

Assoc. Prof. MURAT KÖSEOĞLU

Personal Information

Email: murat.koseoglu@inonu.edu.tr

Web: <https://cms.inonu.edu.tr/tr/cms/murat.koseoglu>

Address: İnönü Üniversitesi, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü

International Researcher IDs

ORCID: 0000-0003-3774-1083

Publons / Web Of Science ResearcherID: ABG-8975-2020

ScopusID: 9943587100

Yoksis Researcher ID: 41202

Education Information

Doctorate, Inonu University, Fen Bilimleri, Elektrik-Elektronik Mühendisliği, Turkey 2004 - 2010

Postgraduate, Inonu University, Fen Bilimleri, Elektrik-Elektronik Mühendisliği, Turkey 2000 - 2003

Undergraduate, Inonu University, Mühendislik Fakültesi, Elektrik-Elektronik, Turkey 1996 - 2000

Foreign Languages

English, C1 Advanced

German, A1 Beginner

Dissertations

Doctorate, Elektriksel boşalma ortamından poliiimid (PI) yüzeyine çöktürülmüş nano-boyutlu karbon örtünün dielektriğin elektro-fiziksel özelliklerine etkisi, Inonu University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, 2010

Postgraduate, Yüksek Gerilim Üreten Dizel Jeneratörlerden Oluşan Bir Sistemin Sinyalizasyon Analizi, Inonu University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, 2003

Research Areas

Electrical and Electronics Engineering, Electronic, Sensing Devices and Transducers, Electronic Circuits, MEMS, Dielectric Materials and Devices, Semiconducting Materials and Devices, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Inonu University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, 2018 - Continues

Assistant Professor, Inonu University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, 2011 - 2018

Research Assistant PhD, Inonu University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, 2010 - 2011

Research Assistant, Inonu University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, 2002 - 2010

Academic and Administrative Experience

Head of Department, Inonu University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, 2011 - 2020

Deputy Head of Department, Inonu University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği, 2011 - 2020

Courses

Plant Organization, Undergraduate, 2022-2023
Electronic Components, Undergraduate, 2022-2023
Elektrik Elektronik Tasarım II, Undergraduate, 2021 - 2022
Electronics Laboratory 1, Undergraduate, 2022-2023
Elektrik Elektronik Tasarım 1, Undergraduate, 2022-2023
Computer Programming and Algorithms, Undergraduate, 2021-2022
Electronic Components, Undergraduate, 2021-2022
Electronic Circuits, Undergraduate, 2021-2022
Elektrik Elektronik Tasarım 2, Undergraduate, 2021-2022
Elektrik-Elektronik Tasarım I, Undergraduate, 2021 - 2022
Elektrik Elektronik Tasarım 1, Undergraduate, 2021-2022
Plant Organization, Undergraduate, 2021-2022
Electronics Laboratory 1, Undergraduate, 2021-2022
Electrical Properties of Polymers, Doctorate, 2019 - 2020
Elektrik Elektronik Tasarım 2, Undergraduate, 2020-2021
Electronic Circuits, Undergraduate, 2020-2021
Computer Programming and Algorithms, Undergraduate, 2020-2021
Plant Organization, Undergraduate, 2020-2021
Elektrik Elektronik Tasarım 1, Undergraduate, 2020-2021
Electronics Laboratory 1, Undergraduate, 2020-2021
Electronic Components, Undergraduate, 2020-2021
Elektrik-Elektronik Tasarım II, Undergraduate, 2019-2020
Dielektrik Fiziği, Postgraduate, 2019 - 2020
Computer Programming and Algorithms, Undergraduate, 2019-2020
Plant Organization, Undergraduate, 2019-2020
Electronic Circuits, Undergraduate, 2019-2020
Gazlarda Elektrik Boşalmaları, Undergraduate Minor, 2019-2020
Electronic Components, Undergraduate, 2019-2020
Elektrik-Elektronik Tasarım I, Undergraduate, 2019-2020
Electronics Laboratory I, Undergraduate, 2019-2020
Computer Programming and Algorithms, Undergraduate, 2018-2019
Electronic Circuits, Undergraduate, 2018-2019
Plant Organization, Undergraduate, 2018-2019
Elektrik-Elektronik Tasarım II, Undergraduate, 2018-2019
Elektrik-Elektronik Tasarım I, Undergraduate, 2018-2019
Electronic Components, Undergraduate, 2018-2019
Electronics Laboratory I, Undergraduate, 2018-2019
Polimerlerin Elektriksel Özellikleri, Undergraduate Minor, 2018-2019
Electronic Components, Undergraduate, 2017-2018
Elektrik-Elektronik Tasarım II, Undergraduate, 2017-2018
Bitirme Çalışması II, Undergraduate, 2017-2018
Plant Organization, Undergraduate, 2017-2018
Computer Programming and Algorithms, Undergraduate, 2017-2018
Electronic Circuits, Undergraduate, 2017-2018

Electronics Laboratory I, Undergraduate, 2017-2018
Elektrik-Elektronik Tasarım I, Undergraduate, 2017-2018
Electronics Laboratory I, Undergraduate, 2016-2017
Computer Programming and Algorithms, Undergraduate, 2016-2017
Bitirme Çalışması I, Undergraduate, 2016-2017
Electronic Components, Undergraduate, 2016-2017
Bitirme Çalışması II, Undergraduate, 2016-2017
Plant Organization, Undergraduate, 2016-2017
Electronics Laboratory II, Undergraduate, 2016-2017
Electronic Circuits, Undergraduate, 2016-2017
Teknoloji ve İnovasyon Yönetimi, Undergraduate, 2015-2016
Computer Programming and Algorithms, Undergraduate, 2015-2016
Plant Organization, Undergraduate, 2015-2016
Electronic Circuits, Undergraduate, 2015-2016
Electronic Components, Undergraduate, 2015-2016
Electronics Laboratory II, Undergraduate, 2015-2016
Bitirme Çalışması II, Undergraduate, 2015-2016
Bitirme Çalışması I, Undergraduate, 2015-2016
Electronics Laboratory I, Undergraduate, 2015-2016
Elektronik Devreler, Undergraduate, 2014-2015
Elektronik Laboratuvarı II, Undergraduate, 2014-2015
Tesis Organizasyonu, Undergraduate, 2014-2015
Bitirme Çalışması I, Undergraduate, 2014-2015
Bilgisayar Programlama ve Algoritmalar, Undergraduate, 2014-2015
Elektronik Laboratuvarı I, Undergraduate, 2014-2015
Teknoloji ve İnovasyon Yönetimi, Undergraduate, 2014-2015
Bitirme Çalışması II, Undergraduate, 2014-2015
Elektronik Elemanlar, Undergraduate, 2014-2015
Elektronik Laboratuvarı I, Undergraduate, 2013-2014
Elektronik Elemanlar, Undergraduate, 2013-2014
Elektronik Devreler, Undergraduate, 2013-2014
Bitirme Çalışması 1, Undergraduate, 2013-2014
Teknoloji ve İnovasyon Yönetimi, Undergraduate, 2013-2014
Elektronik Laboratuvarı II, Undergraduate, 2013-2014
Tesis Organizasyonu, Undergraduate, 2013-2014
Bilgisayar Programlama ve Algoritmalar, Undergraduate, 2013-2014
Elektronik Laboratuvarı II, Undergraduate, 2012-2013
Bitirme Çalışması 1, Undergraduate, 2012-2013
Tesis Organizasyonu, Undergraduate, 2012-2013
Bilgisayar Programlama ve Algoritmalar, Undergraduate, 2012-2013
Elektronik Elemanlar, Undergraduate, 2012-2013
Elektronik Devreler, Undergraduate, 2012-2013
Elektronik Laboratuvarı I, Undergraduate, 2012-2013
Elektronik Devreler, Undergraduate, 2011-2012
Elektronik Laboratuvarı I, Undergraduate, 2011-2012
Bilgisayar Programlama ve Algoritmalar, Undergraduate, 2011-2012
Elektronik Elemanlar, Undergraduate, 2011-2012
Temel Bilgi Teknolojileri, Undergraduate, 2011-2012
Elektronik Laboratuvarı II, Undergraduate, 2011-2012
Dielektrik Fiziği, Undergraduate Double Major, 2011-2012

Advising Theses

- Köseoğlu M., Çoklu ortam ses dosyalarının zaman-frekans yöntemiyle analizi ve karşılaştırılması, Postgraduate, H.UYANIK(Student), 2021
- Köseoğlu M., Görüntü işleme yöntemleriyle temel devre elemanlarının sınıflandırılması, Postgraduate, M.GÜNAY(Student), 2021
- Köseoğlu M., IoT tabanlı enstrümantasyon sistemi kullanılarak farklı frekansların kurşun asit akülerin desülfasyonu üzerine etkilerinin incelenmesi, Postgraduate, Ö.FIRAT(Student), 2019
- Köseoğlu M., Android tabanlı akıllı saatler için diyabet uygulaması, Postgraduate, Ö.PEKTAŞ(Student), 2018
- Köseoğlu M., LAZER MESAFE ÖLÇER İLE OTONOM MOBİL ROBOTLARIÇİN NAVİGASYON PLANLAMASI, Postgraduate, O.MURAT(Student), 2018

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **A Hybrid Approximation Method for Integer Order Approximate Realization of Fractional-Order Derivative Operators**
Köseoğlu M.
JOURNAL OF CIRCUITS, SYSTEMS AND COMPUTERS, vol.32, no.13, pp.1-28, 2023 (SCI-Expanded)
- II. **An effective analog circuit design of approximate fractional-order derivative models of M-SBL fitting method**
KÖSEOĞLU M., DENİZ F. N., ALAGÖZ B. B., ALISOY H.
ENGINEERING SCIENCE AND TECHNOLOGY-AN INTERNATIONAL JOURNAL-JESTECH, vol.33, 2022 (SCI-Expanded)
- III. **Behavioural modelling of delayed imbalance dynamics in nature: a parametric modelling for simulation of delayed instability dynamics**
ALAGÖZ B. B., DENİZ F. N., KÖSEOĞLU M.
INTERNATIONAL JOURNAL OF GENERAL SYSTEMS, vol.51, no.4, pp.313-333, 2022 (SCI-Expanded)
- IV. **Time response optimal rational approximation: Improvement of time responses of MSBL based approximate fractional order derivative operators by using gradient descent optimization**
Köseoğlu M.
ENGINEERING SCIENCE AND TECHNOLOGY, AN INTERNATIONAL JOURNAL, vol.35, no.November, pp.1-12, 2022 (SCI-Expanded)
- V. **An efficient PID-based optimizer loop and its application in De Jong's functions minimization and quadratic regression problems**
ALAGÖZ B. B., DENİZ F. N., KÖSEOĞLU M.
SYSTEMS & CONTROL LETTERS, vol.159, 2022 (SCI-Expanded)
- VI. **Revisiting four approximation methods for fractional order transfer function implementations: Stability preservation, time and frequency response matching analyses**
DENİZ F. N., ALAGÖZ B. B., TAN N., KÖSEOĞLU M.
ANNUAL REVIEWS IN CONTROL, vol.49, pp.239-257, 2020 (SCI-Expanded)
- VII. **The Changes in Electrical and Interfacial Properties of Polyimide Exposed to Dielectric Barrier Discharge in SF6 Medium**
ALISOY H. Z., KÖSEOĞLU M.
SCIENTIFIC WORLD JOURNAL, 2013 (SCI-Expanded)
- VIII. **Effect of Plasma Deposited Thin Carbon Layer on Dielectric Characteristics of Au-PI-Au Structures**
KÖSEOĞLU M., ALISOY H. Z.
IEEE TRANSACTIONS ON DIELECTRICS AND ELECTRICAL INSULATION, vol.19, no.6, pp.2137-2144, 2012 (SCI-Expanded)
- IX. **An approach for unipolar corona discharge in N-2/O-2 gas mixture by considering townsend conditions**
ALISOY H. Z., Yesil A., KÖSEOĞLU M., ÜNAL İ.

- JOURNAL OF ELECTROSTATICS, vol.69, no.4, pp.284-290, 2011 (SCI-Expanded)
- X. **The analysis of the charge on a cylindrical dielectric particle in unipolar corona field**
KÖSEOĞLU M., ALISOY H. Z.
JOURNAL OF ELECTROSTATICS, vol.69, no.3, pp.176-179, 2011 (SCI-Expanded)
- XI. **Effect of dielectric barrier discharge on the sorption properties of disperse porous materials in CO₂-silicagel and SF₆-silicagel systems**
ALISOY H. Z., Yeroglu C., KOSEOGLU M., TAN N.
INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH, vol.46, no.13, pp.4468-4473, 2007 (SCI-Expanded)
- XII. **Investigation of the characteristics of dielectric barrier discharge in the transition region**
ALISOY H., Yeroglu C., KOSEOGLU M., HANSU F.
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.38, no.24, pp.4272-4277, 2005 (SCI-Expanded)
- XIII. **Charging kinetics of spherical dielectric particles in a unipolar corona field**
ALISOY H., ALISOY G., Koseoglu M.
JOURNAL OF ELECTROSTATICS, vol.63, no.12, pp.1095-1103, 2005 (SCI-Expanded)
- XIV. **Calculation of electrical field of spherical and cylindrical gas voids in dielectrics by taking surface conductivity into consideration**
ALISOY G., ALISOY H., Koseoglu M.
COMPEL-THE INTERNATIONAL JOURNAL FOR COMPUTATION AND MATHEMATICS IN ELECTRICAL AND ELECTRONIC ENGINEERING, vol.24, no.4, pp.1152-1163, 2005 (SCI-Expanded)
- XV. **Combined kinetic charging of particles on the precipitating electrode in a corona field**
ALISOY H., ALISOY G., HAMAMCI S. E., Koseoglu M.
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.37, no.10, pp.1459-1466, 2004 (SCI-Expanded)

Articles Published in Other Journals

- I. **Hybrid Approximation Method For Time Response Improvement Of CFE Based Approximate Fractional Order Derivative Models By Using Gradient Descent Algorithm**
Köseoğlu M., Deniz F. N., Alagöz B. B.
Uludağ Üniversitesi Mühendislik Fakültesi Dergisi, vol.28, no.2, pp.403-416, 2023 (Peer-Reviewed Journal)
- II. **A Modified Path Planning Algorithm for ROS Based Autonomous Mobile Robots**
ORKAN MURAT Ç., KÖSEOĞLU M.
Journal of advanced research in natural and applied sciences (Online), vol.9, no.1, pp.205-217, 2023 (Peer-Reviewed Journal)
- III. **Effect of Spectrogram Parameters and Noise Types on The Performance of Spectro-temporal Peaks Based Audio Search Method**
UYANIK H., KÖSEOĞLU M.
Gazi University Journal of Science, vol.36, no.2, pp.624-643, 2023 (Peer-Reviewed Journal)
- IV. **IoT Tabanlı Enstrümantasyon Sistemi ile Farklı Frekansların Kurşun Asit Akülerin Desülfasyonu Üzerine Etkilerinin İncelenmesi**
KÖSEOĞLU M., Aydın Ö. F.
Düzce Üniversitesi Bilim ve Teknoloji Dergisi, vol.10, no.1, pp.356-366, 2022 (Peer-Reviewed Journal)
- V. **An experimental analog circuit realization of Matsuda's approximate fractional-order integral operators for industrial electronics**
KÖSEOĞLU M., DENİZ F. N., ALAGÖZ B. B., Yuce A., TAN N.
ENGINEERING RESEARCH EXPRESS, vol.3, no.4, 2021 (ESCI)
- VI. **Detection of circuit components on hand-drawn circuit images by using faster R-CNN method**
GÜNAY M., KÖSEOĞLU M.
International Advanced Researches and Engineering Journal, vol.5, no.3, pp.372-378, 2021 (Peer-Reviewed Journal)
- VII. **Design of an Android Wear Smartwatch Application as a Wearable Interface to the Diabetes Diary**

Application

PEKTAŞ Ö., KÖSEOĞLU M., Arsand E., Muzny M., Hartvigsen G.

ACADEMIC PLATFORM-JOURNAL OF ENGINEERING AND SCIENCE, vol.9, no.1, pp.126-133, 2021 (Peer-Reviewed Journal)

VIII. Drying process of apple slices in low frequency electromagnetic field

Memmedov A., KÖSEOĞLU M., KARADAĞ T.

International Journal of Recent Technology and Engineering, vol.8, no.3, pp.120-126, 2019 (Scopus)

IX. Monitoring System for Solar Panel using Xbee ZB Module based Wireless Sensor Networks

CİHAN M., KÖSEOĞLU M.

International Journal of Engineering Research and Technology, vol.8, no.5, pp.290-295, 2019 (Peer-Reviewed Journal)

X. Modeling and analysis of dielectric materials by using gradient-descent optimization method

ALAGÖZ B. B., Alisoy H. Z., KÖSEOĞLU M., ALAGÖZ S.

INTERNATIONAL JOURNAL OF MODELING SIMULATION AND SCIENTIFIC COMPUTING, vol.8, no.1, 2017 (ESCI)

XI. MODELING OF ELECTROMAGNETIC WAVE DRYING PROCESS FOR SOME PEPPER SPECIES

Memmedov A., Köseoğlu M.

INTERNATIONAL JOURNAL OF ENGINEERING AND MATHEMATICAL MODELLING, vol.3, no.1, pp.43-53, 2016 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

I. Common AI-Based Methods Used in Blood Glucose Estimation with Ppg Signals

PEKTAŞ Ö., KÖSEOĞLU M.

2021 3rd International Conference on Artificial Intelligence and Applied Mathematics in Engineering, Antalya, Turkey, 1 - 03 October 2021, pp.585-592

II. Performance Evaluation of Different Window Functions for Audio Fingerprint Based Audio Search Algorithm

Uyanık H., Köseoğlu M.

2020 4th International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), İstanbul, Turkey, 22 - 24 October 2020, pp.1-4

III. Classification of Hand-Drawn Circuit Components by Considering the Analysis of Current Methods

GÜNAY M., KÖSEOĞLU M.

2020 4th International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), İstanbul, Turkey, 22 - 24 October 2020

IV. Classification of Hand-Drawn Basic Circuit Components Using Convolutional Neural Networks

GÜNAY M., KÖSEOĞLU M., YILDIRIM Ö.

2020 International Congress on Human-Computer Interaction, Optimization and Robotic Applications (HORA), Ankara, Turkey, 26 - 28 June 2020

V. The Effect of Different Noise Levels on The Performance of The Audio Search Algorithm

UYANIK H., KÖSEOĞLU M.

2020 International Congress on Human-Computer Interaction, Optimization and Robotic Applications (HORA), Ankara, Turkey, 26 - 28 June 2020

VI. Nesnelerin İnterneti Tabanlı Batarya Yönetim Sistemi Tasarımı ve Uygulaması

Köseoğlu M., Aydın Ö. F.

III. Uluslararası Battalgazi Bilimsel Çalışmalar Kongresi, Malatya, Turkey, 21 - 23 September 2019, pp.778-787

VII. Enzyme-based Amperometric Biosensors Used in CGM Technology

PEKTAŞ Ö., KÖSEOĞLU M.

Academic Conference on Robotization, Engineering and Artificial Intelligence (AC-REAI 2019), Prag, Czech Republic, 8 - 10 August 2019, pp.186-193

VIII. Kurşun Asit Aküler İçin Farklı Şarj Yöntemlerinin Karşılaştırılması

Köseoğlu M., Aydın Ö. F.

EURASIA 3rd International Congress of Applied Sciences, Sivas, Turkey, 28 - 30 June 2019, pp.17-24

IX. Smart and Wearable Technologies in Continuous Glucose Monitoring

KÖSEOĞLU M., PEKTAŞ Ö.

International Engineering and Natural Sciences Conference - IENSC 2018, Diyarbakır, Turkey, 14 - 17 November 2018

X. Utilizing the New Generation of Wearable Devices in a Combined Diabetes Diary Application

Pektaş Ö., Muzny M., Arsand E., Hartvigsen G., Köseoğlu M.

International Conference on Advanced Technologies Treatments for Diabetes (ATTD), Vienna, Austria, 14 - 17 February 2018

XI. Design of a smart glove for monitoring finger injury rehabilitation process via MQTT server

KÖSEOĞLU M., Celik O. M., Pektas O.

2nd International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), Kizilcahamam, Turkey, 19 - 21 October 2018, pp.620-625

XII. Artificial Lightening Control via MQTT Based IOT Server by a Smart Phone Application

KÖSEOĞLU M., ORKAN MURAT Ç., PEKTAŞ Ö.

8th International Advanced Technologies Symposium (IATS'17), Elazığ, Turkey, 19 - 22 October 2017, pp.1576-1581

XIII. Design of an Autonomous Mobile Robot Based on ROS

KÖSEOĞLU M., Celik O. M., Pektas O.

2017 International Artificial Intelligence and Data Processing Symposium (IDAP), Malatya, Turkey, 16 - 17 September 2017

XIV. Space Charge Formation In Non-cristalline Polymers And GaSe By DBD In SF6 Medium

ALISOY H. Z., YEROĞLU C., KÖSEOĞLU M.

23rd International Symposium on Discharges and Electrical Insulation in Vacuum, Bucharest, Romania, 15 - 19 September 2008, pp.491-494

Supported Projects

TAĞLUK M. E., KÖSEOĞLU M., IŞIK İ., Project Supported by Higher Education Institutions, DİFÜZYON TABANLI NANO AĞLARDA MOLEKÜLER HABERLEŞMENİN MODELLEMESİ, 2018 - 2020

Metrics

Publication: 40

Citation (WoS): 97

Citation (Scopus): 183

H-Index (WoS): 6

H-Index (Scopus): 7

Non Academic Experience

Enerden Enerji Ltd. Şti.

Company, Enerden Enerrgy LLC, Site of Construction

Ankara Enerji Üretim A.Ş.

Company, Ankara Power Generation INC., Site of Construction