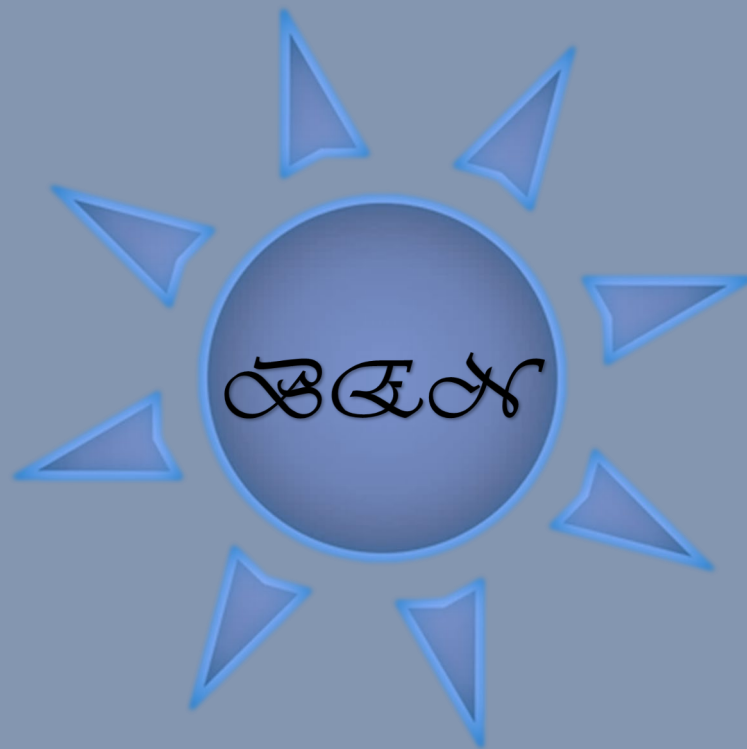


Volume: 6

Issue: 3

July 2025

ISSN: 2687-5195



# Brilliant Engineering

Editor: A.C. AYDIN

*HEAT*  
Publications

# Brilliant Engineering

Editor-in-Chief & Managing Editor

Abdulkadir Cüneyt AYDIN

E-mail: [acaydin@atauni.edu.tr](mailto:acaydin@atauni.edu.tr)

## Editorial Board

|                                                               |                                                                                          |                                                                          |
|---------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <b>Ali ALLAHVERDİ</b><br>Kuwait University, KUWAIT            | <b>Ayhan ÇELİK</b><br>Ataturk University, TURKEY                                         | <b>Ayman S. MOSALLAM</b><br>University of California, USA                |
| <b>Ayşe YURTCAN BAYRAKÇEKEN</b><br>Ataturk University, TURKEY | <b>Bennaceur OUAKİ</b><br>ENSMR, MOROCCO                                                 | <b>Burak DİKİCİ</b><br>Ataturk University, TURKEY                        |
| <b>Burak ERKYAMAN</b><br>Ataturk University, TURKEY           | <b>Ensar OĞUZ</b><br>Ataturk University, TURKEY                                          | <b>Ergün YILDIZ</b><br>Ataturk University, TURKEY                        |
| <b>German DELAFUENTE</b><br>Zaragoza University, SPAIN        | <b>Hikmet ALTUN</b><br>Ataturk University, TURKEY                                        | <b>Hüseyin BİLGİN</b><br>EPOKA University, ALBANIA                       |
| <b>Hongze WANG</b><br>Shanghai Jiao Tong University,<br>CHINA | <b>İhsan EFEOĞLU</b><br>Ataturk University, TURKEY                                       | <b>Jian JIANG</b><br>China University of Mining and<br>Technology, CHINA |
| <b>Jinyang XU</b><br>Shanghai Jiao Tong University,<br>CHINA  | <b>Kadir BİLEN</b><br>Ataturk University, TURKEY                                         | <b>Kemal BEYEN</b><br>Kocaeli University, TURKEY                         |
| <b>Khalil EL-HAMI</b><br>University of Hassan, MOROCCO        | <b>Mahmood KHALID</b><br>King Abdulaziz University, SAUDI<br>ARABIA                      | <b>Mahmut FIRAT</b><br>Inonu University, TURKEY                          |
| <b>Marko SERAFIMOV</b><br>Methodius University,<br>MACEDONIA  | <b>Mehmet Emin AYDIN</b><br>University of the West England,<br>UK                        | <b>Mehmet ERTUĞRUL</b><br>Ataturk University, TURKEY                     |
| <b>Mehmet İNAN</b><br>Oregon University, USA                  | <b>Mirsaeid Hosseini SHIRVANI</b><br>Sari Branch, Islamic Azad<br>University, Sari, IRAN | <b>Mohd Nizar HAMIDON</b><br>Universiti Putra MALAYSIA                   |
| <b>Mojtaba B. SİRJANİ</b><br>Norfolk State University, USA    | <b>Murat DAL</b><br>Munzur University, TURKEY                                            | <b>Naimul HAQUE</b><br>East West University,<br>BANGLADESH               |
| <b>Omer ÇOMAKLI</b><br>Ataturk University, TURKEY             | <b>Özgür ANIL</b><br>Gazi University, TURKEY                                             | <b>Taner TEKİN</b><br>Ataturk University, TURKEY                         |
| <b>Togay ÖZBAKKALOĞLU</b><br>Texas State University, USA      | <b>Vahid JAHANGIRI</b><br>University of Mohaghegh<br>Ardabili, IRAN                      | <b>Vecihi YİĞİT</b><br>Ataturk University, TURKEY                        |
| <b>Yao YU</b><br>North Dakota State University,<br>USA        | <b>Yusuf ÖZTÜRK</b><br>San Diego State University, USA                                   |                                                                          |

Brilliant Engineering is a quarterly published by ACA Publishing, as an international open access journal. Whole of the submitted papers are subjected to peer review process. The manuscripts with high quality original content will be published.

Copyright © ACA Publishing Online ISSN: 2687-5195

Publisher: Abdulkadir Cüneyt AYDIN <ACA Publishing>

Ataturk University, Engineering Faculty

Department of Civil Engineering

25030 Erzurum, TURKEY

# Brilliant Engineering

Volume: 6

Issue: 3

July 2025

ISSN: 2687-5195