

Asst. Prof. Meral BAYRAKTAR

Personal Information

Email: mbarut@yildiz.edu.tr

Post Address: Yıldız Teknik Üniversitesi Makine Mühendisliği Bölümü Makine Teorisi Sistem Dinamiği ve Kontrol Anabilim Dalı
34349 Beşiktaş /İstanbul

Education Information

Doctorate, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Makine Mühendisliği Anabilim Dalı, Turkey 2004 - 2010

Post Graduate, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Makine Mühendisliği Anabilim Dalı, Turkey 2001 - 2004

Under Graduate, Yıldız Teknik Üniversitesi, Mühendislik Mimarlık Fakültesi, Makine Mühendisliği Bölümü, Turkey 1997 - 2001

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Raylı taşıtların dingillerinin dinamik analizi, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Makine Mühendisliği / Mak.Teo.Sist. Din.Ve Titr., 2010

Post Graduate, Oynak Makaralı Rulmanlarda Degme Analizi ve Elastohidrokinematik Yağ Filmi Oluşumu, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Makine Mühendisliği / Mak.Teo.Sist. Din.Ve Titr., 2004

Research Areas

Mechanical Engineering, Machine Theory and Dynamics, Machine Dynamics, Mechanisms, Vehicle Systems Dynamics, Modeling and Simulation of Dynamic Systems, Mechanical Vibrations, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Yıldız Teknik Üniversitesi, Faculty of Mechanical Engineering, Makine Mühendisliği Bölümü, 2018 - Continues

Assistant Professor, Yıldız Teknik Üniversitesi, Faculty of Mechanical Engineering, Makine Mühendisliği Bölümü, 2010 - 2018

Research Assistant, Yıldız Teknik Üniversitesi, Faculty of Mechanical Engineering, Makine Mühendisliği Bölümü, 2001 - 2010

Professional Experience

Deputy Head of Department, Yıldız Teknik Üniversitesi, Faculty of Mechanical Engineering, Makine Mühendisliği Bölümü, 2010 - 2012

Courses

Machine Dynamics, Under Graduate, 2018 - 2019, 2019 - 2020
Automatic Control I, Under Graduate, 2013 - 2014, 2014 - 2015, 2015 - 2016, 2017 - 2018, 2018 - 2019, 2019 - 2020
Bitirme Çalışması, Under Graduate, 2017 - 2018, 2018 - 2019, 2019 - 2020
Proje 1, Under Graduate, 2018 - 2019, 2019 - 2020
Proje 2, Under Graduate, 2018 - 2019, 2019 - 2020
Makine Tasarımı 1, Under Graduate, 2013 - 2014, 2014 - 2015, 2015 - 2016, 2016 - 2017, 2017 - 2018
Makine Tasarımı 2, Under Graduate, 2013 - 2014, 2014 - 2015, 2015 - 2016, 2016 - 2017, 2017 - 2018
Mekanizmaların Dinamiği, Post Graduate, 2017 - 2018
Bitirme Çalışması, Under Graduate, 2013 - 2014, 2014 - 2015, 2015 - 2016, 2016 - 2017, 2017 - 2018
Mechanical Vibrations, Under Graduate, 2018 - 2019
Automatic Control 1, Under Graduate, 2015 - 2016, 2017 - 2018
Machine Dynamics, Under Graduate, 2013 - 2014, 2014 - 2015, 2015 - 2016, 2016 - 2017, 2017 - 2018

Advising Theses

Bayraktar M., Elektrikli aracın suspansiyon braketini analizi ve yorulması, Post Graduate, V.Nalçacıoğlu(Student), Continues
Bayraktar M., Evaluation of variable pitch and fixed pitch propeller effects on a designed test bench, Post Graduate, M.Şanlıtürk(Student), 2019
Bayraktar M., Modal analysis of Three Bladed Propeller in Situ, Post Graduate, S.Uslu(Student), 2019
Bayraktar M., Akkaya A. V. , Değişken Hızlı Alternatif Akım Elektrik Motoru İle Tahrik Edilen Elektro-Hidrolik Yük Algılamalı Bir Abkant Presin Dinamik Performans Analizi, Post Graduate, A.Kandeniz(Student), 2019
Bayraktar M., Bayraktar S., Two-Dimensional Computational Analysis of Vortex-Induced Vibration, Post Graduate, O.MUTLU(Student), 2019
BAYRAKTAR M., Bir Hızlı Tren Modelinde Süspansiyon Parametrelerinin Optimizasyonu Ve Araç Dinamik Karakteristiğine Etkisi, Post Graduate, M.Tahtalı(Student), 2019
BAYRAKTAR M., Alternatif sac bağlantı tekniği ve bu yöntemle üretilen tamburun dinamik analizi, Post Graduate, V.ÇERKEZ(Student), 2018
BAYRAKTAR M., Küçük Çınlama Odası Tasarımı ve Akustik Malzemelerin Ses Yutum ve İletim Özelliklerinin Ölçümü, Post Graduate, Y.Cakirci(Student), 2018

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Modelling of main battle tank and designing LQR controller to decrease weapon oscillations**
Cakir M. F. , Bayraktar M.
Journal Of The Faculty Of Engineering And Architecture Of Gazi University, vol.35, no.1, pp.1-21, 2020 (Journal Indexed in SCI Expanded)
- **Determination of critical section of wagon axle by considering dynamic and safety factors**
Dikmen F., Bayraktar M., Güçlü R.
Alexandria Engineering Journal, 2019 (Journal Indexed in SCI)
- **Manufacturing polymer/metal macro-composite structure for vibration damping**
Altan M., BAYRAKTAR M., YAVUZ B.
International Journal of Advanced Manufacturing Technology, vol.86, pp.2119-2126, 2016 (Journal Indexed in SCI)
- **A New Approach for Reliability Life Prediction of Rail Vehicle Axle by Considering Vibration Measurement**
BAYRAKTAR M., GÜÇLÜ R., Tahrali N.
MATHEMATICAL PROBLEMS IN ENGINEERING, 2014 (Journal Indexed in SCI)
- **Dynamic analysis of rail vehicle axle**
DİKMEN F., BAYRAKTAR M., GUCLU R.
SADHANA-ACADEMY PROCEEDINGS IN ENGINEERING SCIENCES, vol.38, pp.265-280, 2013 (Journal Indexed in SCI)
- **Railway Axle Analyses: Fatigue Damage and Life Analysis of Rail Vehicle Axle**
DİKMEN F., BAYRAKTAR M., GÜÇLÜ R.

STROJNISKI VESTNIK-JOURNAL OF MECHANICAL ENGINEERING, vol.58, pp.545-552, 2012 (Journal Indexed in SCI)

- **Reliability and fatigue life evaluation of railway axles**

BAYRAKTAR M., Tahrali N., GÜÇLÜ R.

JOURNAL OF MECHANICAL SCIENCE AND TECHNOLOGY, vol.24, pp.671-679, 2010 (Journal Indexed in SCI)

- **Numerical investigation of a water flow in a rib-roughened channel by using Reynolds stress model**

Bayraktar S., Bayraktar M., Vardar N.

INTERNATIONAL JOURNAL OF COMPUTATIONAL FLUID DYNAMICS, vol.22, pp.331-339, 2008 (Journal Indexed in SCI)

Articles Published in Other Journals

- **Rayli tasitlarda dinamik hareketler ve titresim azaltma yöntemlerinin incelenmesi**

Bayraktar M., Tahtali M.

Pamukkale Üniversitesi Mühendislik Bilimleri Dergisi, vol.26, no.1, pp.9-20, 2020 (National Refreed University Journal)

- **FREE VIBRATION ANALYSIS OF AN AIRCRAFT WING BY CONSIDERING AS A CANTILEVER BEAM**

Demirtas A., Bayraktar M.

Selçuk Üniversitesi Mühendislik, Bilim ve Teknoloji Dergisi, vol.7, no.1, pp.12-21, 2019 (National Refreed University Journal)

- **Frenli Tas Mentese Kinematik, Kinetik ve Yorulma Analizi**

Bayraktar M., Bilyaz H., Demir C.

Sakarya University Journal Of Science, vol.22, pp.772-783, 2018 (National Refreed University Journal)

- **Vibration Analysis of 19 Degrees of Freedom Rail Vehicle**

Dikmen F., Bayraktar M., Güçlü R.

Scientific Research and Essays, vol.6, pp.5600-5608, 2011 (Refereed Journals of Other Institutions)

- **Zincir baklasında yük altında oluşan gerilmelerin sonlu elemanlar yöntemi ve fotoelastisite yöntemiyle incelenmesi**

AZELOĞLU C. O. , KESKİN ÖNER İ., BAYRAKTAR M.

e-Makine Teknolojileri Elektronik Dergisi (elektronik), vol.2008, no.4, pp.41-48, 2008 (Other Refereed National Journals)

- **Gemilerde korozyon analizi ve korozyonu etkileyen faktörler**

Bayraktar S., Barut M.

Gemi ve Deniz Teknolojisi, vol.3, no.3, pp.1-4, 2004 (Other Refereed National Journals)

Refereed Congress / Symposium Publications in Proceedings

- **Aluminum suspension bracket fatigue life prediction for lightweight vehicles**

Bayraktar M., Nalcacioglu V.

5TH INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING, İstanbul, Turkey, 17 - 19 Aralık 2019, pp.1-10

- **Dynamic Performance of a Hydraulic System Driven By a Variable Speed AC Electric Motor with Electro-Hydraulic Load Sensing**

Kandeniz A., Bayraktar M., Akkaya A. V.

International Symposium For Environmental Science and Engineering Research (ISESER 2019), Konya, Turkey, 25 Mayıs 2019, vol.1, no.1, pp.1-10

- **1-DOF 2D URANS Simulatiom of Vortex-Induced Vibration of a Cylinder with Different Damping Parameters**

Mutlu A. O. , Bayraktar M., Bayraktar S.

4th International Congress on Engineering, Architecture and Design, İstanbul, Turkey, 23 - 24 Nisan 2019, vol.1, no.1, pp.1-10

- **Designing, Implementation of Test Bench with PID Control for Variable Pitch Propeller system**

Şanlıtürk M., Bayraktar M.

4. Uluslararası Mühendislik Mimarlık ve Tasarım Kongresi, İstanbul, Turkey, 23 Nisan 2019, vol.1, no.1, pp.1-5

• **Modeling and Vibration Analyses of a High Speed Rail Vehicle**

Tahtali M., BAYRAKTAR M.

4th International Conference on Advances in Mechanical Engineering (ICAME 2018), İstanbul, Turkey, 19 Aralık 2018, vol.1, no.1, pp.1-10

• **CLINCHING STRENGTHS OF DIFFERENT SHEET METALS THAT CLINCHED WITH SAME TOOLS AT SAME PRESS PARAMETERS**

Cerkez V., Bayraktar M., Demir C.

1st International Symposium on Graduate Research in Science: Focus on Entrepreneurship and Innovation,, İstanbul, Turkey, 04 Ekim 2018, vol.1, no.1, pp.1-5

• **Numerical and Experimental Modal Analysis of a Three Bladed Marine Propeller**

Uslu S., Bayraktar M.

International Symposium on Naval Architecture and Maritime (INT-NAM), İstanbul, Turkey, 23 Nisan 2018, vol.1, no.1, pp.1-10

• **Traffic Noise Pollution of Istanbul D-100 Highway**

Ozkan B., BAYRAKTAR M.

Transist 2018 International İstanbul Transport Congress and Exhibition, İstanbul, Turkey, 01 Aralık 2017, vol.1, no.1, pp.1-7

• **Bir raylı taşıtta farklı koşullar altında yolcu konforu analizi**

AHAN A. O. , ARISOY D. O. , Müderrisoğlu K., BAYRAKTAR M., GÜÇLÜ R.

Uluslararası Katılımlı 17. Makina Teorisi Sempozyumu, İzmir, Turkey, 14 Haziran 2015, pp.1-6

• **Roller Coaster Güzergahında Tanımlanan Noktasal Bir Cismin Dinamik Analizi**

AHAN A. O. , ARISOY D. O. , Müderrisoğlu K., BAYRAKTAR M.

XVI. Ulusal Makina Teorisi Sempozyumu, Erzurum, Turkey, 12 Eylül 2013, pp.1-7

• **Static and Dynamic Analysis of Railway Wagon Trailer Bogie in Computer Environment**

ARISOY D. O. , AHAN A. O. , Müderrisoğlu K., BAYRAKTAR M.

1. International Workshop on Railway System Engineering, Karabük, Turkey, 11 Ekim 2012, pp.1-7

• **Modelling of Air Springs in a Rail Vehicle**

BAYRAKTAR M., GÜÇLÜ R., METİN M.

13th International Research/Expert Conference, Trends in the Development of Machinery and Associated Technology, TMT 2009, Hammamet, Tunisia, 16 Ekim 2009, pp.829-832

• **Aks modellemesiyle hafif raylı taşıtın titreşimlerinin incelenmesi**

Bayraktar M., Güçlü R., Metin M., Yazıcı H.

14. Ulusal Makina Teorisi Sempozyumu UMTS 2009, ODTÜ Kuzey Kıbrıs Kampüsü, Güzelyurt, Cyprus (Kktc), 2 - 04 Temmuz 2009, pp.233-240

• **Systematic Design: Analysis of Natural Systems and Synectics Approach**

Bayraktar M., Bayraktar S.

European Conference for Academic Disciplines organized by Proceedings of the International Journal of Arts & Sciences Conference, 01-04 December 2008, Freiburg, Germany, 1 - 04 Aralık 2008, vol.1, no.1, pp.1-8

• **Investigation of the Effects of Turbulence on a 2-D Rib Roughened Channel**

Bayraktar M., Bayraktar S., Yılmaz T.

11th International Research/Expert Conference "Trends in the Development of Machinery and Associated Technology", (TMT 2007), Tunis, Tunisia, 5 - 09 Eylül 2007, vol.1, no.1, pp.1-4

• **Dişli Çarkların Sonlu Elemanlar Yöntemi ile Modellenmesi ve Analizi**

BAYRAKTAR M.

3. Makina Tasarım ve İmalat Teknolojileri Kongresi (MATIT 2005), Konya, TÜRKİYE

• **Statical and Modal Analyses of Axle in a Light Rail**

BAYRAKTAR M.

International Journal of Arts&Sciences Conference (IJAS), Freiburg, GERMANY

• **Investigation of the Effects of Turbulence on a 2-D Rib Roughened Pipe**

BAYRAKTAR S.

11th International Research/Expert Conference on Trends in the Development of Machinery and Associated

Technologies (TMT 2007), 05-09 September, 2007, Hammamet, TUNISIA.

- **Raylı Taşıt Dingillerinin Dinamik Analizi**

BAYRAKTAR M.

Fikirler Pazarı Etkinliği, YÜ Otağı-ı Hümayun, S.87, İstanbul, TÜRKİYE

- **Hyperelastic Material Model of Rubber and Rubber-Like Materials**

BAYRAKTAR M.

11th International Conference Research/Expert Conference Trends in the Development of Machinery and Associated Technologies (TMT 2007)

- **Otomobil Dış Karoseri Elemanlarından Dikiz Aynasının Aerodinamik Özelliklerinin ANSYS Yazılımı ile Analizi**

BAYRAKTAR M.

4th International Advanced Technologies Symposium (IATS 2005), Konya, TÜRKİYE

- **The Importance of Training at Mechanical Engineering Education in YU (Türkiye) and in the World**

BAYRAKTAR M.

SEFI 34th Annual Conference on Engineering Education and Active Students, Uppsala, SWEDEN

- **Tribodizayn: Makina Tasarımının Temel Bir Dalı**

BAYRAKTAR M.

5. Ulusal Makina Mühendisliği ve Eğitim Sempozyumu, İstanbul, TÜRKİYE

- **Makaralı Oynak Rulmanlarda Elastohidrokinamik Yağ Filmi Oluşumu**

BAYRAKTAR M.

3. Makina Tasarım ve İmalat Teknolojileri Kongresi (MATIT 2005), Konya, TÜRKİYE

- **Stress Analysis, Life and Reliability Evaluation for the Eccentric Press Shaft**

BAYRAKTAR M.

1st. International Scientific Conference on Engineering Manufacturing and Advanced Technologies (MAT 2010), Mostar, BOSNA and HERZEGOVİNA

- **Design of Rail Vehicle Axle Related to Failure and Life**

BAYRAKTAR M.

5. Uluslararası İleri Teknolojiler Sempozyumu (IATS 2009), Karabük, TÜRKİYE

- **Elastohydrodynamic Lubricant Film Forming of Different Bearings**

BAYRAKTAR M.

11th International Conference Research/Expert Conference Trends in the Development of Machinery and Associated Technologies (TMT 2007), Hammamet, TUNISIA

- **A Comparison Between Yıldız Technical University Mechanical Engineering Department and Other Well-Known Universities of Turkey and World for Option and Course Variety**

BAYRAKTAR M.

SEFI 33th Annual Conference on Engineering Education at the Cross-Roads of Civilization, Ankara, TÜRKİYE

- **The Expectation of the Society from a Mechanical Engineer and the Efficiency of the Education**

BAYRAKTAR M.

SEFI 34th Annual Conference on Engineering Education and Active Students, Uppsala, SWEDEN

Other Publications

- **Raylı Taşıt Bojisinde ve Aksında Titreşim Ölçümleri**

GÜÇLÜ R., BAYRAKTAR M., TAHRALI N.

Technical Report, pp.1-10, 2010

- **Raylı Taşıt Aks Millerinin Kırılmalarının Değerlendirilmesi ve Wöhler Diyagramlarına Göre Ömür Hesapları**

GÜÇLÜ R., BAYRAKTAR M., TAHRALI N.

Technical Report, pp.1-10, 2010

- **Raylı Taşıt Aks Millerinin Doğal Frekans Değerlerinin Modal Analiz Yöntemi (Deneysel ve Sonlu Eleman Programı NASTRAN) ile Belirlenmesi**

GÜÇLÜ R., BAYRAKTAR M., TAHRALI N.

Technical Report, pp.1-10, 2010

- **İstatistikî Değerlendirme ve Kırılan Dingiller Esas Alınarak Elde Edilen Diyagramlar**

BAYRAKTAR M.
Other, 2008

Supported Projects

Altan M., Bayraktar M., Yavuz B., TUBITAK Project, Plastik Enjeksiyon Yöntemi İle Titreşim Sönümleyici Sandviç Yapılı Polimer/Metal Makro Kompozitlerin Üretilmesi Ve Özelliklerinin Geliştirilmesi, 2013 - 2015
Yazıcı H., Güçlü R., Bayraktar M., Metin M., Keskin G., TUBITAK Project, Yapısal Sistemlerin Farklı Bozucu Girişler Etkisi Altındaki Titreşimlerinin Analizi ve Aktif-Pasif Kontrolü, (TÜBİTAK 1001 Bilimsel ve Teknolojik Araştırma Projesi, MAG, Proje No:109M523), 2010 - 2012

Patent

BAYRAKTAR M., Titreşimden Elektrik Üreten Elektromekanik Sistemli Makine(Başvuru süreci devam ediyor. 2017-Devam ediyor), Patent, CHAPTER H Electricity, Initial Registration, 2017

Memberships / Tasks in Scientific Organizations

Makina Teorisi Derneği (MAKTED), Member, 2020 - Continues

Scientific Refereeing

Advances in Mechanical Engineering, Journal Indexed in SSCI, February 2019
Arabian Journal for Science and Engineering, SCI Journal, June 2018
Arabian Journal for Science and Engineering, SCI Journal, April 2018
Arabian Journal for Science and Engineering, SCI Journal, February 2018
Advances in Mechanical Engineering, SCI Journal, February 2018
Journal of Vibration, SCI Journal, January 2018
Technicki Vjesnik-Technical Gazette, SCI Journal, December 2017
Sigma Journal of Engineering and Natural Sciences, National Scientific Refreed Journal, August 2017
Arabian Journal for Science and Engineering, SCI Journal, April 2016
Uludağ University Journal of The Faculty of Engineering, National Scientific Refreed Journal, February 2016
Bulletin of Earthquake Engineering, SCI Journal, November 2015
2nd International Conference on Computational and Experimental Science and Engineering (ICCESEN 2015), Other journals, October 2015
Symposium on Theory of Machines and Mechanisms, Other journals, June 2015
Arabian Journal for Science and Engineering, SCI Journal, April 2015
Arabian Journal for Science and Engineering, SCI Journal, September 2014
Journal of Applied Research and Technology, SCI Journal, June 2014
Journal of Applied Research and Technology, SCI Journal, May 2013
Journal of Engineering Manufacture, SCI Journal, December 2012
Caspian Journal of Applied Sciences Research, SCI Journal, November 2012
Journal of Mechanical Engineering Science, SCI Journal, October 2012
Journal of Mechanical Engineering Science, SCI Journal, July 2012
Transportation Research Part C, SCI Journal, May 2012
Caspian Journal of Applied Sciences Research, SCI Journal, February 2012
Transportation Research Part C-Emerging Technologies, SCI Journal, February 2012
Journal of Engineering Manufacture, SCI Journal, February 2012

Citations

Total Citations (WOS):24

h-index (WOS):3

Scholarships

Doktora Sonrasi Arastirma Bursu-Lehigh University-USA, University, 2013 - Continues