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Kişisel Bilgiler

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Publons / Web Of Science ResearcherID: AAX-7206-2020

ScopusID: 56370698300

Yoksis Araştırmacı ID: 203366

Eğitim Bilgileri

Doktora, University of Illinois at Chicago, Amerika Birleşik Devletleri 1999 - 2004

Yüksek Lisans, Orta Doğu Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Makine Mühendisliği (YI) (Tezli), Türkiye 1996 - 1999

Lisans, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, Türkiye 1992 - 1996

Yabancı Diller

İngilizce, C1 İleri

Yaptığı Tezler

Doktora, New Techniques in the Design, Analysis and Optimization of Tuned Dynamic Vibration Absorbers, University Of Illinois At Chicago, 2004

Yüksek Lisans, new Method on Identification of Symmetrical Non-linearities in Structures, Orta Doğu Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Makine Mühendisliği (YI) (Tezli), 1999

Araştırma Alanları

Makina Mühendisliği, Makina Teorisi ve Dinamiği

Akademik Unvanlar / Görevler

Doç. Dr., Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Makina Mühendisliği Bölümü, 2017 - Devam Ediyor

Yrd. Doç. Dr., Tobb Ekonomi Ve Teknoloji Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2011 - 2017

Öğretim Görevlisi, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Makina Mühendisliği, 2010 - 2011

Akademik İdari Deneyim

Bölüm Başkan Yardımcısı, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Makina Mühendisliği Bölümü, 2024 - Devam Ediyor

Yönetilen Tezler

- ÖZER M. B., Nonlinear modeling of piezoelectric stack actuators with flexure based displacement amplifier mechanisms, Yüksek Lisans, O.YURDAKUL(Öğrenci), 2022
- ÖZER M. B., MEMS based multi-mode multi-channel piezoelectric sensor for fully implantable cochlear implants, Yüksek Lisans, F.PİRİM(Öğrenci), 2022
- ÖZER M. B., Numerical modeling and experimental investigation of cell manipulation using acoustophoresis, Yüksek Lisans, A.KARAMAN(Öğrenci), 2022
- ÖZER M. B., Numerical investigation on the acoustic imaging of the human respiratory system and manufacturing of the synthetic experimental model, Yüksek Lisans, F.GİNAZ(Öğrenci), 2022
- ÖZER M. B., The method of degree of freedom truncation for receptance calculation in structural systems, Yüksek Lisans, B.ZAFER(Öğrenci), 2022
- ÖZER M. B., Jet uçağı ile taşınan bir faydalı yükün yapısal cevap kestirimi, Doktora, E.METİN(Öğrenci), 2021
- ÖZER M. B., Numerical and experimental investigation of acoustophoretic microfluidic devices, Yüksek Lisans, M.AKİF(Öğrenci), 2021
- ÖZER M. B., Hardening nonlinear stiffness behaviour of piezoelectric materials with passive nonlinear P-N junction capacitance shunt circuits, Yüksek Lisans, M.ALİ(Öğrenci), 2021
- ÖZER M. B., Kapalı-çevrim glikoz seviyesi kontrolü için piezoelektrik pompa geliştirilmesi, Doktora, A.KAÇAR(Öğrenci), 2021
- ÖZER M. B., Analysis and verification of a pyroshock test system, Yüksek Lisans, A.İSMAİL(Öğrenci), 2021
- ÖZER M. B., Haberleşme uydusu üzerine yerleştirilmiş gregoryen tipindeki haberleşme antenlerinin titreşim ve akustik sayısal analizleri, Yüksek Lisans, O.Kaan(Öğrenci), 2020
- ÖZER M. B., Çalkalanan titreşim sönümleyicilerin performansının deneysel yöntemlerle incelenmesi, Yüksek Lisans, U.TOSUN(Öğrenci), 2016
- ÖZER M. B., Ayarlanmış sıvılı titreşim sönümleyicili yapıların sayısal analizi, Yüksek Lisans, İ.VURUŞKAN(Öğrenci), 2014
- ÖZER M. B., Mikro-kanallarda akustoforez ile parçacık manipülasyonu, Yüksek Lisans, S.BÜYÜKKOÇAK(Öğrenci), 2014

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Experimentally validated passive nonlinear capacitor in piezoelectric vibration applications**
Ali Taşkiran M., ÖZER M. B.
Smart Materials and Structures, cilt.33, sa.10, 2024 (SCI-Expanded)
- II. **Assessment of silicon, glass, FR4, PDMS and PMMA as a chip material for acoustic particle/cell manipulation in microfluidics**
Açıkgöz H. N., KARAMAN A., Şahin M. A., Çaylan Ö. R., Büke G. C., YILDIRIM E., Eroğlu İ. C., ERSON BENSAN A. E., Çetin B., ÖZER M. B.
Ultrasonics, cilt.129, 2023 (SCI-Expanded)
- III. **Development of a method for maximum structural response prediction of a store externally carried by a jet fighter**
Kaplan E. M., Acar E., Bülent Özer M. B.
Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, cilt.236, sa.4, ss.777-788, 2022 (SCI-Expanded)
- IV. **Aerospace structure design using structural response of a payload carried by jet fighter Jet uçağı ile taşınan bir faydalı yükün yapısal cevabının havacılık yapıları tasarımı**
Kaplan E. M., Acar E., ÖZER M. B.
Journal of the Faculty of Engineering and Architecture of Gazi University, cilt.37, sa.3, ss.1341-1354, 2022 (SCI-

Expanded)

- V. **An extended view for acoustofluidic particle manipulation: Scenarios for actuation modes and device resonance phenomenon for bulk-acoustic-wave devicesa)**
ÖZER M. B., Cetin B.
JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA, cilt.149, sa.4, ss.2802-2812, 2021 (SCI-Expanded)
- VI. **A Novel Artificial Pancreas: Energy Efficient Valveless Piezoelectric Actuated Closed-Loop Insulin Pump for T1DM**
Kacar A., ÖZER M. B., Tascioglu Y.
APPLIED SCIENCES-BASEL, cilt.10, sa.15, 2020 (SCI-Expanded)
- VII. **Investigation of effect of design and operating parameters on acoustophoretic particle separation via 3D device-level simulations**
Sahin M. A., ÇETİN B., ÖZER M. B.
MICROFLUIDICS AND NANOFUIDICS, cilt.24, sa.1, 2019 (SCI-Expanded)
- VIII. **Tracking free surface and estimating sloshing force using image processing**
Tosun U., AGHAZADEH R., SERT C., Ozer M. B.
EXPERIMENTAL THERMAL AND FLUID SCIENCE, cilt.88, ss.423-433, 2017 (SCI-Expanded)
- IX. **An integrated acoustic and dielectrophoretic particle manipulation in a microfluidic device for particle wash and separation fabricated by mechanical machining**
Cetin B., Ozer M. B., Cagatay E., Buyukkocak S.
BIOMICROFLUIDICS, cilt.10, sa.1, 2016 (SCI-Expanded)
- X. **Closed form solutions of weakly nonlinear multi-degree of freedom systems with single nonlinear element**
Ozer M. B.
JOURNAL OF SOUND AND VIBRATION, cilt.344, ss.345-362, 2015 (SCI-Expanded)
- XI. **Numerical modeling of ultrasonic particle manipulation for microfluidic applications**
Buyukkocak S., Ozer M. B., Cetin B.
MICROFLUIDICS AND NANOFUIDICS, cilt.17, sa.6, ss.1025-1037, 2014 (SCI-Expanded)
- XII. **Microfluidic bio-particle manipulation for biotechnology**
Cetin B., Ozer M. B., Solmaz M. E.
BIOCHEMICAL ENGINEERING JOURNAL, cilt.92, ss.63-82, 2014 (SCI-Expanded)
- XIII. **Identification of structural non-linearities using describing functions and the Sherman-Morrison method**
Ozer M. B., ÖZGÜVEN H. N., Royston T. J.
MECHANICAL SYSTEMS AND SIGNAL PROCESSING, cilt.23, sa.1, ss.30-44, 2009 (SCI-Expanded)
- XIV. **Experimental and computational models for simulating sound propagation within the lungs**
Acikgoz S., Ozer M. B., Royston T. J., Mansy H. A., Sandler R. H.
JOURNAL OF VIBRATION AND ACOUSTICS-TRANSACTIONS OF THE ASME, cilt.130, sa.2, 2008 (SCI-Expanded)
- XV. **Boundary element model for simulating sound propagation and source localization within the lungs**
Ozer M. B., Acikgoz S., Royston T. J., Mansy H. A., Sandler R. H.
JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA, cilt.122, sa.1, ss.657-671, 2007 (SCI-Expanded)
- XVI. **Extending Den Hartog's vibration absorber technique to multi-degree-of-freedom systems**
Ozer M. B., Royston T.
JOURNAL OF VIBRATION AND ACOUSTICS-TRANSACTIONS OF THE ASME, cilt.127, sa.4, ss.341-350, 2005 (SCI-Expanded)
- XVII. **Application of Sherman-Morrison matrix inversion formula to damped vibration absorbers attached to multi-degree of freedom systems**
Ozer M. B., Royston T.
JOURNAL OF SOUND AND VIBRATION, cilt.283, ss.1235-1249, 2005 (SCI-Expanded)
- XVIII. **Passively minimizing structural sound radiation using shunted piezoelectric materials**
Ozer M. B., Royston T.
JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA, cilt.114, sa.4, ss.1934-1946, 2003 (SCI-Expanded)

XIX. Piezoceramic hysteresis in the adaptive structural vibration control problem

Lee S., Ozer M. B., Royston T.

JOURNAL OF INTELLIGENT MATERIAL SYSTEMS AND STRUCTURES, cilt.13, ss.117-124, 2002 (SCI-Expanded)

XX. Hysteresis models for piezoceramic transducers

Lee S., Ozer M. B., Royston T.

JOURNAL OF MATERIALS PROCESSING & MANUFACTURING SCIENCE, cilt.9, sa.1, ss.33-52, 2000 (SCI-Expanded)

Diğer Dergilerde Yayınlanan Makaleler

I. Multichannel multimodal piezoelectric middle ear implant concept based on MEMS technology for next-generation fully implantable cochlear implant applications

Pirim F., Atik A. C., YÜKSEL M. B., Yılmaz A. M., UĞUR M. B., Tunah S., BATU A., ASLAN M. K., ÖZER M. B., KÜLAH H.
Biosensors and Bioelectronics: X, cilt.18, 2024 (Scopus)

Kitap & Kitap Bölümleri

I. Application of Ultrasonic Waves in Bioparticle Manipulation and Separation

Özer M. B., Çetin B.

Application of Ultrasonic Waves in Bioparticle Manipulation and Separation, Adem Özçelik,Ryan Becker,Tony Jun
huang, Editör, John Wiley & Sons, West Sussex, UK , Mannheim, ss.243-304, 2023

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

I. A Novel Approach for Local Structural Modification of Nonlinear Structures

Ceren Ekinci E., Bülent Özer M. B., ÖZGÜVEN H. N.

41st IMAC, A Conference and Exposition on Structural Dynamics, 2023, Austin, Amerika Birleşik Devletleri, 13 - 16
Şubat 2023, ss.155-160

II. Bypassing the Repeatability Issue in Nonlinear Experimental Modal Analysis of Jointed Structures by Using the RCT-HFS Framework

Gürbüz M. F., Karaağaçlı T., ÖZER M. B., ÖZGÜVEN H. N.

41st IMAC, A Conference and Exposition on Structural Dynamics, 2023, Austin, Amerika Birleşik Devletleri, 13 - 16
Şubat 2023, ss.75-80

III. Extension and Experimental Verification of an Efficient Re-analysis Method for Modified Nonlinear Structures

Ekinci E. C., Karaağaçlı T., Çelik F. K., ÖZER M. B., ÖZGÜVEN H. N.

42nd IMAC, A Conference and Exposition on Structural Dynamics, IMAC 2024, Florida, Amerika Birleşik Devletleri,
29 Ocak - 01 Şubat 2024, ss.89-94

IV. Computational fluid dynamics and proper orthogonal decomposition based control of flow over supersonic cavities

Gelisli K. A., Aradag S., Tascioglu Y., ÖZER M. B.

25th AIAA/CEAS Aeroacoustics Conference, 2019, Delft, Hollanda, 20 - 23 Mayıs 2019

V. EXPERIMENTAL INVESTIGATION OF FLIGHT AND PHYSICAL PARAMETERS AFFECTING THE VIBRATION RESPONSE SEVERITY OF SUBSYSTEM CARRIED BY JET AIRCRAFT

kaplan e. m., ÖZER M. B.

9th Ankara International Aerospace Conference, Ankara, Türkiye, 20 - 22 Eylül 2017

VI. Experimental setup design for liquid sloshing

Tosun U., Aghazadeh R., ÖZER M. B.

23rd International Conference on Vibroengineering, İstanbul, Türkiye, 7 - 09 Ekim 2016, cilt.9, ss.39-43

- VII. **3d modeling of on-chip acoustophoretic particle manipulation in a polymer microfluidic device**
Çağatay E., ÖZER M. B., Çetin B.
20th International Conference on Miniaturized Systems for Chemistry and Life Sciences, MicroTAS 2016, Dublin, İrlanda, 9 - 13 Ekim 2016, ss.1549-1550
- VIII. **Finite element modeling of micro particle separation using ultrasonic standing waves**
SÜLEYMAN B., ÇETİN B., ÖZER M. B.
ASME 2014 4th Joint US-European Fluids Engineering Division Summer Meeting and 11th International Conference on Nanochannels, Microchannels and Minichannels, 3 - 07 Ağustos 2014
- IX. **Fabrication of microfluidic devices for dielectrophoretic and acoustophoretic applications using high precision machining**
SOHEİLA Z., ÇETİN B., ÖZER M. B., SÜLEYMAN B.
16th International Conference on Machine Design and Production, 30 Haziran - 03 Temmuz 2014
- X. **Mekanum tekerlekli araç tasarımı ve üretimi**
SERİN G., MUSTAFA ANIL S., ECEVİT M., AKAY A. N., TAŞCIOĞLU Y., ÖZER M. B.
5. Ulusal Mekatronik Mühendisliği Öğrenci Kongresi, Türkiye, 24 Mayıs 2014
- XI. **Medikal şırınga pompası**
ONUR G., AHMET BAHADIR A., KARA S., EREN CAN E., TAŞCIOĞLU Y., ÖZER M. B.
5. Ulusal Mekatronik Mühendisliği Öğrenci Kongresi, Türkiye, 24 Mayıs 2014
- XII. **SIMULATION OF FLUID SLOSHING FOR DECREASING THE RESPONSE OF STRUCTURAL SYSTEMS**
VURUSKAN I., SERT C., OZER M. B.
12th ASME Biennial Conference on Engineering Systems Design and Analysis (ESDA2014), Copenhagen, Danimarka, 25 - 27 Haziran 2014
- XIII. **Simulation of an integrated microfluidic device for bioparticle wash separation and concentration**
ÇETİN B., SÜLEYMAN B., SOHEİLA Z., ÖZER M. B.
ASME 2013 4th Micro/Nanoscale Heat & Mass Transfer International Conference, 11 - 14 Aralık 2013
- XIV. **Chatter detection using vibrational and acoustic emissions in turning process**
SÜLEYMAN B., KILIÇ Ş., ÖZER M. B., ÜNVER H. Ö.
20th Int. Conf. on Mechatronics and Machine Vision in Practice- M2ViP, 18 - 20 Eylül 2013
- XV. **Design and testing of an earthquake simulation system**
SÜLEYMAN B., KOÇ Ç., ŞEYMA NUR Ç., ÇAĞRI G., ÖZER M. B.
20th Int. Conf. on Mechatronics and Machine Vision in Practice- M2ViP, 18 - 20 Eylül 2013
- XVI. **Piezoelektrik medikal pompa**
YILMAZ M., UFUK T., BİLAL BURAK D., TAŞCIOĞLU Y., ÖZER M. B.
4. Ulusal Mekatronik Mühendisliği Öğrenci Kongresi, Türkiye, 08 Haziran 2013
- XVII. **A numerically efficient frequency domain method for analysis of non Linear multi degree of freedom systems**
ÖZER M. B.
ASME 2012 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference IDETC/CIE, 12 - 15 Ağustos 2012
- XVIII. **Experimental and computational models for simulating sound propagation and acoustic source localization within the lungs**
SERHAN A., ÖZER M. B., THOMAS J R., HANSON A M., SANDLER R. H.
ASME 2006 International Mechanical Engineering Congress and Exposition, 5 - 10 Kasım 2006
- XIX. **Radiation force of ultrasound as shear wave source in Microscopic Magnetic Resonance Elastography**
ÖZER M. B., Othman S., XU H., MERAL C., ROYSTON T. J., MAGIN R. L.
150th Meeting of the Acoustical Society of America, 17 - 21 Ekim 2005
- XX. **Computational and experimental models for sound transmission in the pulmonary system and chest to aid in medical diagnostics**
AÇIKGÖZ S., ROYSTON T. J., ÖZER M. B., MANSY H. A., SANDLER R. H.
149th Meeting of the Acoustical Society of America, 16 - 20 Mayıs 2005

- XXI. **Identification of structural non linearities using describing functions and Sherman Morrison matrix inversion method**
ÖZER M. B., ÖZGÜVEN H. N., ROYSTON T. J.
IMAC-XXIII: Conference & Exposition on Structural Dynamics, 31 Ocak - 03 Şubat 2005
- XXII. **A new method for localization and identification of non linearities in structures**
ÖZER M. B., ÖZGÜVEN H. N.
6th Biennial Conference on Engineering Systems Design Analysis, ASME, 08 Temmuz 2002 - 11 Eylül 2003
- XXIII. **Applications of Sherman Morrison matrix inversion formula in linear and non linear vibrations controls and acoustics**
ÖZER M. B., ROYSTON T. J.
ASME Design Engineering Technical Conferences and Computers and Information in Engineering Conferences, 2 - 06 Eylül 2003
- XXIV. **Active passive single and multi modal control of structural sound using piezoceramics and the effects of PZT hysteresis**
ÖZER M. B., ROYSTON T. J.
143rd Meeting of the Acoustical Society of America, 3 - 07 Haziran 2002
- XXV. **Optimal passive and hybrid control of vibrations and sound radiation from linear and non linear PZT based smart structures**
ÖZER M. B., ROYSTON T. J.
SPIE's 9th Annual Symposium on Smart Structures and Materials, 17 - 21 Mart 2002
- XXVI. **Optimal passive and hybrid control of vibration and sound radiation from linear and nonlinear PZT-based smart structures**
Ozer M. B., Royston T.
Smart Structures and Materials 2002 Conference, California, Amerika Birleşik Devletleri, 18 - 21 Mart 2002, cilt.4693, ss.69-80
- XXVII. **Effect of piezoceramic hysteresis in passive and hybrid structural acoustic control**
ÖZER M. B., ROYSTON T. J.
ASME 2001 Design Engineering Technical Conferences and Computers and Information in Engineering Conference, 9 - 12 Eylül 2001
- XXVIII. **Modeling the effect of piezoceramic hysteresis in structural vibration control**
Ozer M. B., Royston T.
Smart Structures and Materials 2001 Conference, California, Amerika Birleşik Devletleri, 5 - 08 Mart 2001, cilt.4326, ss.89-100

Metrikler

Yayın: 51

Atf (WoS): 431

Atf (Scopus): 517

H-İndeks (WoS): 12

H-İndeks (Scopus): 13

Akademi Dışı Deneyim

Baxter Healthcare (Illinois, ABD)

University of Illinois at Chicago