

Asst. Prof. HARUN GÜÇLÜ

Personal Information

Email: harunguclu@uludag.edu.tr

Web: <https://avesis.uludag.edu.tr/harunguclu>

International Researcher IDs

ScholarID: Wncj78QAAAAJ

ORCID: 0000-0002-5679-313X

Publons / Web Of Science ResearcherID: Q-8738-2018

ScopusID: 57191191009

Yoksis Researcher ID: 224231

Education Information

Doctorate, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, FEN BİLİMLERİ ENSTİTÜSÜ, Turkey 2016 - 2022

Postgraduate, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, FEN BİLİMLERİ ENSTİTÜSÜ, Turkey 2014 - 2016

Undergraduate, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, MAKİNA MÜHENDİSLİĞİ, Turkey 2009 - 2014

Research Areas

Fluid Mechanics, Renewable Energy Systems, Alternative Energy Resources, Energy storage technologies, Hydrogen Technologies and Fuel Cells, System Dynamics and Control, Mechatronics, Modeling and Simulation of Dynamic Systems, Finite Element Methods, Internal Combustion Engines, Computational fluid dynamics, Nanomaterials

Academic Titles / Tasks

Assistant Professor, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, OTOMOTİV MÜHENDİSLİĞİ, 2023 - Continues

Research Assistant PhD, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, OTOMOTİV MÜHENDİSLİĞİ, 2015 - 2023

Courses

Taşıt Dinamiği, Undergraduate, 2022 - 2023

Otomotiv Mühendisliğinde Sonlu Elemanlar Uygulamaları, Undergraduate, 2022 - 2023

Kariyer Planlama, Undergraduate, 2022 - 2023

Published journal articles indexed by SCI, SSCI, and AHCI

- An easy-to-implement self-healing smart design for increasing impact strength and crashworthiness resistance of honeycomb sandwich structures**
Güçlü H., Osmanoğlu S., Hayırkuş A., Taş O., Yazıcı M.
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART L-JOURNAL OF MATERIALS-DESIGN AND APPLICATIONS, vol.237, no.4, pp.812-829, 2023 (SCI-Expanded)
- Investigation of the optimum vibration energy harvesting performance of electrospun PVDF/BaTiO3**

nanogenerator

Güçlü H., Kasım H., Yazıcı M.

JOURNAL OF COMPOSITE MATERIALS, vol.57, no.3, pp.409-424, 2023 (SCI-Expanded)

- III. **Impact behavior of natural rubber based syntactic foam core sandwich structures**
GÜÇLÜ H., Kasım H., Turkoglu I. K., Can Y., Yazıcı M.
MATERIALS TESTING, vol.63, no.11, pp.1052-1057, 2021 (SCI-Expanded)
- IV. **Gradually collapsible crash boxes with bonded aluminium tubes**
Can Y., Güçlü H., Kasar I., Yazıcı M.
EMERGING MATERIALS RESEARCH, vol.9, no.4, pp.1113-1120, 2020 (SCI-Expanded)
- V. **Finite-element analysis of EPP foam core/self-reinforced PP sandwich structures**
Güçlü H., Turkoglu I. K., Can Y., Yazıcı M.
EMERGING MATERIALS RESEARCH, vol.9, no.4, pp.1250-1257, 2020 (SCI-Expanded)
- VI. **Impact Loading Performance of Polymer Foam Core Aluminium Sandwich Panels**
Can Y., Guclu H., Turkoglu I. K., Kasar I., Yazıcı M.
ACTA PHYSICA POLONICA A, vol.135, no.4, pp.769-771, 2019 (SCI-Expanded)
- VII. **Polymer Foam Core Aluminum Sandwich Lightweight Car Hood for Pedestrian Protection**
Can Y., Yazıcı M., GÜÇLÜ H.
ACTA PHYSICA POLONICA A, vol.134, no.1, pp.231-234, 2018 (SCI-Expanded)
- VIII. **Investigation of the Hyperelastic Material Coated Steel Car Hood Concerning Pedestrian Head Impact Protection using Finite Element Method**
Yazıcı M., Can Y., GÜÇLÜ H.
ACTA PHYSICA POLONICA A, vol.134, no.1, pp.238-240, 2018 (SCI-Expanded)
- IX. **Optimal Design of Light Commercial Vehicle Headlamp for Pedestrian Protection**
Yazıcı M., GÜÇLÜ H., Karen I., Kandirmis I. K., Malkoc S., Buyukluoglu O. F.
ACTA PHYSICA POLONICA A, vol.130, no.1, pp.262-265, 2016 (SCI-Expanded)

Articles Published in Other Journals

- I. **Open-Hole Tensile Experiments of Thermoplastic Composite Laminates and Finite Element Analysis**
Özer H., Kurtuluş O., Güçlü H., Taş M., Yazıcı M.
International Journal of Computational and Experimental Science and Engineering (IJCESEN), vol.3, no.1, pp.44-46, 2017 (Peer-Reviewed Journal)
- II. **Finite Element Analysis of Impact Loaded Polymer Composites Side Door Anti-intrusion Bar**
Yazıcı M., Türkoğlu İ. K., Karen İ., Güçlü H., Somyak C.
International Journal of Automation, Mechatronics Robotics, vol.3, no.1, pp.50-55, 2016 (Peer-Reviewed Journal)
- III. **Numerical Analysis of Light Commercial Vehicle Headlamp for Pedestrian Safety**
YAZICI M., GÜÇLÜ H., KAREN İ., TÜRKOĞLU İ. K., SALİM Y., SERTAÇ M.
International Journal of Natural and Engineering Sciences, vol.9, no.2, pp.34-38, 2015 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Polymer Nanocomposites for Energy Harvesting**
Güçlü H., Yazıcı M.
in: Polymer Nanocomposites Fabrication to Applications, Rajesh Kumar Verma, Shivi Kesarwani, Jinyang Xu, J. Paulo Davim, Editor, CRC, New York, Florida, pp.71-82, 2024
- II. **Development of Piezo-Polymer Nano Composite Energy Generator and Energy Harvesting from Mechanical Vibration**
Güçlü H., Eminoğlu E., Yazıcı M.
in: Composite Materials with Different Engineering Approaches III, Prof. Dr. Murat YAZICI, Dr. Öğr. Üy. Yalçın

BOZTOPRAK,Dr. Öğr. Üyesi Süleyman Serdar PAZARLIOĞLU, Editor, Özgür Eğitim Yayıncılık, Gaziantep, pp.33-50, 2023

III. **Predicting Damage Behavior of Self-Healing Sandwich Panels: Computational Modeling**

YAZICI M., GÜÇLÜ H., DELİKTAŞ B.

in: Handbook of Damage Mechanics:Nano to Macro Scale for Materials and Structures, Voyiadjis G.Z., Editor, Springer, New York, pp.1-16, 2021

Refereed Congress / Symposium Publications in Proceedings

- I. **DEVELOPMENT OF A THERMO-MECHANICAL MODEL FOR A BATTERY CELL BOX by USING NOVEL SANDWICH STRUCTURES**
Özgür E., Beyazoğlu E., Güçlü H., Pulat E., Yazıcı M.
TASHKENT INTERNATIONAL CONGRESS ON MODERN SCIENCES-III, Toskent, Uzbekistan, 22 - 23 April 2024, vol.1, no.1, pp.1
- II. **Design, Finite Element Analysis, and Experimental Validation Thermoplastic Composite UD Tape Production System**
Elbhnasawi M. N. M., Eminoğlu E., Güçlü H., Yazıcı M.
3RD INTERNATIONAL CONGRESS ON SCIENTIFIC ADVANCES, İstanbul, Turkey, 20 - 23 December 2023, vol.1, no.1, pp.405-406
- III. **DESIGNING A SELF HEALING ALUMINUM HONEYCOMB CORE SANDWICH PANEL WITH PLACING POLYMER RESIN IMPREGNATED FOAM INTO CORE CELLS**
Osmanoğlu S., Hayırkuş A., Taş O., Güçlü H., Yazıcı M.
II. BASKENT INTERNATIONAL CONFERENCE ON MULTIDISCIPLINARY STUDIES, Ankara, Turkey, 24 - 25 February 2022, pp.1
- IV. **Functionally Graded Syntactic Foam Core Sandwich Materials Under Blast and Impact Loading**
Türkoğlu İ. K., Özer H., Güçlü H., Can Y., Yazıcı M.
8th INTERNATIONAL CONFERENCE ON COMPUTATIONAL AND EXPERIMENTAL SCIENCE AND ENGINEERING (ICCESEN-2021), Antalya, Turkey, 27 - 31 October 2021, pp.2
- V. **Performance of Blast Loaded Thermoplastic Composite Ultra-light Sandwich Panels**
Güçlü H., Matyar B., Can Y., Yazıcı M.
8th INTERNATIONAL CONFERENCE ON COMPUTATIONAL AND EXPERIMENTAL SCIENCE AND ENGINEERING (ICCESEN-2021), Antalya, Turkey, 27 - 31 October 2021, pp.1
- VI. **PERFORMANCE OF AUXETIC CORE 3D PRINTED SANDWICH STRUCTURES UNDER ACOUSTIC AND SHOCK WAVES**
Türkoğlu İ. K., Güçlü H., Yazıcı M.
MECHCOMP7 - 7th International Conference on Mechanics of Composites, Porto, Portugal, 1 - 03 September 2021, vol.1, no.1, pp.18
- VII. **Experimental Investigation Of The Behavior Of Sandwich Panels under Shock Loading**
Yazıcı M., Can Y., Özer H., Güçlü H.
7 th International Conference on Computational and Experimental Science and Engineering, Antalya, Turkey, 21 - 25 October 2020, vol.1, pp.84
- VIII. **Finite Element Analysis on Flexural Behavior of EPP Foam Core Self-Reinforced Polypropylene Thermoplastic Sandwich Structures**
Güçlü H., Türkoğlu İ. K., Can Y., Yazıcı M.
6th INTERNATIONAL CONFERENCE ON COMPUTATIONAL AND EXPERIMENTAL SCIENCE AND ENGINEERING (ICCESEN-2019), Antalya, Turkey, 23 - 27 October 2019, vol.1, pp.195
- IX. **NUMERICAL AND EXPERIMENTAL STUDY OF DC04 SHEETMETAL FORMABILITY**
Vatansevver H., Kamas T., Güçlü H., Yazıcı M.
The International Conference of Materials and Engineering Technologies (TICMET'19), Gaziantep, Turkey, 10 - 12 October 2019, vol.1, pp.6

- X. **Finite Element Analysis of the Impact Behaviour of Natural Rubber Based Syntactic Foam Core Sandwich Structure with Aluminum Skin**
Yazıcı M., Kasım H., Güçlü H., Türkoğlu İ. K., Can Y.
5th International Conference on Computational and Experimental Science and Engineering (ICCESSEN-2018), Antalya, Turkey, 12 - 16 October 2018
- XI. **Finite Element Simulation of the Telescopic Crash Boxes Designing by Adhesively Bonded Coaxial Aluminum Tubes**
Can Y., Güçlü H., Kasar İ., Yazıcı M.
5th International Conference on Computational and Experimental Science and Engineering (ICCESSEN-2018), Antalya, Turkey, 12 - 16 October 2018
- XII. **Continuous Carbon Fiber/Polypropylene Thermoplastic Composite Telescopic Crash Box for a Passenger Car**
Can Y., Güçlü H., Türkoğlu İ. K., Yazıcı M.
21th International Conference on Composite Structures, Bologna, Italy, 4 - 07 September 2018
- XIII. **Comparative Study On Quasi-static and Impact Load Performance of Cubic, Pyramidal, and Hexagonal Cell Shaped Carbon Fiber/ Polypropylene Thermoplastic Composite Truss Lattice Core Sandwich Structures with Carbon Fiber/Polypropylene Laminated Composite Face Sheets**
Akbulut G., Güçlü H., Türkoğlu İ. K., Korkmaz B., Can Y., Yazıcı M.
4th International Conference on Mechanics of Composites, Madrid, Spain, 9 - 12 July 2018
- XIV. **Impact Loading Performance of Polymer Foam Core Aluminum Sandwich Panels**
Can Y., Güçlü H., Türkoğlu İ. K., Yazıcı M.
8th International Advances in Applied Physics and Materials Science Congress Exhibition, Muğla, Turkey, 24 - 30 April 2018
- XV. **THE BENDING RESPONSE OF CARBON FIBER REINFORCED THERMOPLASTIC MONO-COMPOSITE PYRAMIDAL LATTICE TRUSS CORE SANDWICH STRUCTURES**
Güçlü H., Can Y., Türkoğlu İ. K., Yazıcı M.
9th International Automotive Technologies Congress, OTEKON 2018, Bursa, Turkey, 7 - 08 May 2018
- XVI. **QUASI-STATIC AND DYNAMIC CHARACTERISATION OF HOTMELT ETHYLENE/VINYL ACETATE COPOLYMER (EVA) ADHESIVES AND SELF REINFORCED COMPOSITE LAMINATES /EXPANDED POLYPROPYLENE FOAM SANDWICH BEAMS**
Türkoğlu İ. K., Güçlü H., Yazıcı M.
9th International Automotive Technologies Congress, OTEKON 2018, Bursa, Turkey, 7 - 08 May 2018
- XVII. **Experimental Investigation of the Open-Hole Effect on Self Reinforced Polypropylene Based Thermoplastic Composite Laminates**
Türkoğlu İ. K., Güçlü H., Kurtuluş O., Can Y., Yazıcı M.
1st International Symposium on Light Alloys and Composite Materials (ISLAC'18), Karabük, Turkey, 22 - 24 March 2018
- XVIII. **Quasi-Static and Dynamic Characterisation of Hotmelt Ethylene/Vinyl Acetate Copolymer (EVA) Adhesives**
Yazıcı M., Kandirmiş İ. K., Güçlü H., Can Y.
4th International Conference on Computational and Experimental Science and Engineering (ICCESSEN-2017), Antalya, Turkey, 4 - 08 October 2017
- XIX. **Impact Response of Polymer Foam Core Aluminum Sandwich Panels for Pedestrian Friendly Car Hood**
Güçlü H., Yücel C., Yazıcı M.
4th International Conference on Computational and Experimental Science and Engineering, Antalya, Turkey, 4 - 08 October 2017
- XX. **Mechanical Performance of Carbon Fiber Reinforced Thermoplastic Composite Pyramidal Lattice Truss Core Sandwich Structures**
Can Y., Güçlü H., Kandirmiş İ. K., Yazıcı M.
20th International Conference on Composite Structures, Paris, France, 4 - 07 September 2017, pp.68

- XXI. **Lateral Side Impact Performance of Rubber Based Syntactic Foam Core Sandich Panels**
Yazıcı M., Kasım H., Güçlü H., Kandirmiş İ. K., Can Y.
3rd International Conference on Mechanics of Composites (MECHCOMP3), Bologna, Italy, 4 - 07 July 2017, pp.40
- XXII. **Investigation of the Hyperelastic Material Coated Steel Car Hood Concerning Pedestrian Head Impact Protection by Finite Element Analysis**
Yazıcı M., Yücel C., Güçlü H.
7th International Advances in Applied Physics and Materials Science Congress Exhibition, Muğla, Turkey, 22 - 26 April 2017, pp.98
- XXIII. **TERMOPLASTİK KOMPOZİT MALZEME VE SENTAKTİK KÖPÜK ESASLI SANDVIÇ YAPILARDAN ÇOK HAFİF TAMPON KİRİŞİ VE DARBE SÖNÜMLEYİCİ GELİŞTİRİLMESİ**
Özer H., Can Y., Güçlü H., Karen İ., Yazıcı M.
OTEKON 2016. 8.Otomotiv Teknolojileri Kongresi, Bursa, Turkey, 23 - 24 May 2016, pp.565-570
- XXIV. **FINITE ELEMENT ANALYSIS OF IMPACT LOADED POLYMER COMPOSITES SIDE DOOR ANTI-INTRUSION BAR**
Yazıcı M., Türkoğlu İ. K., Karen İ., Güçlü H., Somyak C.
4th International Conference on Advances in Civil, Structural and Mechanical Engineering-CSM2016, Birmingham, United Kingdom, 17 - 18 March 2016, pp.84-89
- XXV. **Experimental Determination of Mechanical Properties of 2D Cross Ply Glass Reinforced Thermoplastic Laminated Composite Materials and Finite Element Model Validation**
Yazıcı M., Özer H., Türkoğlu İ. K., Güçlü H., Karen İ.
2nd International Conference on Computational and Experimental Science and Engineering (ICCESEN 2015), Antalya, Turkey, 14 - 19 October 2015
- XXVI. **Numerical Analysis of Light Commercial Vehicle Headlamp for Pedestrian Safety**
Yazıcı M., Güçlü H., Karen İ., Kandirmiş İ. K., Yagoub S., Malkoç S.
(ICNES 2015) INTERNATIONAL CONGRESS ON NATURAL AND ENGINEERING SCIENCES, Sarajevo, Bosnia And Herzegovina, 9 - 13 September 2015, pp.39
- XXVII. **Investigation of the Polymer Composite Side Door Anti-intrusion Bar for a Light Commercial Vehicle**
KAREN İ., TÜRKOĞLU İ. K., ÖZER H., GÜÇLÜ H., somyak c., torçuk c.
INTERNATIONAL CONGRESS ON NATURAL AND ENGINEERING SCIENCES (ICNES 2015), Bosnia And Herzegovina, 9 - 13 September 2015
- XXVIII. **Frontal crash simulation of the Composite Car Bumper to Rigid Barriers and Poles**
ÖZER H., can y., KAREN İ., GÜÇLÜ H.
International Congress On Natural And Engineering Sciences (ICNES 2015), Bosnia And Herzegovina, 9 - 13 September 2015
- XXIX. **Experimental Determination of Mechanical Properties of 2D Cross Ply Glass Fiber Reinforced Thermoplastic Laminated Composite Materials and Finite Element Model Validation**
YAZICI M., ÖZER H., KANDIRMIŞ İ. K., GÜÇLÜ H., KAREN İ.
2nd International Conference on Computational and Experimental Science and Engineering (ICCESEN 2015), Antalya, Turkey, 14 - 19 October 2015
- XXX. **Optimal Design of Light Commercial Vehicle Headlamp for Pedestrian Protection**
Yazıcı M., Güçlü H., Karen İ., Kandirmiş İ. K., Malkoç S.
2nd International Conference on Computational and Experimental Science and Engineering (ICCESEN 2015), Antalya, Turkey, 14 - 19 October 2015, pp.274
- XXXI. **Frontal crash simulation of the Composite Car Bumper to rigid barriers and poles**
Yazıcı M., Özer H., Can Y., Karen İ., Türkoğlu İ. K., Güçlü H.
(ICNES 2015) INTERNATIONAL CONGRESS ON NATURAL AND ENGINEERING SCIENCES , Sarajevo, Bosnia And Herzegovina, 9 - 13 September 2015, pp.20
- XXXII. **Investigation of the Polymer Composite Side Door Anti-intrusion Bar for a Light Commercial Vehicle**
Yazıcı M., Karen İ., Türkoğlu İ. K., Özer H., Güçlü H., Somyak C., Torçuk C.
(ICNES 2015) INTERNATIONAL CONGRESS ON NATURAL AND ENGINEERING SCIENCES, Sarajevo, Bosnia And Herzegovina, 9 - 13 September 2015, pp.25

XXXIII. Mechanical Properties of Automobile Head Lamp Thermoplastic Materials under Extreme Temperatures

Yazıcı M., Karen İ., Coşkun S., Malkoç S., Kandirmiş İ. K., Güçlü H.

5th International Advances in Applied Physics and Materials Science Congress Exhibition (APMAS2015), Muğla, Turkey, 16 - 19 April 2015

XXXIV. Mechanical Characterization of Usibor 1500 Hot Stamping Steel

Güçlü H., Kandirmiş İ. K., Eşiyok F., Karen İ., Can Y., Yazıcı M.

5th International Advances in Applied Physics and Materials Science Congress Exhibition (APMAS2015), Muğla, Turkey, 16 - 19 April 2015

Supported Projects

YAZICI M., ÜNAL M., DURAN G., GÜÇLÜ H., ÖZER H., KARAMAN A., KUZU E., Project Supported by Higher Education Institutions, Şekil Hafızalı Polimer Matrisli ve Reaktif Termoplastik Polimer Ajan Dolgulu Mikrokapsül Esaslı Kendi Kendine İyileşebilen Termoplastik Kompozit Malzemeler Geliştirilmesi ve İyileşme Performansının İncelenmesi, 2023 - Continues

KORKMAZ B., YAZICI M., ÖZADA Ç., GÜÇLÜ H., ÖZER H., ÜNAL M., KUZU E., Project Supported by Higher Education Institutions, Elektrikli Araçlarda Yüksek Performanslı Enerji Depolama Sistemleri için Multifonksiyonel Elektrolitlerin Geliştirilmesi ve Özelliklerinin İncelenmesi, 2022 - Continues

Yazıcı M., Pulat E., Özer H., Güçlü H., Motorcu A. R., Onat A., Türkoğlu İ. K., Boztoprak Y., TUBITAK Project, GERİ DÖNÜŞÜM PET MATRİSLİ, DOĞAL VE YÜKSEK MUKAVEMETLİ ELYAF TAKVİYELİ KARMA İPLİKLERDEN DOKUNMUŞ, ÇOK KATMANLI ORGANİK PLAKALAR GELİŞTİRİLMESİ, BATARYA KUTUSU ÜRETİMİ VE TESTLERİ, 2023 - 2025

Güçlü H., Yazıcı M., TUBITAK Project, Piezo-Polimer Nano Kompozit Enerji Üretici Geliştirilmesi, 2022 - 2022

Yazıcı M., Akay S. K., Deliktaş B., Durmuş A., Aykut Y., TUBITAK Project, Development of a novel macro level selfhealing hybrid sandwich panels and determination of the panels' healing performance under static, impact and shock loading conditions, 2019 - 2022

Deliktaş B., Akay S. K., Aykut Y., Durmuş A., Yazıcı M., TUBITAK Project, Self healing sandwich materials (TÜBİTAK-ARDEB 1001 Program supported project Grant No. 218M468), 2019 - 2022

Patent

Yazıcı M., Özer H., Güçlü H., Türkoğlu İ. K., ARAÇLARDA PASİF ÇARPIŞMA GÜVENLİK ELEMANLARINDA GÖZENEKLİ YAPILARIN KULLANILMASINI SAĞLAYAN SİSTEM, Patent, CHAPTER F Mechanical engineering; Lighting; Heating; Weaponry; Destroyed Materials, The Invention Recourse Number: 2021/012326 , Standard Registration, 2021

Yazıcı M., Güçlü H., Özer H., Türkoğlu İ. K., SYSTEM ENABLING USE OF POROSITY EMBODIMENTS IN PASSIVE COLLISION SECURITY MEMBERS IN VEHICLES, Patent, CHAPTER F Mechanical engineering; Lighting; Heating; Weaponry; Destroyed Materials, The Invention Recourse Number: PCT/TR2021/051113 , Standard Registration, 2021

Metrics

Publication: 49

Citation (WoS): 26

Citation (Scopus): 31

H-Index (WoS): 3

H-Index (Scopus): 3