

# İHSAN ULUOCAK

## ASST. PROF.

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: G-7462-2018

ScopusID: 57204918859

Yoksis Researcher ID: 108882



## Education

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Doctorate 2014 - 2022	Cukurova University, Fen Bilimleri Enstitüsü, Makina Mühendisliği, Turkey
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Postgraduate 2012 - 2014	Cukurova University, Makina Mühendisliği, Makine Mühendisliği, Turkey
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Undergraduate 2005 - 2011	Gaziantep University, Faculty Of Engineering, Makine Mühendisliği, Turkey
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## Dissertations

Doctorate, DESIGN AND CONTROL OF A NOVEL EDDY CURRENT DYNAMOMETER, Cukurova University, Mühendislik Fakültesi, 2022

Postgraduate, MAGNETIC RETARDER WITH EXTENDED CONTROL SYSTEM, Cukurova University, Makina Mühendisliği, Makine Mühendisliği, 2014

## Academic Titles / Tasks

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Research Assistant 2011 - Continues	Cukurova University, Ceyhan Mühendislik Fakültesi, Makine Mühendisliği
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## Supported Projects

1. YAVUZ H., ULUOCAK İ., Project Supported by Higher Education Institutions, Ağır Araçlarda Kullanılan Manyetik Retarderlerde Kontrol Sisteminin Geliştirilmesi ve Etkisinin Deneysel Olarak İncelenmesi, 2013 - 2015

## Published journal articles indexed by SCI, SSCI, and AHCI

1. **Comparative evaluation of machine learning models for predicting noise and vibration of a biodiesel-CNG fuelled diesel engine**

- ULUOCAK İ., ULUDAMAR E.  
Measurement: Journal of the International Measurement Confederation, vol.249, 2025 (SCI-Expanded)
2. **Artificial Intelligence-Based prediction of engine noise and vibration in Biodiesel-Diesel engines with hydrogen injection**  
ULUDAMAR E., ULUOCAK İ.  
Fuel, vol.385, 2025 (SCI-Expanded)
  3. **Atmospheric NO<sub>2</sub> concentration prediction with statistical and hybrid deep learning methods**  
ULUOCAK İ., Pinar E., Bilgili M.  
ENVIRONMENTAL AND ECOLOGICAL STATISTICS, 2025 (SCI-Expanded)
  4. **Future forecast of global mean surface temperature using machine learning and conventional time series methods**  
Durhasan T., PINAR E., ULUOCAK İ., BİLGİLİ M.  
Theoretical and Applied Climatology, vol.156, no.1, 2025 (SCI-Expanded)
  5. **Daily air temperature forecasting using LSTM-CNN and GRU-CNN models**  
ULUOCAK İ., BİLGİLİ M.  
Acta Geophysica, vol.72, no.3, pp.2107-2126, 2024 (SCI-Expanded)
  6. **Model Predictive Control Coupled with Artificial Intelligence for Eddy Current Dynamometers**  
ULUOCAK İ., YAVUZ H.  
COMPUTER SYSTEMS SCIENCE AND ENGINEERING, vol.44, no.1, pp.221-234, 2023 (SCI-Expanded)
  7. **Artificial Intelligence Based PID Controller for an Eddy Current Dynamometer**  
ULUOCAK İ., YAVUZ H.  
INTELLIGENT AUTOMATION AND SOFT COMPUTING, vol.33, no.2, pp.1229-1243, 2022 (SCI-Expanded)
  8. **Artificial intelligence techniques for the vibration, noise, and emission characteristics of a hydrogen-enriched diesel engine**  
Yildirim S., TOSUN E., Calik A., ULUOCAK İ., AVŞAR E.  
ENERGY SOURCES PART A-RECOVERY UTILIZATION AND ENVIRONMENTAL EFFECTS, vol.41, no.18, pp.2194-2206, 2019 (SCI-Expanded)

### Articles Published in Other Journals

1. **Tarım Makinaları ve Traktörlerde Arızalanma Verilerinin İşletmecilik Kararlarında Kullanılma Esasları**  
SAY S. M., ŞEHRİ M., ERDOĞAN Y., ULUOCAK İ.  
Akademia Mühendislik ve Fen Bilimleri Dergisi/Academia Journal of Engineering and Applied Sciences, vol.1, pp.246-255, 2017 (Peer-Reviewed Journal)
2. **Effect of Rotor Material on Eddy Current Brakes**  
ULUOCAK İ.  
EUROPEAN MECHANICAL SCIENCE, vol.5, pp.246-255, 2017 (Peer-Reviewed Journal)
3. **Dynamic simulation of automobile crankshaft**  
ULUOCAK İ.  
Advances in Automobile Engineering, vol.5, no.143, pp.1, 2016 (Peer-Reviewed Journal)

### Refereed Congress / Symposium Publications in Proceedings

1. **Performance of Eddy Current Dynamometers with Changing Rotor Speed**  
Uluocak İ., Yavuz H.  
6th International Mediterranean Science and Engineering Congress (IMSEC 2021), Antalya, Turkey, 25 - 27 October 2021, no.321, pp.704

2. **Effect of Rotor Temperature on Eddy Current Dynamometers**  
Uluocak İ., Yavuz H.  
7th International Mediterranean Science and Engineering Congress (IMSEC 2022), Antalya, Turkey, 25 - 27 October 2021, pp.703
3. **Design and Setup of A Eddy Current Dynamometer**  
ULUOCAK İ., YAVUZ H., TOSUN E.  
International Academic Conference on Engineering, Transport, IT and Artificial Intelligence (IAC-ETITAI) 2019, Budapeşte, Hungary, 23 - 24 August 2019, pp.179-186
4. **Effects of Membership Function Type and Number of Membership Functions on ANFIS Predictions of Diesel Engine Vibration**  
TOSUN E., AYDIN K., ULUOCAK İ.  
International Academic Conference on Engineering, Transport, IT and Artificial Intelligence (IAC-ETITAI) 2019, Budapeşte, Hungary, 23 - 24 August 2019, pp.187-193
5. **Application of Artificial Neural Networks in Prediction of Compression Ignition Engine Performance and Emission Parameters**  
Uluocak İ., Yıldırım S., Yavuz H., Tosun E.  
292th International Conference on Science, Technology, Engineering and Management(ICSTEM), Paris, France, 25 - 26 August 2018, pp.52
6. **Tarım Makinaları ve Traktörlerde Arızalanma Verilerinin İşletmecilik Kararlarında Kullanılma Esasları**  
SAY S. M., ŞEHİRİ M., ERDOĞAN Y., ULUOCAK İ.  
3rd ASM International Congress Of Agriculture And Environment, Antalya, Turkey, 16 - 18 November 2017, vol.2, pp.73
7. **Simulation of Eddy Current Brake Using Matlab/SimulinkInterface**  
Uluocak İ.  
2nd International Mediterranean Science and Engineering Congress, Adana, Turkey, 25 - 27 October 2017, no.221, pp.460
8. **Effects of Rotor Material on Eddy Current Brake Performance**  
Uluocak İ., Yavuz H., Gürsul M.  
2nd International Mediterranean Science and Engineering Congress, Adana, Turkey, 25 - 27 October 2017
9. **Dynamic Simulation of Automobile Crank Shaft**  
Uluocak İ., Yavuz H., Özarslan H., Burgaç A., Akbıyık H., Conker Ç.  
International Conference and Exhibition on Automobile Engineering, Valencia, Spain, 1 - 02 September 2015, vol.4, pp.38
10. **Genişletilmiş Kontrol Aralıklı Manyetik Retarder**  
ULUOCAK İ., CONKER Ç., YAVUZ H., AYDIN K.  
OTEKON, Bursa, Turkey, 26 - 27 May 2014, pp.217-218
11. **Control application and performance analysis of wave energy converters**  
YAVUZ H., SERİN H., Conker C., AYDIN K., ULUOCAK İ.  
European Biotechnology Congress, Bratislava, Slovakia, 16 - 18 May 2013, vol.24

## Research Areas

Mechanical Engineering, Machine Theory and Dynamics, System Dynamics and Control, Modeling and Simulation of Dynamic Systems, Engineering and Technology