



AFYON KOCATEPE ÜNİVERSİTESİ  
ULUSLARARASI MÜHENDİSLİK TEKNOLOJİLERİ ve UYGULAMALI BİLİMLER DERGİSİ  
Afyon Kocatepe University  
International Journal of Engineering Technology and Applied Sciences

# Afyon Kocatepe University International Journal of Engineering Technology and Applied Sciences

<https://dergipark.org.tr/tr/pub/akuumubd>

[www.ijetas.aku.edu.tr](http://www.ijetas.aku.edu.tr)

e-ISSN:2667-4165

**Afyon Kocatepe University**  
**International Journal of Engineering Technology and**  
**Applied Sciences (AKU-IJETAS)**

Volume: 3 / Number: 1 / December - 2020

*Owner / Publisher: Rector Prof. Dr. Mehmet KARAKAŞ for Afyon Kocatepe University*

*Chief in Chief Prof. Dr. Ayhan EROL*

*Co- Editor in Chief Assist. Prof. Dr. Ahmet YÖNETKEN*

*Published Afyon Kocatepe University, December 2019,*

*ijetas@aku.edu.tr*

*This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned. Nothing from this publication may be translated, reproduced, stored in a computerized system or published in any form or in any manner, including, but not limited to electronic, mechanical, reprographic or photographic, without prior written permission from the Publisher Afyon Kocatepe University [www.ijetas.aku.edu.tr](http://www.ijetas.aku.edu.tr) [ijetas@aku.edu.tr](mailto:ijetas@aku.edu.tr) The individual contributions in this publication and any liabilities arising from them remain the responsibility of the authors. The publisher is not responsible for possible damages, which could be a result of content derived from this publication.*

**CONTACT INFORMATION**

Afyon Kocatepe University International Journal of Engineering Technology and Applied Science Afyon Kocatepe University, Technology Faculty, 03200 Afyonkarahisar, TURKEY

Phone: +90-272-2281446 /ext.

Fax: +90-272 228 1449

e-mail : [ijetas@aku.edu.tr](mailto:ijetas@aku.edu.tr), [aerol@aku.edu.tr](mailto:aerol@aku.edu.tr)

## **Welcome to AKU-IJETAS**

Dear Researchers;

International Journal of Engineering and Applied Sciences ler has been published in Turkish and English since 2018 with 2 issues. Our journal will accept Turkish and English articles as 2 issues a year and the articles will be evaluated by at least two referees with the same system. Our magazine from December 2018; it offers many advantages to readers due to the practical and practical access to the authors as well as the process of publishing and publishing quickly and easily; The electronic journal (e-ISSN:2667-4165) accepts 2 numbers per year (June and December) in Turkish and English. The names of the judges evaluating the articles are not notified to the authors. The referees cannot see the names of the authors. The studies are evaluated as at least two referees. Our authors, who want to send articles, can register their original scientific articles online and follow the process by registering on our magazine page. Our journal is accepted as original and previously published research articles.

We are waiting for your contributions as both referee and writer. I thank you in advance for your support and I wish you success in your work.

**Prof. Dr Ayhan EROL**

**Chief Editor**

## Danışma Kurulu / Editörler/ Editorial Board

Adem KURT	Gazi University	TURKEY
Ahmet AKSOY	Akdeniz University	TURKEY
Ahmet YILDIZ	Afyon Kocatepe University	TURKEY
Alexander ONUFRAK	Pavol Jozef Safarik University	SLOVAKIA
Anas Sarwar QURESHI	Agriculture University	PAKISTAN
Artay YAGCI	Afyon Kocatepe University	TURKEY
Asım Gokhan YETGIN	Dumlupinar University	TURKEY
Aytekin HITIT	Afyon Kocatepe University	TURKEY
Behçet GULENC	Gazi University	TURKEY
Bojan ZLENDER	Maribor University	SLOVENIA
Cahit GURER	Afyon Kocatepe University,	TURKEY
Diñçer BURAN	Süleyman Demirel University	TURKEY
Dunja PERIC	Kansas State University, Manhattan	ABD
Dusan ORAC	Kosice Technical University	SLOVAKIA
Elena Cristina RADA	Trento University	ITALY
Gabor PAY	University College of Nyiregyhaza	HUNGARY
Gratiela BOCA DANA	Technical University Cluj Napoca	ROMANIA
Hazizan Md AKİL	Sains Malaysia University	MALAYSIA
Huseyin Ali YALIM	Afyon Kocatepe University	TURKEY
Huseyin AKBULUT	Afyon Kocatepe University	TURKEY
Huseyin BAYRAKCEKEN	Afyon Kocatepe University	TURKEY
Ilhan KOŞALAY	Ankara University	TURKEY
Ioan ABRUDAN	Technical University Cluj Napoca	ROMANIA
Ivan KURIK,	Technical University Zilina	SLOVAKIA
Iveta VASKOVA	Kosice Technical University	SLOVAKIA
João Pedro SILVA	Leiria Polytechnic Institute	PORTUGAL
Lucian Ionel CIOCA	Lucian Blaga University of Sibiu	ROMANIA
Marco RAGAZZI	Trento University	ITALY
Martina HRUBOVCAKOVA	Kosice Technical University	SLOVAKIA
Matjaž ŠRAML	Maribor University	SLOVENIA
Merlinda EBIBI	Mother Teresa University	MACEDONIA
Metin OZGUL	Afyon Kocatepe University	TURKEY
Mihai BANICA	Technical University Cluj Napoca	ROMANIA
Mircea HORGOS	Technical University Cluj Napoca	ROMANIA
Monica Lopez ALONSO	University of GRANADA	SPAIN
Muhammed YURUSOY	Afyon Kocatepe University	TURKEY
Mustafa ERSOZ	University of Selcuk	TURKEY
Mustafa TÜRKMEN	Kocaeli University	TURKEY
Mustaque HOSSAIN	Kansas State University, Manhattan	ABD
Nadras OTHMAN	Sains University	MALAYSIA
Nicolae UNGUREANU	Technical University Cluj Napoca	ROMANIA

Neritan TURKESHI	Mother Teresa University	MACEDONIA
Olivera PETKOVSKA	Mother Teresa University	MACEDONIA
Olga OROSOVA	Pavol Jozef Safarik University	SLOVAKIA
Otar ZUMBURIDZE	Georgia Technical University	GEORGIA
P. Trinatha RAO	Gitam University	INDIA
Peter MONKA	Technical University Kosice	SLOVAKIA
Prasanna RAMAKRISNAN	Neo Education Institu	MALAYSIA
Ramazan KAÇAR	Karabük University	TURKEY
Radu COTETIU	Technical University Cluj Napoca	ROMANIA
Regita BENDIKIENĖ	Kaunas Technology University	LİTVANIA
Renata PANOCOVA	Pavol Jozef Safarik University	SLOVAKIA
Rıdvan UNAL	Usak University	TURKEY
Robert CEP	Technical University Ostrava	CZECH
Selçuk AKTURK	Mugla University	TURKEY
Serdar SALMAN	Marmara University	TURKEY
Serhat BASPINAR	Afyon Kocatepe University	TURKEY
Sermin OZAN	Firat University	TURKEY
Sezai TAŞKIN	Celal Bayar University	TURKEY
Suleyman GUNDUZ	Karabük University	TURKEY
Sukru TALAS	Afyon Kocatepe University	TURKEY
Stanislaw LEGUTKO	Poznan University of Technology	POLAND
Tomasz NIZNIKOWSKI	Lomza State University Applied Science	POLAND
Tomaz TOLLAZZI	Maribor University	SLOVENIA
Ugur CALIGULU	Firat University	TURKEY
Yılmaz YALCIN	Afyon Kocatepe University	TURKEY
Yuksel OĞUZ	Afyon Kocatepe University	TURKEY
Zeynep OMEROGULLAR	Usak University	TURKEY
Zoran TRIFUNOV	Mother Teresa University	MACEDONIA

## CONTENTS

	Page
<b>Organik Bazlı Kompozit Fren Balataların Üretimi Ve Frenleme Performanslarının İncelemesi</b>	
Gökhan BAŞOĞLU .....	1-9
<b>Düşük Maliyetli ve Enerji Verimli IoT Tabanlı Akıllı Akıllı Ev Sistemi</b>	
Muhammad Muzamil ASLAM, Muhammad Nauman IRSHAD, Hassan AZEEM, Muhammad IKRAM .....	10-20
<b>Afyonkarahisar İlinde Yetiştirilen Yerli Kazlarda Cinsiyet ve Yaşın Karkas Özellikleri Üzerine Etkisi</b>	
Günnur PEŞMEN, Ahmet YÖNETKEN .....	21-26
<b>STM32f103C8 Mikroişlemcisi Kullanılarak CAN Haberleşme Protokolü Tabanlı Veri Toplama Sistemi Uygulaması</b>	
Tolga ÖZER, Sinan KIVRAK, Yüksel OĞUZ, M. Mustafa KELEK .....	27-31
<b>Alçı Esaslı Köpüklerin Üretimi ve Gözenek Yapısının Kontrolü</b>	
Mustafa Serhat BAŞPINAR, Şenol MUTLU, Cüneyt DOĞAN, Abdullah Noman ALAWADHI .....	32-38
<b>Mermer İşleme Tesislerinde Çamur Kontrol Sistemi İçin Optik Sensör Tasarımı</b>	
Tarık KUNDURACI, Yasin AYDIN, Sezai TAŞKIN .....	39-44