

Asst. Prof. Ömer Music

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: H-8544-2018

ScopusID: 8623751300

Yoksis Researcher ID: 58859

Biography

Omer Music holds Bachelor and Master of Science degrees in mechanical engineering, both from the Middle East Technical University and a PhD in engineering from the University of Cambridge, UK. In parallel to his Master's studies, he worked as a research engineer for ORS Bearings. He has six years of experience in industrial research and five years in academic research.

Just after his PhD, In 2011, he was awarded the International Karl-Kolle Prize for Metal Forming by the German Metal Forming Association, in recognition of "application oriented innovative outstanding research achievements in the field of metal forming" and an Outstanding PhD dissertation award by the Department of Engineering at the University of Cambridge.

In 2012, he started his academic career at Atilim University, as a faculty member in the manufacturing engineering department and a senior researcher at the Metal Forming Centre of Excellence, where he was appointed a member of the Executive Board. His work was focused on industrial projects, mainly with the automotive, machine tools and aerospace industry.

At the beginning of 2017, he moved to TED University, as a faculty member in the Department of Mechanical Engineering.

He is an active reviewer for a number of international journals and a scientific committee member of a number of international conferences. He holds a number of patents on metal forming processes.

Education Information

Doctorate, University of Cambridge, Engineering, England 2007 - 2011

Postgraduate, Middle East Technical University, Turkey 2001 - 2004

Undergraduate, Middle East Technical University, Turkey 1996 - 2001

Foreign Languages

Bosnian
English
Turkish

Academic Titles / Tasks

Other, TED University, Faculty of Engineering, Department of Mechanical Engineering, 2017 - Continues
Assistant Professor, TED University, Faculty of Engineering, Department of Mechanical Engineering, 2017 - Continues
Assistant Professor, Atılım University, Manufacturing Engineering Department, 2012 - 2016
Other, University of Cambridge, Department of Engineering, 2008 - 2010

Academic and Administrative Experience

University representative, Ministry of Science, Industry and Technology, Public-University-Industry Collaboration
Workgroup / R&D Incentives Directorate, 2019 - Continues
Management Board member, TED University, TEDUTECH Technology Transfer Office, 2018 - Continues
Academic advisory board member, TED University, Continuous Education Center, 2017 - Continues

Courses

Machine Design I, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017
Fundamentals of Metal Forming, Postgraduate, 2021 - 2022, 2020 - 2021, 2018 - 2019
Senior Project, Undergraduate, 2021 - 2022, 2019 - 2020
Master's Thesis II, Postgraduate, 2022 - 2023, 2021 - 2022
Master's Thesis I, Postgraduate, 2021 - 2022
Mechanics of Materials, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018
Machine Design I, Undergraduate, 2016 - 2017
Materials Science, Undergraduate, 2021 - 2022
Applied Finite Element Analysis, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018
Fundamentals of Metal Forming, Undergraduate, 2020 - 2021, 2018 - 2019
Numerical Methods in Engineering, Undergraduate, 2020 - 2021, 2018 - 2019, 2017 - 2018
Introduction to Solid Mechanics, Undergraduate, 2020 - 2021, 2019 - 2020
Manufacturing Processes, Undergraduate, 2019 - 2020
Master's Thesis II, Postgraduate, 2019 - 2020
Master's Thesis I, Postgraduate, 2019 - 2020
Numerical Methods in Engineering, Undergraduate, 2016 - 2017

Jury Memberships

December, 2021
January, 2021
January, 2021
January, 2021
November, 2019
May, 2019

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Shear spinning: numerical modelling and process mechanics**
Uzun M. C., Music Ö.
International Journal of Advanced Manufacturing Technology, vol.135, no.7-8, pp.4015-4033, 2024 (SCI-Expanded)
- II. **Backward tube spinning mechanics**
Sariyarlioglu E. C., Music Ö., Bakkal M.
International Journal of Advanced Manufacturing Technology, vol.123, no.1-2, pp.479-491, 2022 (SCI-Expanded)
- III. **Mechanics of tube spinning: a review**
Music Ö., Sariyarlioglu E. C.
International Journal of Advanced Manufacturing Technology, vol.123, no.3-4, pp.709-735, 2022 (SCI-Expanded)
- IV. **Folding-shearing: Shrinking and stretching sheet metal with no thickness change**
Allwood J. M., Cleaver C. J., Loukaides E. G., Music Ö., Nagy-Sochacki A.
CIRP Annals, vol.68, no.1, pp.285-288, 2019 (SCI-Expanded)
- V. **Assessment of Pb, Cd and Hg soil contamination and its potential to cause cytotoxic and genotoxic effects in human cell lines (CaCo-2 and HaCaT)**
Husejnovic M. S., Bergant M., Jankovic S., Zizek S., Smajlovic A., Softic A., Music Ö., Antonijevic B.
Environmental Geochemistry and Health, vol.40, no.4, pp.1557-1572, 2017 (SCI-Expanded)
- VI. **The use of spatial impulse responses to characterise flexible forming processes with mobile tools**
Music Ö., Allwood J. M.
Journal of Materials Processing Technology, vol.212, no.5, pp.1139-1156, 2012 (SCI-Expanded)
- VII. **Flexible asymmetric spinning**
Music Ö., Allwood J. M.
CIRP Annals - Manufacturing Technology, vol.60, no.1, pp.319-322, 2011 (SCI-Expanded)
- VIII. **The effect of partially cut-out blanks on geometric accuracy in incremental sheet forming**
Allwood J. M., Braun D., Music Ö.
Journal of Materials Processing Technology, vol.210, no.11, pp.1501-1510, 2010 (SCI-Expanded)
- IX. **A review of the mechanics of metal spinning**
Music Ö., Allwood J., Kawai K.
Journal of Materials Processing Technology, vol.210, no.1, pp.3-23, 2010 (SCI-Expanded)
- X. **Closed-loop feedback control of product properties in flexible metal forming processes with mobile tools**
Allwood J. M., Music Ö., Raithathna A., Duncan S. R.
CIRP Annals - Manufacturing Technology, vol.58, no.1, pp.287-290, 2009 (SCI-Expanded)
- XI. **The technical and commercial potential of an incremental ring rolling process**
Allwood J., Kopp R., Michels D., Music Ö., Öztop M., Stanistreet T., Tekkaya A., Tiedemman I.
CIRP Annals - Manufacturing Technology, vol.54, no.1, pp.233-236, 2005 (SCI-Expanded)

Books & Book Chapters

- I. **Shear forming**
Music Ö.
in: CIRP Encyclopedia of Production Engineering, Luc Laperrière, Gunther Reinhart, Editor, Springer, Berlin, Heidelberg, pp.1555-1560, 2019
- II. **Flexible asymmetric spinning**
Music Ö., Allwood J.
in: 60 Excellent Inventions in Metal Forming, , Editor, Springer Berlin Heidelberg, pp.173-178, 2015

Refereed Congress / Symposium Publications in Proceedings

- I. **An Exploration of the Process Operating Window for Folding-Shearing in a Press-Tool**
Arora R., Music Ö., Cleaver C. J., Allwood J. M.
14th International Conference on Technology of Plasticity, ICTP 2023, Mandelieu-La Napoule, France, 24 - 29 September 2023, pp.70-77
- II. **Modelling and Mechanics of Shear Spinning**
Uzun M. C., Music Ö.
14th International Conference on Technology of Plasticity, ICTP 2023, Mandelieu-La Napoule, France, 24 - 29 September 2023, pp.766-774
- III. **Evolution of microstructure during hot incremental disk rolling of a nickel-based super-alloy**
Dinçer M. Ş., Ozcatalbas M., Acar S. S., Music Ö., ŞİMŞİR C.
26th International ESAFORM Conference on Material Forming, ESAFORM 2023, Krakow, Poland, 19 - 21 April 2023, vol.28, pp.667-674
- IV. **Analysis of Tube Spinning**
Sarıyarlıoğlu E., Music Ö., Bakkal M.
13th International Conference on the Technology of Plasticity, ICTP 2021, Virtual, Online, 25 - 30 July 2021, pp.2077-2088
- V. **Numerical Modelling and Deformation Mechanics of the English Wheel Process**
Bowen D. T., Music Ö., Alaz Erdinc A., Shokrani A., Loukaides E. G.
13th International Conference on the Technology of Plasticity, ICTP 2021, Virtual, Online, 25 - 30 July 2021, pp.457-466
- VI. **Construction of preparatory underground facilities with combine in specific mineral-geological conditions of coal mine " Mramor"**
Music Ö., Gutic K., Cickusic H., Sejranic E.
26th International Mining Congress and Exhibition of Turkey, IMCET 2019, Antalya, Turkey, 16 - 19 April 2019, pp.305-316
- VII. **Working technology of long wall equipment in variable dimensions of excavation panel**
Music Ö., Dostovic D., Gutic K., Čičkušić H., Sarajlic Š.
26th International Mining Congress and Exhibition of Turkey, IMCET 2019, Antalya, Turkey, 16 - 19 April 2019, pp.672-683
- VIII. **Simulation of incremental sheet forming using partial sheet models**
Memcoglu P., Music Ö., Karadogan C.
International Conference on the Technology of Plasticity, ICTP 2017, Hucisko, England, 17 - 22 September 2017, vol.207, pp.831-835
- IX. **A Potential Solution to Mystical Materials in Indentation Test**
Billur E., Çetin B., Music Ö., Şimşir C., Davut K.
International Conference on the Technology of Plasticity, ICTP 2017, Hucisko, England, 17 - 22 September 2017, vol.207, pp.1952-1957
- X. **Analysis of elastic-plastic interference-fit joints**
Hüyük H., Music Ö., Koç A., Karadoğan Ç., Bayram Ç.
11th International Conference on Technology of Plasticity, ICTP 2014, Nagoya, Japan, 19 - 24 October 2014, vol.81, pp.2030-2035
- XI. **Tool-path design for metal spinning**
Music Ö., Allwood J.
10th International Conference on Technology of Plasticity, ICTP 2011, Aachen, Germany, 25 - 30 September 2011, pp.542-547
- XII. **A method for evaluation of flexible forming processes**
Music Ö., Allwood J.
9th International Conference on Technology of Plasticity, ICTP 2008, Gyeongju, South Korea, 7 - 11 September 2008, pp.1771-1776

Scientific Refereeing

JOURNAL OF MANUFACTURING SCIENCE AND ENGINEERING, TRANSACTIONS OF THE ASME, April 2021
INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, March 2021
JOURNAL OF MATERIALS PROCESSING TECHNOLOGY, January 2021
IDDRG Conference, July 2020
13th International Conference on Technology of Plasticity, February 2020
JOURNAL OF MATERIALS PROCESSING TECHNOLOGY, January 2020
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS, PART L: JOURNAL OF MATERIALS: DESIGN AND APPLICATIONS, January 2020
INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, January 2020
ASME Journal of Manufacturing Science and Engineering, January 2020
INTERNATIONAL JOURNAL OF MATERIAL FORMING, January 2019
JOURNAL OF MATERIALS PROCESSING TECHNOLOGY, January 2019
JOURNAL OF MANUFACTURING SCIENCE AND ENGINEERING, TRANSACTIONS OF THE ASME, January 2019

Awards

MUSIC Ö., JMPT 2020 Best reviewer award, Elsevier publishing, January 2020