

Prof.Dr. Sadettin ORHAN

Curriculum Vitae

Name and Surname: SADETTİN ORHAN

Education: PhD.

Degree	Department	University	Year
Bachelor	Department of Mechanical Engineering	Selçuk University	1992
Master (MsC)	Department of Mechanical Engineering	Kirikkale University	1996
PhD	Department of Mechanical Engineering	Kirikkale University	2002

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Research Interests: Mechanical Vibrations, Structural Health Monitoring, Dynamics of Machinery, Mechanisms, Vibration Based Predictive Maintenance

MsC Thesis:

“Effect of Flexibility on trajectory of a planar manipulator with two arm”, Supervisor Prof.Dr. Hira KARAGÜLLE

PhD Dissertation :

“Predictive maintenance by Vibration analysis of Dynamical systems supported by Rolling Element Bearings”, Supervisor Prof.Dr.Veli ÇELİK, Co-Supervisor Prof.Dr.Nizami AKTÜRK

Positions:

Title	University	Year
Prof.Dr.	Ankara Yildirim Beyazit University	29 June 2015 - Still
Associate Prof.	Ankara Yildirim Beyazit University	20 September 2013-29 June 2015
Associate Prof. (Visiting Scholar)	Southern University (USA)	20 June 2013-20 September 2013
Associate Prof.	Yildirim Beyazit University	7 July 2011- 20 June 2013
Associate Prof.	Kirikkale University	2010 - 7 July 2011
Assistant Prof.	Kirikkale University	2003- 2010
Research Assistans	Kirikkale University	1994-2003

Administrative Duties :

- 1.)** Chair of Department, Yildirim Beyazit University Dept. of Mech.Eng.(3 March 2016-Still)
- 2.)** Vice of Chair, Yildirim Beyazit University Dept. of Mech.Eng.(April 2013- November 2015)
- 3.)** Chair of Department, Yildirim Beyazit University, Dept. of Mech.Eng.(10 August 2011-10 October 2012)
- 4.)** Vice of Chair, Kirikkale University, Dept. of Mech.Eng. (16 March 2005 - 14 September 2009)

PUBLICATIONS

The Papers published Journals Covered SCI index

- 1.** Jabbar Gattmah Gattmah, Fahrettin Öztürk, Sadettin Orhan “**Experimental and finite element analysis of residual stresses in cold tube drawing process with a fixed mandrel of AISI 1010 steel tube**” , *The International Journal of Advanced Manufacturing Technology*, (Publisher: Springer), ISSN: 1433-3015 (electronic version), Published Online, 09.06.2017. DOI: <https://doi.org/10.1007/s00170-017-0583-8>
- 2.** Jabbar Gattmah Gattmah, Fahrettin Öztürk, Sadettin Orhan “**Effects of process parameters on hot extrusion of hollow tube**” ,*Arabian Journal for Science and Engineering*, Volume 42, Issue 5, Pages 2021-2030, May 2017.
- 3.** Sadettin Orhan, Murat Lüy, M. Hüsnü Dirikolu, Gazi Mustafa Zorlu “**The effect of crack geometry on the nondestructive fault detection in a composite beam**”, *International Journal of Acoustics and Vibration*, Vol. 21, No. 3, Pages 271-273, September 2016.
- 4.** Hakan Arslan, Ali Osman Er, Sadettin Orhan, Ersan Aslan “**An experimental investigation of high speed turning vibration signals for evaluation of tool wear and surface roughness**”, *International Journal of Acoustics and Vibration*, Vol. 21, No. 4, Pages 371-378, December 2016.
- 5.** Sadettin Orhan “**Analysis of free and forced vibration of a cracked cantilever beam**”, *NDT & E International*, Volume 40, Issue 6, September 2007, Pages 443-450
- 6.** Sadettin Orhan, Ali Osman Er, Necip Camuşcu and Ersan Aslan “**Tool wear evaluation by vibration analysis during end milling of AISI D3 cold work tool steel with 35 HRC hardness**”, *NDT & E International*, Volume 40, Issue 2, March 2007, Pages 121-126
- 7.** Ertuğrul Çam, Sadettin Orhan and Murat Lüy “**An analysis of cracked beam structure using impact echo method**”, *NDT & E International*, Volume 38, Issue 5, July 2005, Pages 368-373
- 8.** Sadettin Orhan, Nizami Aktürk and Veli Çelik “**Vibration monitoring for defect diagnosis of rolling element bearings as a predictive maintenance tool: Comprehensive case studies**”, *NDT & E International*, Volume 39, Issue 4, June 2006, Pages 293-298

The Papers Published International Conference Proceedings:

1. Polat Kurt, Oğuzhan Mülkoğlu and Sadettin Orhan "**Vibration analysis of multiple cracked beams subjected to moving load by finite element method**" , Proceedings of 22nd International Scientific Conference "MECHANIKA 2017", ISSN: 1822-1951, pp. 216-220, 22nd International Scientific Conference "MECHANIKA 2017", 19th May 2017, Kaunas University of Technology, Kaunas / Lithuania.
2. Mostafa Ranjbar, Sadettin Orhan "**Self-Excited Vibration of the Three-Degrees of Freedom System**", The 25th Annual International Conference on Mechanical Engineering ISME2017, 2-4 May 2017, Tarbiat Modares University, Tehran, Iran.
3. Polat Kurt, Oğuzhan Mülkoğlu and Sadettin Orhan "**Vibration Analysis of Cracked Beam Subjected to a Moving Load by Finite Element Method**" ,4th International Symposium on Innovative Technologies in Engineering and Science (ISITES2016), 3-5 November 2016, pp.1220-1229, Alanya/Antalya - Turkey.
4. Jabbar Gattmah, Fahrettin Ozturk and Sadettin Orhan "**Effects of the semi die/plug angles on cold tube drawing with a fixed plug by FEM for AISI 1010 steel tube**" ,4th International Symposium on Innovative Technologies in Engineering and Science (ISITES2016), 3-5 November 2016, pp.1065-1074, Alanya/Antalya - Turkey.
5. Sadettin Orhan, "**Comparision of three vectoral solutions for kinematic analysis of mechanisms in mechanical engineering education**", 3rd International symposium on innovative technologies in engineering and science (ISITES 2015), Universidad Politécnica de Valencia,3-5 June 2015,Valencia / Spain.
6. Ertugrul ÇAM, Sadettin ORHAN, Murat LÜY, Hakan ARSLAN, Serafettin EREL "**Defect analysis in different alloying Brass beams using non-destructive technique**" ELECO 2005, 4th International Conference on Electrical and Electronics Engineering, 7-11 December 2005, Bursa, TURKEY
7. Şerafettin Erel, Murat Lüy ve Sadettin Orhan "**An usability of remote sensing of mechanical vibrations in certain characteristics using the laser technique**" The second Advanced Technologies Symposium, Marmara University, 8-10 March 1999, İstanbul, Turkey.
8. Hira Karagülle ve Sadettin Orhan "**Effect of flexibility on trajectories of manipulators**", The Fourth Intemational Conference on Control, Automation, Robotics and Vision (ICARCV'96) Singapore. 3-6 December,1996, pp.553-557

The Papers Published National Journals (Almost in Turkish):

1. Sadettin Orhan, Hakan Arslan, Nizami Aktürk "**Titreşim Analiziyle Rulman Arızalarının Belirlenmesi**", Gazi Üniversitesi Mühendislik Mimarlık Fakültesi Dergisi, Cilt 18, No: 2, Sayfa 39-48, Haziran 2003
2. Sadettin Orhan, Nizami Aktürk ve Veli Çelik "**Bir Santrifüj Pompa Rulmanlarının Çalışabilirliğinin Titreşim Analizi ile Belirlenmesi**", Gazi Üniversitesi Fen Bilimleri Enstitüsü Fen Bilimleri Dergisi, Cilt 16, Sayı 3, Sayfa 543-552,

3. Sadettin Orhan ve Nizami Aktürk “Aktarma Organı Dişlilerinde Oluşan Fiziksel Hataların Titreşim Analizi ile Belirlenmesi”, Gazi Üniversitesi Mühendislik Mimarlık Fakültesi Dergisi, Cilt 18, No:3 ,Sayfa 97-106, Eylül 2003

4. Alaattin Aktaş ve Sadettin Orhan “Pimli Bağlantılarda Çatlak İlerleme Yönünün Sonlu Elemanlar Metodu ile Bulunması”, Gazi Üniversitesi Fen Bilimleri Dergisi, Cilt 16, Sayı 4, Sayfa 751-757, 2003

5. Sadettin Orhan “Dönen Makinelerde Arızalar ve Titreşim ilişkisi”, Zonguldak Karaelmas Üniversitesi Karabük Teknik Eğitim Fakültesi Teknoloji Dergisi, Yıl 6, (2003), Sayı 3-4, Sayfa 41-48

6. Hakan Arslan, Sadettin Orhan ve Nizami Aktürk “Bilyalı Rulman Hasarlarının Neden Olduğu Titreşimlerin Modellenmesi”, Gazi Üniversitesi Mühendislik Mimarlık Fakültesi Dergisi, Cilt 18, No:4 ,Sayfa 123-146, 2003

7. Alaattin Aktaş, Sadettin Orhan “Düşük Kavrama Oranlı Dişlilerde Rijitliğin Sonlu Elemanlar Metodu ile Belirlenmesi”, Zonguldak Karaelmas Üniversitesi Karabük Teknik Eğitim Fakültesi Teknoloji Dergisi, Yıl 7, (2004), Cilt 7, Sayı 2, Sayfa 285-288.

8. Ertuğrul Çam, Murat Lüy ve Sadettin Orhan "Detection of Defects in a Cantilever Beam Using Modal Test Data", Pamukkale Üniversitesi Mühendislik Bilimleri Dergisi, Cilt 10, Sayı 3, sayfa 327-331, 2004

9. Jabbar Gattmah,Fahrettin Öztürk,Sadettin Orhan “Effect of the semi die/plug angles cold tube drawing with a fixed plug by FEM for AISI 1010 steel tube”, *Sakarya Üniversitesi Fen Bilimleri Dergisi* (Accepted for October issue)

The Papers Presented National Conference Proceedings(in Turkish):

1. Sadettin Orhan “Sonlu elemanlar metodu ile kirişlerin modal analizi”, 9. Ulusal Makina Teorisi Sempozyumu Bildiri Kitabı, sayfa 221- 226, Gaziantep Üniversitesi Mühendislik Fakültesi Makina Mühendisliği Bölümü, 15-17 Eylül 1999, Gaziantep -Türkiye

2. Sadettin Orhan “Dişli Sehim Modelleri”, UMTS 2001 10. Ulusal Makina Teorisi Sempozyumu Bildiriler Kitabı, Cilt 1, sayfa 413-419, Selçuk Üniversitesi Mühendislik Mimarlık Fakültesi Makina Bölümü, 12-14 Eylül 2001, Konya

3. Alaattin Aktaş, Sadettin Orhan “Sonlu Elemanlar Metodu ile Dişlilerin Doğal Frekanslarının Belirlenmesi”, UMTS 2001 10. Ulusal Makina Teorisi Sempozyumu Bildiriler Kitabı, Cilt 2, sayfa 621-626, Selçuk Üniversitesi Mühendislik Mimarlık Fakültesi Makina Bölümü, 12-14 Eylül 2001, Konya

4. Şerafettin Erel, Sadettin Orhan, Hakan Arslan “Mekanik Titreşimlerin Lazerle Algılanmasında Son Gelişmeler”, UMTS 2001 10. Ulusal Makina Teorisi Sempozyumu Bildiriler Kitabı, Cilt 2, sayfa 605-609, Selçuk Üniversitesi Mühendislik Mimarlık Fakültesi Makina Bölümü, 12-14 Eylül 2001, Konya

5. Sadettin Orhan “Balanssızlık ve Rulman Arızası Saha Örnekleri”, 5.Bakım Teknolojileri Kongresi ve Sergisi Bildiriler Kitabı, Sayfa 249-260,Makine Mühendisleri Odası Yayın NO:E/2011/564, 14-16 Ekim 2011,SAKARYA

6. Şevket Özdeş, Sadettin ORHAN “Helikopter ana rotor, motor ve transmisyon hasarlarının önceden tespitinde bakım, kullanım ve izleme sisteminin kullanımı”, UMTS 2011 15. Ulusal

Makina Teorisi Sempozyumu bildiriler kitabı, cilt 2, Sayfa 683-693, Niğde Üniversitesi Mühendislik Mimarlık Fakültesi Makina Bölümü, 16-18 Haziran 2011, NİĞDE

7. Ali Osman ER, Sadettin ORHAN, Necip CAMUŞCU, Ersan ASLAN “**Sertleştirilmiş 1.2738 plastik kalıp çeliklerinin yüksek hızlarda işlenmesinde titreşimin işleme etkilerinin deneysel olarak incelenmesi**”, 3. Ulusal Talaşlı İmalat Sempozyumu bildiri kitabı, sayfa 354-361, Gazi Üniversitesi Teknoloji Fakültesi, 4-5 Ekim 2012, Ankara

Recent Projects :

1.) Project manager “**Desing, Manufacturing, and performing Acoustics Tests of a Tonpilz type transducer**”, Supported by Ankara Yildirim Beyazit University, Unit of Scientific Research Projects, 2017, Project No:2771

2.) Project manager “**Experimental and finite element analysis of cold tube drawing process with a fixed mandrel**”, Supported by Ankara Yildirim Beyazit University, Unit of Scientific Research Projects, 2017, Project No:2641.

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

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

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

Courses Offered

Undergraduate Level: Dynamics, Mechanisms, Dynamics of Machinery, Strength of Materials

Graduate Level: Advanced Mechanical Vibrations, Vibration of Continuous Systems

Refreeing for the International Journals indexed by SCI and SCI Expanded.

Journal of Vibration and Control

Measurement Science and Technology

Structural Engineering and Mechanics

International Journal of Acoustics and Vibration

Measurement

Journal of the Faculty of Engineering and Architecture of Gazi University