

Prof. Dr. Sadettin ORHAN

Personal Information

Office Phone: [+90 312 906 2341](tel:+903129062341)

Email: sadettinorhan@ybu.edu.tr

Web: <https://aybu.edu.tr/sadettinorhan/>

Address: ANKARA YILDIRIM BEYAZIT ÜNİVERSİTESİ
Mühendislik ve Doğa Bilimleri Fakültesi Makine
Mühendisliği Bölümü 15 Temmuz Şehitleri Yerleşkesi
Ayvalı Mh. Gazze Cd. 150. Sokak, Antares AVM Yanı
Etlük, Keçiören /ANKARA, TÜRKİYE



Education Information

PhD, Kırıkkale Üniversitesi, Mühendislik Fakültesi,
Makine Mühendisliği Bölümü, Turkey 1996 - 2002

MSc, Kırıkkale Üniversitesi, Fen Bilimleri Enstitüsü,
Makine Mühendisliği (YI) (Tezli), Turkey 1994 - 1996

BSc, Selçuk Üniversitesi, Mühendislik Fakültesi,
Makine Mühendisliği Bölümü, Turkey 1988 - 1992

Thesis

PhD, Rulmanlarla yataklanmış dinamik sistemlerin titreşim analizi ile
kestirimci bakımı, Kırıkkale University, Graduate School of Natural and
Applied Sciences, 2002

MSc, İki kolu düzlemsel robot mekanizmasında esnekliğin yörüngeye etkisi,
Kırıkkale University, Graduate School of Natural and Applied Sciences, 1996

Research Areas

Dynamics of Machinery, Mechanisms, Mechanical Vibrations, Structural Health Monitoring, Finite Element Methods.

Academic Titles / Tasks

Professor, Ankara Yıldırım Beyazıt Üniversitesi, Mühendislik ve Doğa Bilimleri Fakültesi, Makine Mühendisliği Bölümü, 2015 - Continues

Associate Professor, Ankara Yıldırım Beyazıt Üniversitesi, Mühendislik Ve Doğa Bilimleri Fakültesi, Makine Mühendisliği Bölümü, 2013 - 2015

Associate Professor, Southern University and A & M College, Faculty of Engineering, Computer Engineering, 2013 – 2013, USA

Associate Professor, Ankara Yıldırım Beyazıt Üniversitesi, Mühendislik Ve Doğa Bilimleri Fakültesi, Makine Mühendisliği Bölümü, 2011 - 2013

Associate Professor, Kırıkkale Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2010 - 2011

Assistant Professor, Kırıkkale Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2003 - 2010

Research Assistant, Kırıkkale Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 1994 - 2003

Academic and Administrative Experience

Head of department, Ankara Yıldırım Beyazıt Üniversitesi, Mühendislik Ve Doğa Bilimleri Fakültesi, Makine Mühendisliği Bölümü, 2016 - Continues

Vice Head of department, Ankara Yıldırım Beyazıt Üniversitesi, Mühendislik Ve Doğa Bilimleri Fakültesi, Makine Mühendisliği Bölümü, 2013 - 2015

Head of department, Ankara Yıldırım Beyazıt Üniversitesi, Mühendislik Ve Doğa Bilimleri Fakültesi, Makine Mühendisliği Bölümü, 2011 - 2013

Vice Head of department, Kırıkkale Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2005 - 2009

Courses

Mechanisms, Undergraduate

Advanced Mechanical Vibrations, Graduate

Mechanical Vibrations, Undergraduate

Vibration of Continuous Systems, Graduate

Articles Published in Journals indexed by SCI, SSCI and AHCI.

- I. **A new development of measurement technique for residual stresses generated by the cold tube drawing process with a fixed mandrel**

Gattmah J., ÖZTÜRK F., ORHAN S.

International Journal of Advanced Manufacturing Technology, vol.108, pp.3675-3687, 2020 (Journal Indexed in SCI Expanded)

- II. **Numerical Simulation of Bending Process for Steel Plate Using Finite Element Analysis**

Gattmah J., ÖZTÜRK F., ORHAN S.

Arabian Journal for Science and Engineering, vol.44, no.12, pp.10285-10292, 2019 (Journal Indexed in SCI Expanded)

- III. **Determination of the stiffness properties of a complex RF MEMS by superposition and finite elements method**

Yilmaz M. C. , Orhan S.

Microsystem Technologies, vol.25, no.7, pp.2561-2569, 2019 (Journal Indexed in SCI Expanded)

- IV. **Vibro-acoustic design, manufacturing and characterization of a tonpiliz-type transducer**

Kurt P., Sansal M., Tatar I., Duran C., Orhan S.

Applied Acoustics, vol.150, pp.27-35, 2019 (Journal Indexed in SCI Expanded)

V. **Experimental and finite element analysis of residual stresses in cold tube drawing process with a fixed mandrel for AISI 1010 steel tube**

Gattmah J., Ozturk F., Orhan S.

International Journal of Advanced Manufacturing Technology, vol.93, pp.1229-1241, 2017 (Journal Indexed in SCI Expanded)

VI. **Effects of Process Parameters on Hot Extrusion of Hollow Tube**

Gattmah J., Ozturk F., Orhan S.

Arabian Journal for Science and Engineering, vol.42, no.5, pp.2021-2030, 2017 (Journal Indexed in SCI Expanded)

VII. **The effect of crack geometry on the nondestructive fault detection in a composite beam**

Orhan S., LÜY M., Dirikolu M. H. , Zorlu G. M.

International Journal of Acoustics and Vibrations, vol.21, no.3, pp.271-273, 2016 (Journal Indexed in SCI Expanded)

VIII. **Tool condition monitoring in turning using statistical parameters of vibration signal**

ARSLAN H., ER A. O. , Orhan S., Aslan E.

International Journal of Acoustics and Vibrations, vol.21, no.4, pp.371-378, 2016 (Journal Indexed in SCI Expanded)

IX. **Analysis of free and forced vibration of a cracked cantilever beam**

Orhan S.

NDT and E International, vol.40, no.6, pp.443-450, 2007 (Journal Indexed in SCI Expanded)

- X. **Tool wear evaluation by vibration analysis during end milling of AISI D3 cold work tool steel with 35 HRC hardness**

Orhan S., Er A. O. , Camuşcu N., Aslan E.

NDT and E International, vol.40, no.2, pp.121-126, 2007 (Journal Indexed in SCI Expanded)

- XI. **Vibration monitoring for defect diagnosis of rolling element bearings as a predictive maintenance tool: Comprehensive case studies**

Orhan S., Aktürk N., Çelik V.

NDT and E International, vol.39, pp.293-298, 2006 (Journal Indexed in SCI Expanded)

- XII. **An analysis of cracked beam structure using impact echo method**

Çam E., Orhan S., Lüy M.

NDT and E International, vol.38, no.5, pp.368-373, 2005 (Journal Indexed in SCI Expanded)

Articles Published in other Journals

- I. **An Artificial Neural Network (ANN) Approach for Solution of the Transcendental Equation of Longitudinal Vibration**

AKTAŞ G. R. , EMÜL A., ORHAN S.

Uludağ Üniversitesi Mühendislik Fakültesi Dergisi, vol.24, no.1, pp.161-170, 2019 (Other Refereed National Journals)

- II. **Effect of the process parameters on cold tube drawing with a fixed plug using finite element analysis for AISI 1010 steel**

Gattmah J., ÖZTÜRK F., ORHAN S.

SAÜ Fen Bilimleri Enstitüsü Dergisi, vol.21, no.5, pp.886-892, 2017
(Other Refereed National Journals)

III. DETECTION OF DEFECTS IN A CANTILEVER BEAM USING MODAL TEST DATA

Çam E., Lüy M., Orhan S.

Pamukkale Üniversitesi Mühendislik Bilimleri Dergisi, vol.10, no.3,
pp.327-331, 2004 (National Refreed University Journal)

IV. Düşük Kavrama Oranlı Dişlilerde Rijitliğin Sonlu Elemanlar Metodu ile Belirlenmesi

AKTAŞ A., ORHAN S.

Teknoloji, vol.7, no.2, pp.285-288, 2004 (Other Refereed National Journals)

V. Aktarma Organı Dişlilerinde Oluşan Fiziksel Hataların Titreşim Analizi ile Belirlenmesi

ORHAN S., AKTÜRK N.

Journal of the Faculty of Engineering and Architecture of Gazi
üniversitesi, vol.18, no.3, pp.97-106, 2003 (Other Refereed National Journals)

VI. Dönen Makinelerde Arızalar ve Titreşim ilişkisi

ORHAN S.

Teknoloji, vol.6, pp.41-48, 2003 (Other Refereed National Journals)

VII. Titreşim Analiziyle Rulman Arızalarının Belirlenmesi

ORHAN S., ARSLAN H., AKTÜRK N.

Journal of the Faculty of Engineering and Architecture of Gazi
üniversitesi, vol.18, no.2, pp.39-48, 2003 (Other Refereed National Journals)

VIII. Pimli Bağlantılarda Çatlak İlerleme Yönünün Sonlu Elemanlar Metodu ile Bulunması

AKTAŞ A., ORHAN S.

G.U. Journal of Science, vol.16, no.4, pp.751-757, 2003 (Other Refereed National Journals)

IX. Bir Santrifüj Pompa Rulmanlarının Çalışabilirliğinin Titreşim Analizi ile Belirlenmesi

ORHAN S., AKTÜRK N., ÇELİK V.

Journal of the Faculty of Engineering and Architecture of Gazi üniversitesi, vol.16, no.3, pp.543-552, 2003 (Other Refereed National Journals)

X. Bilyalı Rulman Hasarlarının Neden Olduğu Titreşimlerin Modellenmesi

ARSLAN H., ORHAN S., AKTÜRK N.

Journal of the Faculty of Engineering and Architecture of Gazi üniversitesi, vol.18, no.4, pp.123-146, 2003 (Other Refereed National Journals)

Refereed Congress / Symposium Publications in Proceedings

I. Analysis of cold rolling process with different parameters using finite element method

ÖZTÜRK F., GATTMAH J., ORHAN S.

1st International Conference on Advances in Mechanical and Mechatronics Engineering (ICAMMEN 2018), 8 - 09 November 2018

II. Contact Force Calculation Of An Electrically Actuated Micro Cantilever Beam Switch

ORHAN S., YILMAZ M. C.

1st International Conference on Advances in Mechanical and Mechatronics Engineering (ICAMMEN 2018), 8 - 09 November 2018

III. **An Artificial Neural Network (ANN) Approach For Solution of The Transcendental Equation Of Longitudinal Vibration**

ORHAN S., AKTAŞ G. R. , EMÜL A.

1st International Conference on Advances in Mechanical and Mechatronics Engineering (ICAMMEN 2018), 8 - 09 November 2018

IV. **Investigation of the Effects of Cold Treatment on Wear Performance of AISI 8620 Carburized Steel**

UÇAK N., ÇİÇEK A., AYVALI K., AĞCA S., ORHAN S.

8th International Advanced Technologies Symposium (IATS17), Elazığ, Turkey, 19 - 22 October 2017

V. **Vibration analysis of multiple cracked beams subjected to moving load by finite element method**

KURT P., MÜLKOĞLU O., ORHAN S.

MECHANIKA 2017, Kaunas, Lithuania, 19 May 2017, pp.216-220

VI. **Vibration Analysis of Cracked Beam Subjected to a Moving Load by Finite Element Method**

KURT P., MÜLKOĞLU O., ORHAN S.

4TH INTERNATIONAL SYMPOSIUM ON INNOVATIVE TECHNOLOGIES IN ENGINEERING AND SCIENCE, Alanya/ANTALYA, Turkey, 3 - 05 November 2016, pp.1220-1229

VII. **Effects of the semi die plug angles on cold tube drawing with a fixed plug by FEM for AISI 1010 steel tube**

GATTMAH J., ÖZTÜRK F., ORHAN S.

4TH INTERNATIONAL SYMPOSIUM ON INNOVATIVE TECHNOLOGIES
IN ENGINEERING AND SCIENCE, 3 - 05 November 2016, pp.1065-1074

VIII. **Comparison of Three Vectoral Solutions for Kinematic Analysis of Mechanisms in Mechanical Engineering Education**

ORHAN S.

3RD INTERNATIONAL SYMPOSIUM ON INNOVATIVE TECHNOLOGIES
IN ENGINEERING AND SCIENCE, 3 - 05 June 2015

IX. **Sertleştirilmiş 1 2738 plastik kalıp çeliklerinin yüksek hızlarda işlenmesinde titreşimin işleme etkilerinin deneysel olarak incelenmesi**

ER A. O. , ORHAN S., Camuşcu N., ASLAN E.

3. Ulusal Talaşlı İmalat Sempozyumu, Ankara, Turkey, 4 - 05 October
2012, pp.354-361

X. **Balanssızlık ve Rulman Arızası Saha Örnekleri**

ORHAN S.

5.Bakım Teknolojileri Kongresi ve Sergisi, Sakarya, Turkey, 14 - 16
October 2011, pp.249-260

XI. **Helikopter ana rotor motor ve transmisyon hasarlarının önceden tespitinde bakım kullanım ve izleme sisteminin kullanımı**

Özdeş Ş., ORHAN S.

UMTS 2011 15. Ulusal Makina Teorisi Sempozyumu, Niğde, Turkey, 16 -
18 June 2011, pp.483-493

XII. **Defect analysis in different alloying Brass beams using non destructive technique**

ÇAM E., ORHAN S., LÜY M., ARSLAN H., EREL Ş.

4th International Conference on Electrical and Electronics
Engineering(ELECO 2005), 7 - 11 December 2005

XIII. Dişli Sehim Modelleri

ORHAN S.

UMTS 2001 10. Ulusal Makina Teorisi Sempozyumu, Konya, Turkey, 12 - 14 September 2001, pp.413-419

XIV. Sonlu Elemanlar Metodu ile Dişlilerin Doğal Frekanslarının Belirlenmesi

AKTAŞ A., ORHAN S.

UMTS 2001 10. Ulusal Makina Teorisi Sempozyumu, Turkey, 12 - 14 September 2001, vol.2, pp.621-626

XV. Mekanik Titreşimlerin Lazerle Algılanmasında Son Gelişmeler

EREL Ş., ORHAN S., ARSLAN H.

UMTS 2001 10. Ulusal Makina Teorisi Sempozyumu, Turkey, 12 - 14 September 2001, vol.2, pp.605-609

XVI. Sonlu elemanlar metodu ile kirişlerin modal analizi

ORHAN S.

9. Ulusal Makina Teorisi Sempozyumu, Gaziantep, Turkey, 15 - 17 September 1999, pp.221-226

XVII. An usability of remote sensing of mechanical vibrations in certain characteristics using the laser technique

EREL Ş., LÜY M., ORHAN S.

2th International Advanced Technologies symposium, 8 - 10 March 1999

XVIII. Effect of flexibility on trajectories of manipulators

ORHAN S., KARAGÜLLE H.

The Fourth International Conference on Control, Automation, Robotics and Vision (ICARCV'96), 3 - 06 December 1996, pp.553-557

Projects

Project manager, “**Sabit Mandrel İle Boru Çekmenin Deneysel ve Sonlu Elemanlar Yöntemiyle İncelenmesi**”, Project Supported by Higher Education Institutions, , 2016 – 2017

Project manager “**Design, Manufacturaing and Acoustic Tests of Transducers**”, Project Supported by Higher Education Institutions, “**Design, Manufacturaing and Acoustic Tests of Transducers**”, 2016 – 2017

Researcher, “**Silencer design**” Supported by Ministry of Science, Technology and Industry,2013.

Project manager, “**Experimental and finite element analysis of beams having defects subjected to forced vibration**”,Supported by Higher Education Institutions, Project No.2006/29, (2009)

Researcher, “**Determination of Gear defects by Vibration analysis**”, Supported by Higher Education Institutions, Project No.03/04-02-04, (2006)

Activities in Scientific Journals

Diyala Journal of Engineering Sciences

<https://djes.info/index.php/djes/Editoralteam>, **Editorial Board Member**, 2021 - Continues

Journal of Mechanics Engineering and Automation

<http://www.davidpublisher.org/index.php/Home/Journal/detail?journalid=27&jx=jmea&cont=editorial>, **Editorial Board Member**, 2017 - Continues

Scientific Refereeing

STRUCTURE, Journal Indexed in SCI-E, August 2020
MEASUREMENT, Journal Indexed in SCI-E, December 2019
MEASUREMENT SCIENCE & TECHNOLOGY, SCI Journal, December 2018
MEASUREMENT SCIENCE & TECHNOLOGY, SCI Journal, July 2018
MEASUREMENT SCIENCE & TECHNOLOGY, SCI Journal, June 2018
MEASUREMENT SCIENCE & TECHNOLOGY, SCI Journal, March 2018
MEASUREMENT SCIENCE & TECHNOLOGY, SCI Journal, August 2017
MEASUREMENT, Journal Indexed in SCI-E, February 2017
MEASUREMENT SCIENCE & TECHNOLOGY, SCI Journal, February 2017
MEASUREMENT SCIENCE & TECHNOLOGY, SCI Journal, November 2016
MEASUREMENT, National Scientific Refreed Journal, September 2016
MEASUREMENT SCIENCE & TECHNOLOGY, SCI Journal, August 2016
MEASUREMENT, Journal Indexed in SCI-E, April 2016
STRUCTURAL ENGINEERING AND MECHANICS, Journal Indexed in SCI-E,
March 2016
MEASUREMENT SCIENCE & TECHNOLOGY, SCI Journal, November 2015
MEASUREMENT, Journal Indexed in SCI-E, September 2015
JOURNAL OF VIBRATION AND CONTROL, Journal Indexed in SCI-E, October
2014
MEASUREMENT, Journal Indexed in SCI-E, January 2013
MEASUREMENT, Journal Indexed in SCI-E, April 2012
MEASUREMENT, Journal Indexed in SCI-E, November 2011

Citations

Total Citations (WOS): 324

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