

Prof. GÜLAY TOHUMOĞLU

Personal Information

Email: gulay.tohumoglu@deu.edu.tr

Web: <https://avesis.deu.edu.tr/gulay.tohumoglu>

International Researcher IDs

ScholarID: oty2I2sAAAJ

ORCID: 0000-0003-2292-2148

Publons / Web Of Science ResearcherID: O-9718-2019

ScopusID: 6602312581

Yoksis Researcher ID: 8187

Education Information

Doctorate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Gaziantep Elektrik-Elektronik Mühendisliği (Dr), Turkey 1986 - 1993

Postgraduate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Gaziantep Elektrik-Elektronik Mühendisliği (YI) (Tezli), Turkey 1983 - 1986

Undergraduate, Middle East Technical University, Gaziantep Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Pr., Turkey 1978 - 1983

Foreign Languages

Spanish, A1 Beginner

Certificates, Courses and Trainings

Personal Evolution, Deprem 3-Deprem 4, Uzaktan Eğitim Kapısı, 2023

Personal Evolution, Deprem 1-Deprem 2, Uzaktan Eğitim Kapısı, 2023

Human Rights, Çalışma Ahlakı, Uzaktan Eğitim Kapısı, 2023

Environment and Sustainability, Deniz Okuryazarlığı Programı, Dokuz Eylül Üniversitesi Sürekli Eğitim Merkezi, 2023

Dissertations

Doctorate, Computation of steady-state responses of periodically excited nonlinear systems by extended spectral analysis method, Middle East Technical University, Fen Bilimleri Enstitüsü, Gaziantep Elektrik-Elektronik Mühendisliği (Dr), 1993

Postgraduate, Spectral analysis technique for periodically time varying linear systems, Middle East Technical University, Fen Bilimleri Enstitüsü, Gaziantep Elektrik-Elektronik Mühendisliği (YI) (Tezli), 1986

Research Areas

Biosignal Processing, Electrical and Electronics Engineering, Circuit Theory, Electronic Circuits, Passive Circuit

Components, Cables, Switches and Connectors

Academic Titles / Tasks

Professor, Dokuz Eylul University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği Bölümü, 2010 - Continues
Professor, Gaziantep University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering (English),
2007 - 2010

Associate Professor, Gaziantep University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering
(English), 2000 - 2007

Assistant Professor, Gaziantep University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering
(English), 1993 - 2000

Lecturer, Gaziantep University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering (English),
1987 - 1993

Research Assistant, Middle East Technical University, Faculty Of Engineering, Elektrik-Elektronik Mühendisliği Bölümü,
1983 - 1987

Academic and Administrative Experience

Head of Department, Dokuz Eylul University, Fen Bilimleri Enstitüsü, 2020 - 2023

Head of Department, Dokuz Eylul University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği Bölümü, 2011 -
2014

Head of Department, Dokuz Eylul University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği Bölümü, 2010 -
2013

Fakülte Kurulu Üyesi, Dokuz Eylul University, Mühendislik Fakültesi, Elektrik - Elektronik Mühendisliği Bölümü, 2010 -
2013

Erasmus Coordinator, Gaziantep University, Faculty Of Engineering, Department Of Electrical And Electronics
Engineering (English), 2007 - 2010

Head of Department, Gaziantep University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering
(English), 2004 - 2009

Deputy Head of Department, Gaziantep University, Faculty Of Engineering, Department Of Electrical And Electronics
Engineering (English), 1993 - 1996

Courses

Laboratory II, Undergraduate, 2023 - 2024

Circuit Theory I, Undergraduate, 2022 - 2023

Circuit Theory II, Undergraduate, 2023 - 2024, 2022 - 2023

Signals and Systems for Biomedical Technologies, Postgraduate, 2022 - 2023

Research, Undergraduate, 2022 - 2023

Linear Systems Theory I, Postgraduate, 2022 - 2023

Circuit Theory II, Undergraduate, 2022 - 2023

Laboratory I, Undergraduate, 2022 - 2023

Laboratory II, Undergraduate, 2022 - 2023

Network Synthesis, Undergraduate, 2020 - 2021

EED 4894 Graduation Project, Undergraduate, 2019 - 2020

EED4793 Research Project, Undergraduate, 2019 - 2020

EEE5503 Linear System Theory I, Postgraduate, 2019 - 2020

EED 2402 Circuit Theory II, Undergraduate, 2019 - 2020, 2015 - 2016

FINAL YEAR PROJECT, Undergraduate, 2018 - 2019, 2015 - 2016
M.SC. THESIS, Postgraduate, 2018 - 2019, 2015 - 2016
PH D THESIS, Doctorate, 2018 - 2019, 2015 - 2016
M.SC. RESEARCH, Postgraduate, 2018 - 2019, 2015 - 2016
EED2301 CİRCUİT THEORY I, Undergraduate, 2018 - 2019
PH D RESEARCH, Doctorate, 2018 - 2019, 2015 - 2016
Biomedical Electronics, Postgraduate, 2015 - 2016

Advising Theses

Tohumoğlu G., Daubechies dalgacıkları kullanılarak EEG sinyallerinden epileptik nöbetlerin belirlenmesi, Postgraduate, Ş.YOL(Student), 2022
TOHUMOĞLU G., Katar uzunluğu, zincir kod ve EZW kodlamaları tabanlı tıbbi görüntü sıkıştırma yaklaşımları, Doctorate, E.ALDEMİR(Student), 2019
TOHUMOĞLU G., Engelliler için ses ve mimik kumandalı TV kontrol sistemi tasarımı ve gerçekleştirilmesi, Postgraduate, H.ALTINKİLİT(Student), 2016
TOHUMOĞLU G., Design of analog circuits via soft computing methods, Doctorate, H.KARCI(Student), 2015
TOHUMOĞLU G., Novel clustering methods for neurofuzzy systems design, Doctorate, Y.TORUN(Student), 2010
TOHUMOĞLU G., Wavelet based tumor detection and its application on mammograms, Postgraduate, B.TÜYSÜZ(Student), 2007
TOHUMOĞLU G., Identification of asynchronous machines, Postgraduate, İ.ARIKAN(Student), 2006
TOHUMOĞLU G., Sliding mode control and its applications, Postgraduate, Ş.AKINAL(Student), 2005
TOHUMOĞLU G., Analysis of linear time-varying systems in wavelet domain, Postgraduate, H.KARCI(Student), 2005
TOHUMOĞLU G., Modification of shapiro's embedded zerotree wavelet (EZW) algorithm to apply for ECG signal compression, Postgraduate, K.ERBİL(Student), 2002
TOHUMOĞLU G., Adaptation of the spectral analysis method to the periodically time-varying linear discrete systems, Postgraduate, S.ÖZALICI(Student), 1997

Jury Memberships

Associate Professor Exam, Associate Professor Exam, Dokuz Eylül University, October, 2023
Post Graduate, Post Graduate, Dokuz Eylül Üniversitesi, September, 2022

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Reversible 3D compression of segmented medical volumes: usability analysis for teleradiology and storage**
Aldemir E., GEZER N. S., TOHUMOĞLU G., Baris M. M., Kavur A. E., DİCLE O., SELVER M. A.
MEDICAL PHYSICS, vol.47, no.4, pp.1727-1737, 2020 (SCI-Expanded)
- II. **Binary medical image compression using the volumetric run-length approach**
Aldemir E., TOHUMOĞLU G., SELVER M. A.
IMAGING SCIENCE JOURNAL, vol.67, no.3, pp.123-135, 2019 (SCI-Expanded)
- III. **Speciation-based genetic algorithm in analog circuit design**
Karci H., TOHUMOĞLU G., NACAROĞLU A.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.24, no.3, pp.1022-1033, 2016 (SCI-Expanded)
- IV. **Designing simulated annealing and subtractive clustering based fuzzy classifier**
TORUN Y., Tohumoglu G.

APPLIED SOFT COMPUTING, vol.11, no.2, pp.2193-2201, 2011 (SCI-Expanded)

- V. **Linear time-varying systems analysis in wavelet domain**
Karci H., Tohumoglu G.
ELECTRICAL ENGINEERING, vol.89, no.8, pp.653-658, 2007 (SCI-Expanded)
- VI. **Formulation of ELF magnetic fields' effects on malondialdehyde level and myeloperoxidase activity in kidney using genetic programming**
Tohumoglu G., Canseven A. G., Cevik A., Seyhan N.
COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE, vol.86, no.1, pp.1-9, 2007 (SCI-Expanded)
- VII. **ECG signal compression by multi-iteration EZW coding for different wavelets and thresholds**
Tohumoglu G., Sezgin K. E.
COMPUTERS IN BIOLOGY AND MEDICINE, vol.37, no.2, pp.173-182, 2007 (SCI-Expanded)
- VIII. **Multi-iteration wavelet zero-tree coding for image compression**
Losada M., Tohumoglu G., Fraile D., Artes A.
SIGNAL PROCESSING, vol.80, no.7, pp.1281-1287, 2000 (SCI-Expanded)
- IX. **Effects of parasitic elements in operational transconductance amplifier AM modulator**
Nacaroglu A., Tohumoglu G.
JOURNAL OF THE FRANKLIN INSTITUTE-ENGINEERING AND APPLIED MATHEMATICS, vol.334B, no.4, pp.507-514, 1997 (SCI-Expanded)
- X. **Steady state analysis of periodically time-varying networks by new developments in the spectral domain**
Tohumoglu G., Koksall M.
INTERNATIONAL JOURNAL OF CIRCUIT THEORY AND APPLICATIONS, vol.24, no.4, pp.519-528, 1996 (SCI-Expanded)

Articles Published in Other Journals

- I. **The relationship between general motivation and situation-specific attitudes and beliefs related to learning English for academic purposes: It's impact on academic success**
UÇKUN B., TOHUMOĞLU G., Utar S.
Gaziantep Üniversitesi Sosyal Bilimler Dergisi, vol.10, no.1, pp.547-569, 2011 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **A Short Tutorial: From Neuroscience to Detection of Pseudo Epileptic Seizure**
TOHUMOĞLU G., YOL Ş.
TIPTEKNO'21 MEDICAL TECHNOLOGIES CONGRESS, Antalya, Turkey, 04 November 2021, pp.176-179
- II. **Detection Methods of Pseudo and Epileptic Seizures from EEG signals: A Short Review**
Yol S., TOHUMOĞLU G.
2020 Medical Technologies Congress (TIPTEKNO), ELECTR NETWORK, 19 - 20 November 2020
- III. **Denoising Baseline Signal of Electrocardiogram using Separable Wavelets Bases**
Aldemir E., TOHUMOĞLU G.
Medical Technologies Congress (TIPTEKNO), İzmir, Turkey, 3 - 05 October 2019, pp.505-508
- IV. **Performance Evaluation of Lossless Compression Algorithms for Medical Images**
Aldemir E., TOHUMOĞLU G., SELVER M. A.
27th Signal Processing and Communications Applications Conference (SIU), Sivas, Turkey, 24 - 26 April 2019
- V. **Lossless Compression of Segmented 3D Binary Data for Efficient Telemedicine Applications**
ALDEMİR E., TOHUMOĞLU G., DİCLE O., SELVER M. A.
RSNA, 25 - 30 November 2018
- VI. **Improvement of Entropy Coding Performance for Medical Images using 3D Predictors**

Aldemir E., TOHUMOĞLU G., DİCLE O., SELVER M. A.

26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018

VII. **Quasi Resonant Flyback Topology Based LCD TV Power Supply Board Design and Power Loss Analysis**

Sahin Y., TOHUMOĞLU G.

2nd European Conference on Electrical Engineering and Computer Science (EECS), Bern, Switzerland, 20 - 22 December 2018, pp.16-20

VIII. **Improvement of the Band Detection performance of DNA Gel Images Using A Nonlinear Preprocessing Operation**

ALDEMİR E., ŞEN E., YAĞCI T., TOHUMOĞLU G.

International Conference on Technology, Engineering and Science (ICONTESS), 26 - 29 October 2017

IX. **Comparison of Run Length Encoding Based Compression of Binary CT Images for Efficient Transmission of Segmented Data**

ALDEMİR E., TOHUMOĞLU G., DİCLE O., SELVER M. A.

X. ULUSLARARASI KATILIMLI TIP BİLİŞİMİ KONGRESİ, Antalya, Turkey, 12 - 15 October 2017

X. **THE TRADITIONAL HISTORY BEHIND THE FOODS AROUND GAZIANTEP TURKEY A CASE OF ÇEYİZ ALMA TAKING TROUSSEAU TRADITION AND TO SERVE PATLICAN DOĞRAMA CUT UP AUBERGINE**
TOHUMOĞLU G.

Uluslararası Gastronomi Turizmi Kongresi, İzmir, Turkey, 8 - 10 December 2016

XI. **Denoising of 3D Medical Imaging Using Sparse Decomposition**

ALDEMİR E., TOHUMOĞLU G.

8th International Conference on Image Processing, Wavelet and Applications, 22 - 24 September 2016

XII. **The possible role of bioinformatics for Ph.D. education in biochemistry.**

ÇAVAŞ L., ALYÜRÜK H., TOHUMOĞLU G.

6th ORPHEUS Conference, 6 - 07 May 2011

XIII. **A New Fuzzy Classifier Based on Simulated Annealing and Subtractive Clustering**

TORUN Y., Tohumoglu G.

IEEE 17th Signal Processing and Communications Applications Conference, Antalya, Turkey, 9 - 11 April 2009, pp.694-697

XIV. **Formulation of low intensity direct current effects on wound healing of skin using genetic programming**

Canseven A. G., Tohumoglu G., Cevik A., Seyhan N.

15th International Conference on Digital Signal Processing, Cardiff, United Kingdom, 1 - 04 July 2007, pp.507-508

Memberships / Tasks in Scientific Organizations

Elektrik Mühendisleri Odası, Member of Advisory Board, 1983 - Continues, Turkey

Scientific Refereeing

ELECO 2023, Conference Paper (Full Text), October 2023

Project Supported by Higher Education Institutions, BAP Research Project, Hacettepe University, Turkey, October 2023

Project Supported by Higher Education Institutions, BAP Research Project, Dokuz Eylul University, Turkey, March 2023

Research Project of the Presidency of Turkey Health Institutes (TÜSEB), Dokuz Eylul University, Turkey, January 2023

Research Project of the Presidency of Turkey Health Institutes (TÜSEB), Dokuz Eylul University, Turkey, November 2022

Research Project of the Presidency of Turkey Health Institutes (TÜSEB), Dokuz Eylul University, Turkey, November 2022

Project Supported by Higher Education Institutions, BAP Research Project, Karadeniz Technical University, Turkey, May 2022

Project Supported by Higher Education Institutions, BAP Research Project, Hacettepe University, Turkey, March 2022

Tasks In Event Organizations

Tohumođlu G., ELEKTRİK-ELEKTRONİK ve BİYOMEDİKAL MÜHENDİSLİĐİ KONFERANSI, Scientific Congress, Bursa, Turkey, Kasım 2022

Tohumođlu G., TIPTEKNO MEDICAL TEKNOLOGIES CONGRESS, Scientific Congress, Antalya, Turkey, Kasım 2022

Tohumođlu G., TIPTEKNO MEDICAL TEKNOLOGIES CONGRESS, Scientific Congress, Antalya, Turkey, Kasım 2021

Metrics

Publication: 26

Citation (WoS): 102

Citation (Scopus): 137

H-Index (WoS): 5

H-Index (Scopus): 6

Artistic Activity

TOHUMOĐLU G., 1. Kişisel Karma Resim Sergisi, March 2019