

## Asst. Prof. ERKAN CANER ÖZKAT

### Personal Information

**Office Phone:** [+90 464 223 7518](tel:+904642237518) Extension: 1136

**Email:** [erkancaner.ozkat@erdogan.edu.tr](mailto:erkancaner.ozkat@erdogan.edu.tr)

**Web:** [https://www.researchgate.net/profile/Erkan\\_Ozkat](https://www.researchgate.net/profile/Erkan_Ozkat)

**Address:** Makine Mühendisliği Bölümü, Mühendislik Fakültesi, Recep Tayyip Erdoğan Üniversitesi, Zihni Derin Kampüsü, 5310 Rize, TR

### International Researcher IDs

ScholarID: 1MFUPicAAAAJ

ORCID: 0000-0003-0530-5439

Yoksis Researcher ID: 179232

### Education Information

Post Doctorate, Aalborg Universitet (Aalborg University), Denmark 2021 - 2022

Doctorate, University of Warwick, Warwick Manufacturing Group, Mechanical Engineering, United Kingdom 2014 - 2019

Postgraduate, University of Bath, Faculty of Mechanical Engineering, Automotive Engineering, United Kingdom 2006 - 2007

Undergraduate, Istanbul University, Turkey 2001 - 2005

### Foreign Languages

English, C2 Mastery

### Dissertations

Doctorate, A Physics-Driven Model for the Closed-Loop Quality Control of Remote Laser Welding, University of Warwick, Warwick Manufacturing Group, Makine Mühendisliği, 2019

Postgraduate, Technology Management in Hybrid Electrical Vehicles, University of Bath, Makine Fakültesi, Otomotiv Mühendisliği, 2007

### Research Areas

Signal Processing Theory and Methods, Artificial Intelligence, Computer Learning and Pattern Recognition, Quality and Reliability, Predictive and Preventive Maintenance, Mechanical Vibrations, Mechanical

### Academic Titles / Tasks

Assistant Professor, Recep Tayyip Erdoğan University, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2020 - Continues

Lecturer PhD, Recep Tayyip Erdoğan University, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2019 - 2020

Research Assistant, Bursa Technical University, Doğa Bilimleri Mimarlık Ve Mühendislik Fakültesi, Makine Mühendisliği,

2011 - 2014

## Academic and Administrative Experience

Head of Department, Recep Tayyip Erdogan University, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2020 - Continues

## Courses

System Dynamics and Control, Undergraduate, 2021 - 2022  
Static, Undergraduate, 2021 - 2022  
Strength of Materials, Undergraduate, 2020 - 2021  
Mechanical Vibrations, Undergraduate, 2020 - 2021  
Optimisation and Machine Learning in Engineering Applications, Postgraduate, 2020 - 2021  
Management and Organization, Undergraduate, 2020 - 2021  
Teknik İletişim, Undergraduate, 2020 - 2021  
Matlab Programming for Mechanical Engineers, Postgraduate, 2020 - 2021  
Engineering Dynamics, Undergraduate, 2020 - 2021  
Strength of Materials, Undergraduate, 2019 - 2020  
Mechanical Vibrations, Undergraduate, 2019 - 2020  
Engineering Dynamics, Undergraduate, 2019 - 2020

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

- I. **A data-driven predictive maintenance model to estimate RUL in a multi-rotor UAS**  
Özkat E. C., Bektas O., Nielsen M. J., La Cour-Harbo A.  
INTERNATIONAL JOURNAL OF MICRO AIR VEHICLES, vol.15, 2023 (SCI-Expanded)
- II. **Machine learning models to estimate the elastic modulus of weathered magmatic rocks**  
Ceryan N., Özkat E. C., Korkmaz Can N., Ceryan S.  
ENVIRONMENTAL EARTH SCIENCES, vol.80, no.12, 2021 (SCI-Expanded)
- III. **Laser dimpling process parameters selection and optimization using surrogate-driven process capability space**  
Ozkat E. C., Franciosa P., Ceglarek D.  
OPTICS AND LASER TECHNOLOGY, vol.93, pp.149-164, 2017 (SCI-Expanded)
- IV. **Development of decoupled multi-physics simulation for laser lap welding considering part-to-part gap**  
Ozkat E. C., Franciosa P., Ceglarek D.  
JOURNAL OF LASER APPLICATIONS, vol.29, no.2, 2017 (SCI-Expanded)

## Articles Published in Other Journals

- I. **A Method to Classify Steel Plate Faults Based on Ensemble Learning**  
Özkat E. C.  
Journal of Materials and Mechatronics:A (Online), vol.3, no.2, pp.240-256, 2022 (Peer-Reviewed Journal)
- II. **Makine Öğrenmesi Metodolojisi Kullanılarak Yüksek Hızlı Rulmanlarda Sağlık Göstergesinin Belirlenmesi**  
Özkat E. C.  
Avrupa Bilim ve Teknoloji Dergisi, no.22, pp.176-183, 2021 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **GENETİK ALGORİTMANIN MEKANİK TASARIM PROBLEMLERİNİN ÇÖZÜMÜNDE KULLANIMI**  
Özkat E. C.  
in: Herkes İçin Genetik Algoritma, Aktürk Cemal, Editor, Nobel Yayın Dağıtım, Ankara, pp.147-174, 2021

## Refereed Congress / Symposium Publications in Proceedings

- I. **A Study of Ensemble Learning and Wavelet Scattering for Bearing Fault Detection**  
Özkat E. C.  
International Materials Engineering and Advanced Manufacturing Technologies Congress, İstanbul, Turkey, 15 - 16 October 2022, pp.190-195
- II. **A Degradation Model to Predict the Remaining Useful Life of Bearings**  
Özkat E. C.  
International Conference on AI and Big Data in Engineering Applications, 15 June 2021, pp.227-239
- III. **The Comparison Of Machine Learning Algorithms In Estimation Of Remaining Useful Life**  
ÖZKAT E. C.  
IXTH INTERNATIONAL MAINTENANCETECHNOLOGIES CONGRESS AND EXHIBITION, Denizli, Turkey, 26 - 28 September 2019, vol.704, pp.613-620
- IV. **A Framework for Physics-driven in-process Monitoring of Penetration and Interface Width in Laser Overlap Welding**  
Ozkat E. C., Franciosa P., Ceglarek D.  
27th CIRP Design Conference 2017, Cranfield, United Kingdom, 10 - 12 May 2017, vol.60, pp.44-49
- V. **In-Process Monitoring of Remote Laser Welding Considering Part-to-Part Gap in Overlap Joint Based on Energy Balance Method**  
ÖZKAT E. C., FRANCIOSA P., CEGLAREK D.  
Int. Congress Appl. Laser Electro-Optics, SAN DIEGO, United States Of America, 16 - 20 October 2016, vol.2016, pp.602-610
- VI. **Dizel Araç Egzoz Sisteminin AVL Fire CFD Programı ile Modellenmesi**  
ÖZKAT E. C., ALKAN B., SÜR MEN A.  
ULIBTK 2013 19. Ulusal Isı Bilimleri ve Tekniği Kongresi, Samsun, Turkey, 9 - 12 September 2013
- VII. **Technology Management in Hybrid Electric Vehicle: Milner CVT Approaches to Transmission**  
ÖZKAT E. C., KHAN S., SÜR MEN A.  
OTEKON 2012 6. Otomotiv Teknolojileri Kongresi, Bursa, Turkey, 4 - 05 June 2012

## Metrics

Publication: 14  
Citation (WoS): 17  
Citation (Scopus): 17  
H-Index (WoS): 3  
H-Index (Scopus): 3

## Scholarships

Post-Doctorate Research Fellowship from TUBITAK (The Scientific and Technological Research Council of Turkey) through funding programme 2219/2, 2020, TUBITAK, 2021 - 2022  
Postgraduate Research Scholarship of Turkish Ministry of Education, Doctoral research in Warwick Manufacturing

Group at the University of Warwick, Ministry of Education, 2014 - 2019