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Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: O-2807-2017

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Education Information

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Uçak ve Uzay Mühendisliği, Turkey 2015 - 2020

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Uçak ve Uzay Mühendisliği, Turkey 2013 - 2015

Undergraduate, Istanbul Technical University, Uçak ve Uzay Bilimleri, Uçak Mühendisliği, Turkey 2004 - 2013

Foreign Languages

German, B1 Intermediate

English, C2 Mastery

Research Areas

Fracture Mechanics, Finite Element Methods, Mechanical Testing, Aeronautical and Space Engineering, Mechanical Properties, Composites, Material Characterization, Aeronautical Engineering, Structural Technologies, Material Technologies, Testing Techniques, Engineering and Technology

Academic Titles / Tasks

Research Assistant, Istanbul Technical University, Uçak ve Uzay Bilimleri, Uçak Mühendisliği, 2019 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Multiphase lattice metamaterials with enhanced mechanical performance**
Usta F., Scarpa F., Türkmen H. S., Johnson P., Perriman A. W., Chen Y.
SMART MATERIALS AND STRUCTURES, vol.30, no.2, 2021 (SCI-Expanded)
- II. **Edgewise compression of novel hexagonal hierarchical and asymmetric unit cells honeycomb metamaterials**
Usta F., Scarpa F., Türkmen H. S.
Materials Today Communications, vol.24, 2020 (SCI-Expanded)
- III. **Experimental and numerical investigation of impact behavior of nested tubes with and without honeycomb filler**

Usta F., Türkmen H. S.

THIN-WALLED STRUCTURES, vol.143, 2019 (SCI-Expanded)

IV. Crashworthiness Optimization of Nested and Concentric Circular Tubes Using Response Surface Methodology and Genetic Algorithm

Usta F., Eren Z., Kurtaran H., Türkmen H. S., Kazancı Z., Mecitoğlu Z.

LATIN AMERICAN JOURNAL OF SOLIDS AND STRUCTURES, vol.15, no.5, 2018 (SCI-Expanded)

Articles Published in Other Journals

I. Impact behavior of triggered and non-triggered crash tubes with auxetic lattices

Usta F., Ertaş O. F., Ataalp A., Türkmen H. S., Kazancı Z., Scarpa F.

Multiscale and Multidisciplinary Modeling, Experiments and Design, vol.2, no.2, pp.119-127, 2019 (ESCI)

Refereed Congress / Symposium Publications in Proceedings

I. Ökzetik dolgulu tüplerin statik ezme yükü altında deformasyon davranışının incelenmesi

USTA F., TÜRKMEN H. S.

8. Ulusal Havacılık ve Uzay Konferansı (UHUK'xx2020), Turkey, 9 - 11 September 2020

II. Ökzetik dolgulu tüplerin çarpma yükleri altında deneysel ve sayısal olarak incelenmesi

USTA F., TÜRKMEN H. S.

8. Ulusal Havacılık ve Uzay Konferansı (UHUK'xx2020), Turkey, 9 - 11 September 2020

III. Crushing behaviour of nested composite crash tubes

Usta F., Ataalp A., Türkmen H. S.

9th International Conference on Recent Advances in Space Technologies, RAST 2019, İstanbul, Turkey, 11 - 14 June 2019, pp.65-68

IV. Toroidal sandwich panels with auxetic core under impact loads: Numerical simulations

Usta F., Türkmen H. S., Scarpa F.

9th International Conference on Recent Advances in Space Technologies, RAST 2019, İstanbul, Turkey, 11 - 14 June 2019, pp.25-28

V. Impact Response of Sandwich Structures with Auxetic and Honeycomb Core

Ataalp A., Usta F., Türkmen H. S., Scarpa F., Doltsinis I., Kazancı Z.

9th International Conference on Recent Advances in Space Technologies (RAST), İstanbul, Turkey, 11 - 14 June 2019, pp.69-72

VI. Optimization of Cylindrical Curved Composite Panels Using Response Surface Methodology and Genetic Algorithm

USTA F., KURTARAN H., TÜRKMEN H. S.

20th International Conference on Composite Structures (ICCS20), Paris, France, 4 - 07 September 2017

VII. Numerical and Experimental Impact Analysis of Stepped and Concentric Crash Tubes

USTA F., EREN Z., KURTARAN H., TÜRKMEN H. S., KAZANCI Z., MECITOĞLU Z.

International Symposium on Dynamic Response and Failure of Composite Materials, Italy, 12 - 15 July 2018

VIII. Numerical and Experimental Investigation of Curved Sandwich Panels and Plates

USTA F., TÜRKMEN H. S., KURTARAN H.

International Conference on Mechanics of Composites-(MECHCOMP3), Italy, 4 - 07 June 2017

IX. Crash Behavior of Nested Tube Structures with Various Cross Sections

Usta F., Türkmen H. S.

8th International Conference on Recent Advances in Space Technologies (RAST), İstanbul, Turkey, 19 - 22 June 2017, pp.23-27

X. Crash Response of Composite Multitubular Structures: The Effects of Wall Thickness

USTA F., EREN Z., TÜRKMEN H. S., KAZANCI Z., MECITOĞLU Z.

19th International Conference on Composite Structures (ICCS19), Portugal, 5 - 08 August 2016

- XI. **Numerical Investigation of Foam Filled Axially Loaded Multitubular Structures**
USTA F., EREN Z., TÜRKMEN H. S., KAZANCI Z., MECİTOĞLU Z.
1st International Conference on Impact Loading of Structures and Materials-ICILSM2016, Italy, 22 - 26 May 2016
- XII. **Effects of Thickness and Curvature on Impact Behaviour of Composite Panels**
Usta F., Mullaoglu F., Turkmen 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
- XIII. **Deformation behavior of the polycarbonate plates subjected to impact loading**
Mullaoglu F., Usta F., Turkmen H. S., Kazanci 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
- XIV. **Axial Crash and Crush Response of Novel Nested Tube Designs**
EREN Z., USTA F., TÜRKMEN H. S., KAZANCI Z., MECİTOĞLU Z.
12th International Conference on the Mechanical Behaviour of Materials (ICM 12), Germany, 10 - 14 May 2015
- XV. **Numerical Investigation of Stepped Concentric Crash Tubes Subjected to Axial Impact : The Effects of Number of Tubes**
Usta F., Eren Z., Turkmen H. S., Kazanci Z., Mecitoğlu Z.
7th International Conference on Recent Advances in Space Technologies (RAST), İstanbul, Turkey, 16 - 19 June 2015, pp.39-43

Supported Projects

Usta F., Turkmen H. S., Project Supported by Higher Education Institutions, Köpük Dolgulu Çift Eğrilikli Sandviç Panellerde Dinamik Çarpma Etkisinin İncelenmesi (BAP Doktora Tez Destek Projesi - İTÜ), 2019 - 2021

Usta F., Turkmen H. S., Project Supported by Higher Education Institutions, Çift Eğrilikli Ökzetik Dolgulu Sandviç Panellerin Katı ve Yumuşak Parçacık Çarpması Etkisi Altında Davranışının İncelenmesi (BAP Genel Araştırma Projesi - İTÜ), 2018 - 2021

Türkmen H. S., Mecitoğlu Z., Kazancı Z., TUBITAK Project, İç içe yuvalanmış ezilme kutularının ezilme ve çarpışma davranışının sayısal ve deneysel incelenmesi, 2013 - 2015

Patent

Usta F., Araçlarda Pasif Güvenlik Bileşeni Olarak İç İçe Çarpışma Kutusu, Patent, CHAPTER F Mechanical engineering; Lighting; Heating; Weaponry; Destroyed Materials, The Invention Registration Number: TR 2015 10333 , Standard Registration, 2020

Scientific Refereeing

MATERIALS & DESIGN, SCI Journal, January 2021

THIN-WALLED STRUCTURES, SCI Journal, November 2020

SHOCK AND VIBRATION, SCI Journal, June 2020

THIN-WALLED STRUCTURES, SCI Journal, December 2019

ENGINEERING STRUCTURES, SCI Journal, November 2018

Metrics

Publication: 24

Citation (WoS): 127

Citation (Scopus): 193

H-Index (WoS): 7

H-Index (Scopus): 8

Scholarships

2211/C Domestic Priority Doctoral Fellowship, TUBITAK, 2019 - Continues

2214-A International Doctoral Research Fellowship, TUBITAK, 2019 - 2019

100/2000 Domestic Priority Doctoral Fellowship, YOK, 2017 - 2019