

Asst. Prof. ERKAN CANER ÖZKAT

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: AAS-1248-2021

ScopusID: 57193528102

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, İstanbul University-Cerrahpaşa, Faculty Of Engineering, Department Of Mechanical Engineering, 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 Erdogan University, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2020 -

Continues

Lecturer PhD, Recep Tayyip Erdogan 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 Ve Mimarlık Fakültesi, Makine Mühendisliği, 2020 - Continues

Erasmus Program Department Coordinator, Recep Tayyip Erdogan University, Mühendislik Ve Mimarlık Fakültesi, Makine Mühendisliği, 2019 - 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

Advising Theses

Özkat E. C., PREDICTING REMAINING USEFUL LIFE OF BEARINGS THROUGH VIBRATION ANALYSIS-BASED PREDICTIVE MAINTENANCE, Postgraduate, E.KALCIOĞLU(Student), 2023

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Vibration data-driven anomaly detection in UAVs: A deep learning approach**
Özkat E. C.
Engineering Science and Technology, an International Journal, vol.54, 2024 (SCI-Expanded)
- II. **Machine learning driven optimization and parameter selection of multi-surface HTS Maglev**
Özkat E. C., Abdioglu M., Öztürk U. K.
Physica C: Superconductivity and its Applications, vol.616, 2024 (SCI-Expanded)
- III. **Extended 2-D Magnetic Field Modeling of Linear Motor to Investigate the Magnetic Force Parameters of High-Speed Superconducting Maglev**
ÖZTÜRK U. K., ABDİOĞLU M., ÖZKAT E. C., MOLLAHANNOĞLU H.
IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY, vol.33, no.4, 2023 (SCI-Expanded)
- IV. **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)
- V. **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)

VI. 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)

VII. 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. Positional Health Assessment of Collaborative Robots Based on Long Short-Term Memory Auto-Encoder (LSTMAE) Network

Hasan N., Webb L., Chinanthai M. K., Hossain M. A., ÖZKAT E. C., Tokhi M. O., Alkan B.

26th International Conference series on Climbing and Walking Robots and the Support Technologies for Mobile Machines, CLAWAR 2023, Florianopolis, Brazil, 2 - 04 October 2023, vol.811, pp.323-335

II. 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

III. 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

IV. 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

V. 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, Cranfield, England, 10 - 12 May 2017, vol.60, pp.44-49

- VI. **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
- VII. **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
- VIII. **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

Supported Projects

Özkat E. C., TUBITAK Project, Extraction of Required Material Properties for the Machine Learning Algorithm of the Process of Developing Manufacturable Alloys with Additive Manufacturing, 2022 - 2023

Student Project

R & D Project, Extraction of Required Material Properties for the Machine Learning Algorithm of the Process of Developing Manufacturable Alloys with Additive Manufacturing, Recep Tayyip Erdogan University, Mühendislik Ve Mimarlık Fakültesi, Makine Mühendisliği, Turkey, 2022 - 2023

Scientific Refereeing

IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS, SCI Journal, July 2023

JOURNAL OF INTELLIGENT MANUFACTURING, SCI Journal, July 2020

JOURNAL OF INTELLIGENT MANUFACTURING, SCI Journal, May 2019

Metrics

Publication: 18

Citation (WoS): 42

Citation (Scopus): 45

H-Index (WoS): 5

H-Index (Scopus): 5

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