

## Asst. Prof. ORKUN ÖZŞAHİN

### Personal Information

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### Education Information

Doctorate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Makine Mühendisliği (YI) (Tezli), Turkey 2008 - 2014

Postgraduate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Makine Mühendisliği (YI) (Tezli), Turkey 2005 - 2008

Undergraduate, Middle East Technical University, Faculty Of Engineering, Makine Mühendisliği Bölümü, Turkey 2000 - 2005

### Dissertations

Doctorate, Analysis and modelling of machine tool dynamics and cutting stability during operation, Middle East Technical University, Graduate School of Natural and Applied Sciences, Makine Mühendisliği (YI) (Tezli), 2014

Postgraduate, An investigation on dynamic contact parameters in machining center spindle?tool assemblies, Middle East Technical University, Graduate School of Natural and Applied Sciences, Makine Mühendisliği (YI) (Tezli), 2008

### Research Areas

Mechanical Engineering, Construction and Manufacturing, Machine Elements, Machine Design, Machining Methods, Machine Theory and Dynamics, Mechanical Vibrations, Engineering and Technology

### Academic Titles / Tasks

Assistant Professor, Middle East Technical University, Faculty Of Engineering, Department Of Mechanical Engineering, 2018 - Continues

Assistant Professor, Middle East Technical University, Faculty Of Engineering, Department Of Mechanical Engineering, 2017 - 2018

Assistant Professor, Atilim University, Faculty Of Engineering, İmalat, 2015 - 2017

Research Assistant, Middle East Technical University, Faculty Of Engineering, Department Of Mechanical Engineering, 2009 - 2013

### Courses

THEORY OF MACHINES II, Undergraduate, 2018 - 2019, 2019 - 2020

SPECIAL TOPICS IN ME: MACHINING DYNAMICS AND MACHINE TOOL VIBRATIONS, Undergraduate, 2018 - 2019

## ARTICLES PUBLISHED IN JOURNALS THAT ENTERED SCI, SSCI AND AHCI INDEXES

- I. **Alternative experimental methods for machine tool dynamics identification: A review**  
Iglesias A., Taner Tunç L., ÖZŞAHİN O., Franco O., Munoa J., Budak E.  
Mechanical Systems and Signal Processing, vol.170, 2022 (Journal Indexed in SCI Expanded)
- II. **Use of inverse stability solutions for identification of uncertainties in the dynamics of machining processes**  
Tunc L. T., Özşahin O.  
ADVANCES IN MANUFACTURING, vol.6, pp.308-318, 2018 (Journal Indexed in SCI)
- III. **High speed tooltip FRF predictions of arbitrary tool-holder combinations based on operational spindle identification**  
Postel M., Ozsahin O., Altintas Y.  
INTERNATIONAL JOURNAL OF MACHINE TOOLS & MANUFACTURE, vol.129, pp.48-60, 2018 (Journal Indexed in SCI)
- IV. **Determination of tool point FRF of micro tools under operational conditions using analytical methods**  
ÖZŞAHİN O.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.33, no.2, pp.517-526, 2018 (Journal Indexed in SCI)
- V. **Stability of Milling Operations With Asymmetric Cutter Dynamics in Rotating Coordinates**  
Comak A., Ozsahin O., Altintas Y.  
JOURNAL OF MANUFACTURING SCIENCE AND ENGINEERING-TRANSACTIONS OF THE ASME, vol.138, no.8, 2016 (Journal Indexed in SCI)
- VI. **Receptance coupling based algorithm for the identification of contact parameters at holder-tool interface**  
Matthias W., Ozsahin O., Altintas Y., DENKENA B.  
CIRP JOURNAL OF MANUFACTURING SCIENCE AND TECHNOLOGY, vol.13, pp.37-45, 2016 (Journal Indexed in SCI)
- VII. **Identification of bearing dynamics under operational conditions for chatter stability prediction in high speed machining operations**  
ÖZŞAHİN O., Budak E., ÖZGÜVEN H. N.  
PRECISION ENGINEERING-JOURNAL OF THE INTERNATIONAL SOCIETIES FOR PRECISION ENGINEERING AND NANOTECHNOLOGY, vol.42, pp.53-65, 2015 (Journal Indexed in SCI)
- VIII. **Prediction of frequency response function (FRF) of asymmetric tools from the analytical coupling of spindle and beam models of holder and tool**  
Ozsahin O., Altintas Y.  
INTERNATIONAL JOURNAL OF MACHINE TOOLS & MANUFACTURE, vol.92, pp.31-40, 2015 (Journal Indexed in SCI)
- IX. **In-process tool point FRF identification under operational conditions using inverse stability solution**  
ÖZŞAHİN O., Budak E., ÖZGÜVEN H. N.  
INTERNATIONAL JOURNAL OF MACHINE TOOLS & MANUFACTURE, vol.89, pp.64-73, 2015 (Journal Indexed in SCI)
- X. **Analytical modeling of asymmetric multi-segment rotor - bearing systems with Timoshenko beam model including gyroscopic moments**  
Ozsahin O., ÖZGÜVEN H. N. , Budak E.  
COMPUTERS & STRUCTURES, vol.144, pp.119-126, 2014 (Journal Indexed in SCI)
- XI. **Analysis and compensation of mass loading effect of accelerometers on tool point FRF measurements for chatter stability predictions**  
ÖZŞAHİN O., ÖZGÜVEN H. N. , Budak E.  
INTERNATIONAL JOURNAL OF MACHINE TOOLS & MANUFACTURE, vol.50, no.6, pp.585-589, 2010 (Journal Indexed in SCI)
- XII. **A closed-form approach for identification of dynamical contact parameters in spindle-holder-tool assemblies**  
ÖZŞAHİN O., ERTURK A., ÖZGÜVEN H. N. , Budak E.

## Refereed Congress / Symposium Publications in Proceedings

- I. **Identification of spindle dynamics by receptance coupling for non-contact excitation system**  
ÖZŞAHİN O., Ritou M., Budak E., Rabréau C., Le Loch S.  
17th CIRP Conference on Modelling of Machining Operations, CIRP CMMO, Sheffield, United Kingdom, 13 - 14 June 2019, vol.82, pp.273-278
- II. **ANALYSIS AND DESIGN OF VARIABLE PITCH TOOLS FOR THE IMPROVED PRODUCTIVITY**  
ÖZŞAHİN O.  
International Congress on Machining (UTIS 2018), Antalya, Turkey, 8 - 10 October 2018
- III. **Analytical modeling of the machine tool spindle dynamics under operational conditions**  
ÖZŞAHİN O., Budak E., ÖZGÜVEN H. N.  
37th International MATADOR 2012 Conference, Manchester, United Kingdom, 25 - 27 July 2012, pp.117-120
- IV. **Investigating Dynamics of Machine Tool Spindles under Operational Conditions**  
ÖZŞAHİN O., Budak E., ÖZGÜVEN H. N.  
13th CIRP Conference on Modelling of Machining Operations, Sintra, Portugal, 12 - 13 May 2011, vol.223, pp.610-612
- V. **The use of noise measurements in machining stability analysis**  
Özlü E., ÖZŞAHİN O., Budak E., ÖZGÜVEN H. N.  
36th International Congress and Exhibition on Noise Control Engineering, INTER-NOISE 2007, İstanbul, Turkey, 28 - 31 August 2007, vol.7, pp.4881-4894

## Citations

Total Citations (WOS):280

h-index (WOS):10