

JOURNAL OF INNOVATIVE ENGINEERING AND NATURAL SCIENCE

**YENİLİKÇİ MÜHENDİSLİK VE DOĞA BİLİMLERİ
DERGİSİ**

e-ISSN: 2791-7630

Yalova – Turkey

Year / Yıl	Volume / Cilt	Issue / Sayı
2022	2	1



JIENS

Journal of Innovative Engineering and Natural Science
Yenilikçi Mühendislik ve Doğa Bilimleri Dergisi

Journal Cover Design / Dergi Kapak Tasarımı: İdris Karagöz

Journal Cover Artwork / Dergi Kapak Resmi: Fatma Aleyna Ceylan



Journal of Innovative Engineering

and Natural Science

(Yenilikçi Mühendislik ve Doğa Bilimleri Dergisi)

journal homepage: <https://jiens.org>



Product Information / Ürün Bilgisi

Publisher <i>Yayınçı</i>	İdris Karagöz
Owner <i>Sahibi</i>	İdris Karagöz
Editor-in-Chief <i>Baş Editör</i>	İdris Karagöz
Publishing Manager <i>Sorumlu Yazı İşleri Müdürü</i>	İdris Karagöz
e-ISSN Number <i>e-ISSN Numarası</i>	2791-7630
Web Page <i>Web Sayfası</i>	https://jiens.org
Date of Online Publication <i>Online Basım Tarihi</i>	31.01.2022
Language <i>Dili</i>	English / Turkish İngilizce / Türkçe
Frequency <i>Yayın Aralığı</i>	Published two times in a year Yılda iki kere yayınlanır
Type of Publication <i>Yayın Türü</i>	Periodical Süreli yayın
Abstracted and indexed in <i>Tarandığı ve Özettlendiği Dizinler</i>	
Telephone <i>Telefon</i>	+90 (226) 815 55 53
Fax <i>Faks</i>	+90 (226) 815 54 00
E-mail <i>E-posta</i>	jiens@jiens.org
Correspondence Adress <i>Yazışma Adresi</i>	Yalova University Faculty of Engineering, Yalova University Central Campus, On the Çınarcık Road 77200 Yalova, Turkey Yalova Üniversitesi Mühendislik Fakültesi, Yalova Üniversitesi Merkez Yerleşkesi, Çınarcık Yolu Üzeri 77200 Yalova, Türkiye



Editor-in-Chief
Baş Editör

İdris Karaagöz

Associate Editors
Yardımcı Editörler

Julide Hızal Yücesoy, Yalova University, Turkey
Yahya Bozkurt, Marmara University, Turkey
Ayşe Bedeloğlu, Bursa Technical University, Turkey
Khalid Zaki Elwakeel, Port Said University, Egypt
Pelin Baran, Yalova University, Turkey
Ilda Kazani, Polytechnic University of Tirana, Albania
Mesut Yılmazoğlu, Yalova University, Turkey
Mandana Adeli, Iran University of Science and Technology, Iranian
Mehmet Buğdayıcı, Yalova University, Turkey
Şeyda Korkmaz, Yalova University, Turkey
Özlem Tuna, Yalova University, Turkey

Editorial Board
*Alan Editörleri ve
Yayın Kurulu*

Zakaria Boumerzoug, University of Biskra, Algeria
Gürel Çam, İskenderun Technical University, Turkey
Kulathuiyer Seshan, University of Twente, Netherlands
Edin Dolićanin, State University of Novi Pazar, Serbia
Levan Chkhartishvili, Georgian Technical University, Georgia
Emel Taban, Kocaeli University, Turkey
Sinan Şen, Yalova University, Turkey
Uğur Özsaraç, Sakarya University of Applied Sciences, Turkey
Mehmet Özgür Seydibeyoğlu, İzmir Katip Çelebi University, Turkey
İsmail Gökhan Temel, Yalova University, Turkey
Erol Erçağ, Tekirdağ Namık Kemal University, Turkey
Salih Yazıcıoğlu, Gazi University, Turkey
Melda Altıkatoğlu Yapaöz, Yıldız Technical University, Turkey
Kadriye Tuzlakoğlu, Yalova University, Turkey
Ayşe Erçağ, İstanbul University-Cerrahpaşa, Turkey
Figen Beyhan, Gazi University, Turkey
Naci Genç, Yalova University, Turkey
Eyüp Debik, Yıldız Technical University, Turkey
Barbaros Nalbantoğlu, Yıldız Technical University, Turkey
Mustafa Yavuz, Süleyman Demirel University, Turkey
Ilda Kazani, Polytechnic University of Tirana, Albania



Editorial Board

*Alan Editörleri ve
Yayın Kurulu*

- Oğuzhan Gündüz, Marmara University, Turkey
Stanislav Roshchupkin, Sevastopol State University, Sevastopol
Müge Balkaya, İstanbul Technical University, Turkey
Mustafa Çakır, Marmara University, Turkey
Halil İbrahim Kurt, Gaziantep University, Turkey
Israfil Küçük, Gebze Technical University, Turkey
Mehmet Büyükyıldız, Bursa Technical University, Turkey
Yeşim Müge Şahin, Arel University, Turkey
İlyas Kartal, Marmara University, Turkey
Mahmut Yıldız, Gebze Technical University, Turkey
Turgut Ak, National Defence University, Turkey
Mustafa Gürbüz, Ağrı İbrahim Çeçen University, Turkey
Gökhan Açık, Piri Reis University, Turkey
Mehmet Berat Taşkın, University of Würzburg, Germany
Mandana Adeli, Iran University of Science and Technology, Iranian
Mehmet Arif Kaya, Yalova University, Turkey
Asst. Prof. Dr. Mithat Çelebi, Yalova University, Turkey
Ayça Bal, İstinye University, Turkey
Fuat Kosanoğlu, Yalova University, Turkey
Mehmet Ertem, American University of Sharjah, United Arab Emirates
Tai-Cheng Chen, Institute of Nuclear Energy Research, Taiwan
Levent Öncel, Sinop University, Turkey
Murat Alkan, Dokuz Eylül University, Turkey
Ömer Yunus Gümüş, Bursa Technical University, Turkey
Abdussamet Subaşı, İstanbul Technical University, Turkey
Alperen Bal, Yalova University, Turkey
Raheem Al-Sabur, University of Basrah, Iraq

Advisory Board
Danışma Kurulu

- Serdar Salman, National Defence University, Turkey
Fehim Fındık, Sakarya University of Applied Sciences, Turkey
Nizamettin Kahraman, Karabük University, Turkey
-