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Personal Information

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International Researcher IDs

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Education Information

Doctorate, İstanbul Technical University, Fen Bilimleri Enstitüsü, Uçak Ve Uzay Mühendisliği (Dr), Turkey 2005 - 2012

Postgraduate, İstanbul Technical University, Fen Bilimleri Enstitüsü, Uzay Mühendisliği (YI) (Tezli), Turkey 2001 - 2004

Undergraduate, İstanbul Technical University, Uçak Ve Uzay Bilimleri Fakültesi, Uzay Mühendisliği Bölümü, Turkey 1996 - 2000

Foreign Languages

English

Dissertations

Doctorate, Viskoelastik çekirdeğe sahip sandviç kompozit plakların anlık basınç yükü altındaki davranışının teorik ve deneySEL incelemesi, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Uçak Ve Uzay Mühendisliği (Dr), 2012

Postgraduate, Döner kanath hava araçlarının aerodinamik performansının değerlendirilmesi, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Uzay Mühendisliği (YI) (Tezli), 2004

Research Areas

Mechanical Engineering, Mechanical, Solid Mechanics, Mechanical Testing, Aeronautical and Space Engineering, Metallurgical and Materials Engineering, Material science and engineering, Mechanical Properties, Composites, Space Engineering, Structure / Mechanism, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, İstanbul Technical University, Uçak Ve Uzay Bilimleri Fakültesi, Uzay Mühendisliği Bölümü, 2018 - Continues

Assistant Professor, İstanbul Technical University, Uçak Ve Uzay Bilimleri Fakültesi, Uzay Mühendisliği Bölümü, 2014 - 2018

Lecturer PhD, İstanbul Technical University, Uçak Ve Uzay Bilimleri Fakültesi, Uzay Mühendisliği Bölümü, 2013 - 2014

Research Assistant, İstanbul Technical University, Uçak Ve Uzay Bilimleri Fakültesi, Uzay Mühendisliği Bölümü, 2001 - 2013

Courses

Mechanical Vibrations, Undergraduate, 2024 - 2025
Engineering Mathematics, Postgraduate, 2022 - 2023
Strength of Material II, Undergraduate
Strength of Materials I, Undergraduate
HAVA UZAY YAPILARI, Undergraduate, 2016 - 2017, 2015 - 2016
DENEYSEL MÜHENDİSLİK, Undergraduate, 2016 - 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. Comparison of in-plane compression of additively manufactured Ti6Al4V 2D auxetic structures: Lattice design, manufacturing speed, and failure mode
Eren Z., Gokcekaya O., Balkan D., Nakano T., Mecitoğlu Z.
Materials and Design, vol.241, 2024 (SCI-Expanded)
- II. Dynamic analysis of a stiffened composite plate under blast load: A new model and experimental validation
Balkan D., DEMİR Ö., Arıkoğlu A.
INTERNATIONAL JOURNAL OF IMPACT ENGINEERING, vol.143, 2020 (SCI-Expanded)
- III. Vibration analysis of curved composite sandwich beams with viscoelastic core by using differential quadrature method
DEMİR Ö., Balkan D., Peker R. C., METİN M., Arıkoğlu A.
JOURNAL OF SANDWICH STRUCTURES & MATERIALS, vol.22, no.3, pp.743-770, 2020 (SCI-Expanded)
- IV. Nonlinear dynamic behavior of viscoelastic sandwich composite plates under non-uniform blast load: Theory and experiment
Balkan D., MECITOGLU Z.
INTERNATIONAL JOURNAL OF IMPACT ENGINEERING, vol.72, pp.85-104, 2014 (SCI-Expanded)
- V. Accuracy of Strain Solution of a Laminated Composite Plate via Galerkin's Method
Mecitoğlu Z., KAZANCI Z., Balkan D.
INTERNATIONAL JOURNAL OF NONLINEAR SCIENCES AND NUMERICAL SIMULATION, vol.15, no.5, pp.251-263, 2014 (SCI-Expanded)

Articles Published in Other Journals

- I. Investigation of buckling response of variable angle fiber composite plates using differential evolution
Beyazgül U., Balkan D.
International Journal on Interactive Design and Manufacturing, vol.17, no.4, pp.1579-1587, 2023 (ESCI)
- II. Thermal buckling analysis of laminated plates with variable angle fiber orientation
Baran F., Balkan D.
Niğde Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.12, no.3, pp.912-918, 2023 (Peer-Reviewed Journal)
- III. A NUMERICAL MODEL FOR BALLISTIC IMPACT RESPONSE OF COMPOSITE ARMORS
BALKAN D., EKEN S.
Journal of Aeronautics and Space Technologies, vol.11, no.2, pp.17-23, 2018 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **An Artificial Neural Network Approach to Predict Strain Gauge Results of Unidirectional Laminated Composites' Tensile Test**
Karalar A. B., Soyugüzel T., Balkan D.
10th International Conference on Recent Advances in Air and Space Technologies, RAST 2023, İstanbul, Turkey, 7 - 09 June 2023
- II. **Modeling of Bird Strike to a Composite Helicopter Rotor Blade**
Eren Z., Tataroğlu S., Balkan D., Mecitoğlu Z.
58th AIAA/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Grapevine, Texas, United States Of America, 9 - 13 January 2017, pp.1
- III. **The effect of bird strike on both flat and curved helicopter windshields with different curvatures**
Tataroğlu S., Eren Z., Balkan D., Türkmen H. S., Kazancı Z., Mecitoğlu Z.
19th International Conference on Composite Structures (ICCS19), Porto, Portugal, 5 - 09 September 2016, pp.63-65
- IV. **Effects of Thickness and Curvature on Impact Behaviour of Composite Panels**
Usta F., Mullaoğlu F., Türkmen H. S., Balkan D., Mecitoğlu Z., Kurtaran H., Akay E.
2nd International Symposium on Dynamic Response and Failure of Composite Materials, (Draf), Naples, Italy, 6 - 09 September 2016, vol.167, pp.216-222
- V. **Deformation behavior of the polycarbonate plates subjected to impact loading**
Mullaoğlu F., Usta F., Türkmen H. S., Kazancı Z., Balkan D., Akay E.
2nd International Symposium on Dynamic Response and Failure of Composite Materials (Draf), Naples, Italy, 6 - 09 September 2016, vol.167, pp.143-150
- VI. **New Model for Interlaced Yarns in the Ballistic Impact of Flexible Body Armors**
YAVUZ A. G., Phoenix S. L., Balkan D.
14th International Conference on Advances in Materials and Processing Technologies (AMPT), İstanbul, Turkey, 13 - 16 July 2011, vol.445, pp.1023-1024
- VII. **Dynamic Response of a Laminated Composite Plate with Viscoelastic Stiffeners subject to Blast Load**
Acar Ezer O., Balkan D., Türkmen H. S., Mecitoğlu Z.
The Tenth International Conference on Computational Structures Technology, Valencia, Spain, 14 - 17 September 2010, pp.1-8
- VIII. **Dynamic Behaviour of the Laminated Sandwich Plate with a Stepwise Graded Viscoelastic Core**
Tengiz E., Balkan D., Türkmen H. S., Mecitoğlu Z.
The Tenth International Conference on Computational Structures Technology, Valencia, Spain, 14 - 17 September 2010, pp.1-8
- IX. **Dynamic Response of a Laminated Composite Plate With Viscoelastic Stiffeners Under Blast Load**
ACAR EZER O., BALKAN D., TÜRK MEN H. S., MECİTOĞLU Z.
The Tenth International Conference on Computational Structures Technology, 14 - 17 September 2010
- X. **Transient Response of Laminated Sandwich Plate with Viscoelastic Core Subjected to Air Blast: Theory and Experiment**
BALKAN D., ACAR O., TÜRK MEN H. S., MECİTOĞLU Z.
11th International Conference on Structures Under Shock and Impact, 28 - 30 July 2010
- XI. **Transient response of a laminated sandwich plate with viscoelastic core subjected to air blast: theory and experiment**
Balkan D., Acar O., Türkmen H. S., Mecitoğlu Z.
11th International Conference on Structures under Shock and Impact, Tallinn, Estonia, 01 July 2010, vol.113, pp.113-124
- XII. **Dynamic Response of a Sandwich Plate with Viscoelastic Core Under Blast Load**
Balkan D., Mecitoğlu Z.
7th EUROMECH Solid Mechanics Conference, Lizbon, Portugal, 7 - 11 September 2009, pp.1

Supported Projects

- Balkan D., Eren Z., Mecitoğlu Z., GÖKÇEKAYA Ö., Project Supported by Higher Education Institutions, Yenilikçi Hava-Uzay Yapıları için Metal Katmanlı İmalat ile 2B Meta-malzeme Nüveli Sandviç Yapıların Üretilmesi ve Patlama Yanıtlarının Deneysel ve Sayısal Olarak İncelenmesi, 2022 - Continues
- Balkan D., Eren Z., Arikoglu A., Project Supported by Higher Education Institutions, Filament Sarma Yöntemi ile Üretilmiş Kompozit Tüpelerinin Ezilme Yanımı için Hasar Kriteri Geliştirilmesi, Geometrik Süreksizliklerin Deneysel ve Sayısal Olarak İncelenmesi, 2018 - 2020
- Balkan D., Baloglu S., Project Supported by Higher Education Institutions, Uçak Motor Türbin Pallerinde Kullanılan RENE41 (AMS5545) Nikel Tabanlı Süper Alaşımının Yüksek Sıcaklık Oksidasyon Özellikleri, 2018 - 2019
- Balkan D., Türkmen H. S., Mecitoğlu Z., Project Supported by Other Official Institutions, Kanopi ve Palaya Kuş Çarpması Etkisinin İncelenmesi, 2015 - 2017
- Balkan D., Türkmen H. S., Project Supported by Other Official Institutions, Parçacık Çarpması Etkisinin İncelenmesi ve Malzeme Modeli Kurulması, 2015 - 2017
- Balkan D., TUBITAK Project, Anlık Basınç Yüküne Ve Balistik Çarpmaya Dayanıklı, Takviye Elemanları Güçlendirilmiş İnce Cidarlı Kompozit Sandviç Plakların Çok-Hedefli Genetik Algoritmalar İle Optimal Tasarımı Ve Deneysel Doğrulaması, 2014 - 2017
- Balkan D., Mecitoğlu Z., Türkmen H. S., TUBITAK Project, Theoretical and experimental investigation of sandwich composite plates with viscoelastic core under the blast load, 2008 - 2011

Metrics

- Publication: 20
Citation (WoS): 82
Citation (Scopus): 108
H-Index (WoS): 5
H-Index (Scopus): 6

Non Academic Experience

McNair Aerospace Center
Cornell University