, no.1, pp.149-154, 2014 (SCI-Expanded)

**XVII. CT liver tissue segmentation using distance regularized level set evolution based on spatial fuzzy clustering**

KUTBAY U., HARDALAÇ F.

ENERGY EDUCATION SCIENCE AND TECHNOLOGY PART A-ENERGY SCIENCE AND RESEARCH, vol.29, no.2, pp.715-720, 2012 (SCI-Expanded)

## **Articles Published in Other Journals**

**I. Hastane Yoğun Bakım Skorlaması İçin Otomasyon Arayüzünün Geliştirilmesi**

KUTBAY U.

Fırat Üniversitesi Mühendislik Bilimleri Dergisi, vol.30, no.1, pp.269-275, 2018 (Peer-Reviewed Journal)

**II. Cognitive Process Analysis with Turkish Modal Musics**

HARDALAÇ N., URAL A. B., KUTBAY U., ÖZÇELİK S.

Journal of Education and Sociology, vol.6, no.1, pp.149-171, 2015 (Peer-Reviewed Journal)

## **Books & Book Chapters**

**I. Partitional Clustering**

Kutbay U.

in: Recent Applications in Data Clustering, PİRİM Harun, Editor, IntechOpen, Londrina, pp.19-34, 2018

**II. Non Invasive Applications to Detect Gastric Cancer and Brain Tumor**

URAL A. B., HARDALAÇ F., İLHAN M. N., SERHATLIOĞLU S., KUTBAY U., KOÇ M.

Lambert Academic Publishing, Saarbrücken, 2015

## **Refereed Congress / Symposium Publications in Proceedings**

- I. **Automated Cerebral Vessel Segmentation Using Deep Learning for Early Detection of Cerebrovascular Diseases**  
Kutan F., KUTBAY U., ALGIN O.  
5th International Congress on Human-Computer Interaction, Optimization and Robotic Applications, HORA 2023, İstanbul, Turkey, 8 - 10 June 2023
- II. **2-Stage Optical Packaging Quality Control System Design For Dental Implants**  
KUTBAY U.  
ISPEC8th INTERNATIONAL CONFERENCE ON ENGINEERING NATURAL SCIENCES, 12 June - 14 March 2020
- III. **Real Time Surface Angle Measurement of Dental Implants**  
KUTBAY U.  
Araconf 2020-International Conference on Access to Recent Advances in Engineering and Digitalization, Kayseri, Turkey, 5 - 07 March 2020
- IV. **A Novel Approach for Estimation of Coronary Artery Calcium Score Class Using ANN and Body Mass Index, Age and Gender Data**  
Yasar H., Serhathoğlu S., Kutbay U., Hardalaç F.  
4th International Conference on Computer and Technology Applications (ICCTA), İstanbul, Turkey, 3 - 05 May 2018, pp.184-187
- V. **A New Combined System Using ANN and Complex Wavelet Transform for Tissue Density Classification in Mammography Images**  
Yasar H., Kutbay U., Hardalaç F.  
4th International Conference on Computer and Technology Applications (ICCTA), İstanbul, Turkey, 3 - 05 May 2018, pp.179-183
- VI. **Patient Diagnosis With ECG Signals Estimation Using Artificial Neural Network**  
HARDALAÇ F., KUTBAY U., Salimitorkamani M.  
International Conference on "Engineering & Technology, Computer, Basic & Applied Science"(ECBA-2016), 5 - 06 January 2016, vol.42, pp.13
- VII. **K MEANS Algoritması Kullanılarak Yeraltı Profilinin Kümelendirilmesi**  
Kutbay U., Ural A. B., Hardalaç F.  
IEEE SİU-2015: Sinyal İşleme ve İletişim Uygulamaları Kurultayı, Malatya, Turkey, 16 - 19 May 2015, vol.1, pp.467-470
- VIII. **Performance Evaluation of Pansharpening Methods on GPU for RASAT Images**  
Acikgoz I. S., Teke M., Kutbay U., Hardalaç F.  
7th International Conference on Recent Advances in Space Technologies (RAST), İstanbul, Turkey, 16 - 19 June 2015, pp.283-288
- IX. **Application of Wireless Motion Tracking**  
HARDALAÇ F., KUTBAY U.  
International Conference on Education in Mechatronics, 23 September 2013, pp.49-52

## Supported Projects

AKARÇEŞME C., KOCAMAN H., KUTBAY U., ALVURDU S., BAĞCI E., Project Supported by Higher Education Institutions, Yerli Sportif Ölçüm ve İzleme Cihazlarının Geliştirilmesi, 2020 - 2023

Şenel Ö., Kutbay U., Baykal C., Kocaman H., Alvurdu S., Bağcı E., Akarçeşme C., Project Supported by Higher Education Institutions, Yerli Sportif Ölçüm ve İzleme Cihazlarının Geliştirilmesi, 2020 - 2022

Hardalaç F., KUTBAY U., TUBITAK Project, YENİ DOĞAN BEBEKLERDE YENİDOĞAN SARILIĞININ AKILLI TELEFON İLE TESPİTİ, 2018 - 2020

KUTBAY U., HARDALAÇ F., Project Supported by Other Private Institutions, HUAWEİ'İM NASIL OLMALI, 2017 - 2018

KUTBAY U., Project Supported by Other Private Institutions, AKILLI TELEFONLARDA MOBİL SAĞLIK UYGULAMALARI HEALTH CARE, 2016 - 2016

Hardalaç F., Kutbay U., Project Supported by Other Official Institutions, Yoğun Bakım Skorlamalı Karar Destek Sistemi,

2015 - 2016

Industrial Thesis Project, Metalik Hedeflerin Ayırımı için Elektromanyetik İndüksiyon Sistemi ve Yazılımı, 2012 - 2014

Industrial Thesis Project, İlaç Etkileşimleri, 2011 - 2012

## **Scientific Consultations**

Huawei, Other, Gazi University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği, Turkey, 2016 - Continues

## **Metrics**

Publication: 31

Citation (WoS): 69

Citation (Scopus): 81

H-Index (WoS): 5

H-Index (Scopus): 5

## **Non Academic Experience**

Asfel Elek.

Demre Otomasyon