Asst. Prof. HÜSEYİN ERDEM YALKIN



Personal Information

Office Phone: +90 236 234 4460 Extension: 6710
Email: huseyinerdem.yalkin@cbu.edu.tr
Web: https://avesis.mcbu.edu.tr/huseyinerdem.yalkin

International Researcher IDs
ScholarID: 2Tht6CUAAAAJ
ORCID: 0000-0001-5140-525X
Publons / Web Of Science ResearcherID: AAG-4489-2019
ScopusID: 56652329800
Yoksis Researcher ID: 247077

Education

Doctorate, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Makina Mühendisliği Ana Bilim Dalı, Turkey 2015 - 2020
Postgraduate, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Makina Mühendisliği Ana Bilim Dalı, Turkey 2013 - 2015
Undergraduate, Dokuz Eylul University, Mühendislik Fakültesi, Metalurji Ve Malzeme Mühendisliği Bölümü, Turkey 2009 - 2013

Biography

I am conducting research in the fields of materials mechanics, characterization techniques, and research & development. I completed my graduate studies on the behavior of fiber-reinforced composite materials under various loading conditions. My core expertise includes experimental characterization of microstructural and mechanical properties, reverse engineering applications, and damage analysis.

To date, I have published numerous national and international scientific papers, which have received over 200 international citations. In addition to academic research, I have been actively involved in TÜBİTAK and university-supported projects, as well as industry collaborations on various R&D initiatives. My goal is to bridge theoretical knowledge and experimental applications to gain a deeper understanding of material performance and to develop innovative solutions that contribute to both academia and industry.

Foreign Languages

English, C1 Advanced

Certificates, Courses and Trainings

Vocational Training, Micromeritics Gemini VII / Yüzey Alanı ve Gözeneklilik Ölçüm Cihazı (BET) Eğitimi, Terralab Laboratuvar Malzemeleri San. Ve Tic. A.Ş. / Selmin ATAMER, 2020

Vocational Training, ZEISS GeminiSEM 500 SEM/EDAX Kullanıcı Eğitimi, Carl Zeiss Teknoloji Çözümleri Tic. Ltd. Şti., 2019
Vocational Training, Bruker Q4 Tasman Optik Emisyon Spektrometre Cihazı Eğitimi, Elize Elektronik Mühendislik San. ve Tic. Ltd. Şti. / Hakan AKDEMİR, 2018
Quality Management, TS EN ISO/IEC 17025 Deney ve Kalibrasyon Laboratuvarlarının Yeterliliği için Genel Gereklilikler Temel Eğitimi, TÜRKAK Teknik Uzmanı, Şerife KAHYA, 2017
Quality Management, TS EN ISO/IEC 17025 İç Tetkik Eğitimi, TÜRKAK Teknik Uzmanı, Şerife KAHYA, 2017
Vocational Training, TA Instrumental Discover DSC 250 Cihaz Eğitimi, LiKrom Analitik Çözümler Paz. San. Ve Tic. A.Ş. / Hasan KAŞIKÇI, 2017
Vocational Training, SHIMADZU AG-X Plus 250 kN Çekme-Basma Cihazı Kullanıcı Eğitimi, Star Teknik, 2016
Vocational Training, Emcotest- Durascan-20 Mikro Sertlik Ölçüm Cihazı Eğitimi, ALS Laboratuvar Cihazları Paz. San. Tic. Ltd. Şti. / Demir DİNMEZ, 2016
Quality Management, TS EN ISO 9001 Kalite Yönetim Sistemi Temel Eğitimi, Türk Standartları Enstitüsü Personel ve Sistem Belgelendirme Merkezi, 2012

Dissertations

Doctorate, Sandviç kompozitlerin düşük hızlı darbe performansını geliştirmeye yönelik yapısal parametrelerin incelenmesi, Dokuz Eylul University, Fen Bilimleri Enstitüsü, 2020
Postgraduate, Sandviç kompozitlerde kalınlık boyunca takviyenin mekanik performansa etkileri, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Mechanical Engineering, 2015

Research Areas

Avesis Research Areas: Mechanical, Solid Mechanics, Fracture Mechanics, Finite Element Methods, Mechanical Testing, Testing and Control of Materials, Mechanical Properties, Composites, Adhesion and Adhesives, Polymeric Materials, Material Characterization, Mechanical Metallurgy, Metallic Materials
WoS Research Areas: Materials Science Characterization & Testing, Engineering Mechanical, Mechanics, Engineering Multidisciplinary, Materials Science Multidisciplinary, Materials Science Composites
Scopus Research Areas: Materials Chemistry, Mechanics of Materials

Academic Positions

Assistant Professor, Manisa Celal Bayar University, MANİSA TEKNİK BİLİMLER MESLEK YÜKSEKOKULU, ELEKTRONİK VE OTOMASYON, 2023 - Present

Courses

Undergraduate
MSE 4263 Quality Control and Standardization, Undergraduate, 2024 - 2025, 2023 - 2024
MLZ 3149 Fiziksel Metalurji, Undergraduate, 2024 - 2025
Associate Degree
MTK 1101 Professional Ethics, Associate Degree, 2025 - 2026, 2024 - 2025, 2023 - 2024
MYO 2002 İşletmede Mesleki Eğitim, Associate Degree, 2024 - 2025, 2023 - 2024, 2022 - 2023
MTK 1191 Occupational Health and Safety, Associate Degree, 2025 - 2026, 2024 - 2025, 2023 - 2024
MTK 1102 Sosyal Sorumluluk, Associate Degree, 2024 - 2025, 2023 - 2024
MTK 2127 Computer Aided Design, Associate Degree, 2025 - 2026, 2024 - 2025, 2023 - 2024
MTK 1132 Malzeme Teknolojisi, Associate Degree, 2024 - 2025, 2023 - 2024
MTK 1181 Araştırma Yöntem ve Teknikleri, Associate Degree, 2025 - 2026

MTK 1028 Career Planning, Associate Degree, 2024 - 2025, 2023 - 2024
MTK 1201 Bilgi Teknolojileri, Associate Degree, 2025 - 2026, 2024 - 2025
CBU 2401 Girişimcilik, Associate Degree, 2023 - 2024
MTK 1030 Advanced Manufacturing Methods, Associate Degree, 2022 - 2023
MTK 1024 Teknoloji Yönetimi, Associate Degree, 2022 - 2023
MTK 1111 Teknik ve Meslek Resmi, Associate Degree, 2023 - 2024
MAK 1141.1 Ölçme ve Kontrol, Associate Degree, 2022 - 2023

Jury Memberships

Post Graduate, Post Graduate, Ege Üniversitesi, September, 2026
Post Graduate, Post Graduate, Ege Üniversitesi, July, 2026
Post Graduate, Post Graduate, Dokuz Eylül Üniversitesi, September, 2024
Post Graduate, Post Graduate, Dokuz Eylül Üniversitesi, September, 2024

Articles

I. **Effects of Annealing on the Thermomechanical Properties and Crystallization Behavior of FDM-Printed High-Temperature PLA and Glass Fiber PLA Composites**
YALKIN H. E., ÖZKAN A. N.
Polymer Engineering and Science, vol.66, no.11, pp.8486-8503, 2026 (SCI-Expanded, Scopus)

II. **Quasi-static indentation behavior of glass fiber reinforced sandwich composites with asymmetric facesheets and segmented polymer foam cores**
YALKIN H. E.
Journal of the Brazilian Society of Mechanical Sciences and Engineering, vol.48, no.14, 2026 (SCI-Expanded, Scopus)

III. **Temperature dependent structural integrity of S2-glass and E-glass fiber reinforced epoxy laminates under indentation and flexural loading**
YALKIN H. E.
Journal of Composite Materials, vol.60, no.22, pp.2059-2070, 2026 (SCI-Expanded, Scopus)

IV. **The Effect of aluminum, graphite, and carbon fiber powders on the electrical and mechanical properties of carbon fiber reinforced composites**
Gürbulak M., Tanrıverdi E., Özel B. E., Targıtay E., Yağcı T., Yalkın H. E., Türkal G.
Balıkesir Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.28, no.2, pp.866-879, 2026 (TRDizin)

V. **Investigation of Crystal Structure Change and Mechanical Properties of 3D Printed PLA After Annealing**
YALKIN H. E., ÖZKAN A. N.
POLYMER ENGINEERING AND SCIENCE, vol.66, no.7, pp.4995-5006, 2026 (SCI-Expanded, Scopus)

VI. **EFFECT OF SIDE WALLS ON THE THREE-POINT BENDING BEHAVIOR OF PLA AND PETG SANDWICH STRUCTURES MANUFACTURED BY FDM PRINTING**
Yalkın H. E.
International Journal of 3D Printing Technologies and Digital Industry, vol.9, no.3, pp.527-535, 2025 (TRDizin)

VII. **Low-velocity impact behaviors of sandwich composites with different structural configurations of foam core: numerical study and experimental validation**
YALKIN H. E., KARAKUZU R., ALPYILDIZ T.
PHYSICA SCRIPTA, vol.98, no.11, 2023 (SCI-Expanded, Scopus)

VIII. **Low velocity impact behavior of sandwich composites with different structural configurations of foam core: An experimental study**
YALKIN H. E., KARAKUZU R., ALPYILDIZ T.

JOURNAL OF SANDWICH STRUCTURES & MATERIALS, vol.24, no.6, pp.1941-1960, 2022 (SCI-Expanded, Scopus)

IX. **Experimental and numerical behaviors of GFRP laminates under low velocity impact**
YALKIN H. E., KARAKUZU R., ALPYILDIZ T.
JOURNAL OF COMPOSITE MATERIALS, vol.54, no.21, pp.2999-3007, 2020 (SCI-Expanded, Scopus)

X. **Tensile and compressive performances of foam core sandwich composites with various core modifications**
YALKIN H. E., Icten B. M., ALPYILDIZ T.
JOURNAL OF SANDWICH STRUCTURES & MATERIALS, vol.19, no.1, pp.49-65, 2017 (SCI-Expanded, Scopus)

XI. **Enhanced mechanical performance of foam core sandwich composites with through the thickness reinforced core**
YALKIN H. E., Icten B. M., ALPYILDIZ T.
COMPOSITES PART B-ENGINEERING, vol.79, pp.383-391, 2015 (SCI-Expanded, Scopus)

Books

I. **Biyomalzemelerin Karakterizasyonu**
YALKIN H. E.
in: Temel Spinal Enstrüman Bilgisi, Cüneyt TEMİZ, Editor, Akademisyen Yayınevi Kitabevi, Ankara, pp.129-174, 2023

Papers Presented at Peer-Reviewed Scientific Conferences

I. **EFFECT OF ANNEALING AND NATURAL SUNLIGHT EXPOSURE ON CRYSTALLINITY AND TENSILE BEHAVIOR OF FDM-PRINTED PLA+ SPECIMENS**
YALKIN H. E., SERT S.
12. Uluslararası Mühendislik Bilimleri ve Multidisipliner Yaklaşımlar Kongresi, İstanbul, Turkey, 5 - 06 September 2026, (Full Text)

II. **EFFECT OF ANNEALING AND SUNLIGHT EXPOSURE ON THERMAL AND CHARPY IMPACT PROPERTIES OF FDM-PRINTED PLA+ SPECIMENS**
YALKIN H. E., SERT S.
14. Uluslararası Palandöken Bilimsel Çalışmalar Kongresi, Erzurum, Turkey, 21 - 22 July 2026, (Full Text)

III. **Recycling of End-of-Life S2 and E Glass Fiber Epoxy Composites by Pyrolysis and Usage As Additive In Concrete**
Yalkın H. E., Özkan E.
11th INTERNATIONAL MARMARA SCIENTIFIC RESEARCH AND INNOVATION CONGRESS, İstanbul, Turkey, 24 October 2025, (Full Text)

IV. **Laminat Kompozitlerin Yarı Statik Yüklemede Destek Çapı ve Test Hızı Parametrelerinin İncelenmesi**
YALKIN H. E.
1. Uluslararası Bilimsel Araştırmalar ve Yenilikçi Çalışmalar Sempozyumu, Balıkesir, Turkey, 22 February 2021, (Summary Text)

V. **Numerical Investigation on Effect of Impactor Velocity on CFRP Laminates**
YALKIN H. E.
III. Ulusal Üniversite Sanayi İşbirliği Ar-Ge ve İnovasyon Kongresi, Manisa, Turkey, 29 December 2020, (Full Text)

VI. **Drop Weight Impact Response of Laminated Composites**
YALKIN H. E., KARAKUZU R.
3rd International Students Science Congress, Turkey, 4 - 05 May 2019, pp.444-450, (Full Text)

VII. **Polimer Matrisli Sandviç Kompozit Malzemelerin Vakum Infüzyon Yöntemi Ile Üretimi Ve Mekanik Dayanımlarının Karşılaştırılması**
YALKIN H. E., KÖYMEN ÇAĞAR P., DOĞRU A.

IV. Ulusal Havacılık Teknolojileri Ve Uygulamaları Kongresi, İzmir, Turkey, 17 - 18 November 2017, vol.1, pp.326-334, (Full Text)

VIII. **Polimer matrisli kompozit malzemelerin vakum infüzyon yöntemi ile üretimi ve ürünlerin tahribatsız muayenesi**
KÖYMEN ÇAĞAR P., DOĞRU A., YALKIN H. E.
VI. Ulusal Havacılık ve Uzay Konferansı, Kocaeli, Turkey, 28 - 30 September 2016, (Full Text)

IX. **Effect of divided core on the shear performances of textile reinforced foam core sandwich composites**
ALPYILDIZ T., YALKIN H. E., İÇTEN B. M.
THERMAM International Conference on Thermophysical and Mechanical Properties of Advanced Materials, İzmir, Turkey, 1 - 03 September 2016, (Summary Text)

X. **Impact response of perforated foam core sandwich composites effect of core thickness**
İÇTEN B. M., YALKIN H. E., ALPYILDIZ T.
THERMAM International Conference on Thermophysical and Mechanical Properties of Advanced Materials, İzmir, Turkey, 1 - 03 September 2016, (Summary Text)

XI. **Effect of divided core on the bending performances of textile reinforced foam core sandwich composites**
ALPYILDIZ T., İÇTEN B. M., YALKIN H. E.
Innovative solutions for sustainable development of textiles and leather industry, Oradea, Romania, 27 - 28 May 2016, (Full Text)

XII. **Development of the flexible personal protective structure with spacer fabrics**
ÖZTÜRK S., DEĞİRMENCİ B., YALKIN H. E., SAKİN S., BOYACI B.
7 th European Conference on Protective Clothing, İzmir, Turkey, 23 - 25 May 2016, (Summary Text)

XIII. **Study on the shear performance of perforated foam core sandwich composites: effect of core thickness**
YALKIN H. E., İÇTEN B. M., ALPYILDIZ T.
THERMAM International Conference on Thermophysical and Mechanical Properties of Advanced Materials, Baku, Azerbaijan, 17 - 18 September 2015, (Summary Text)

XIV. **Investigation of bending performance of foam core sandwich composites**
YALKIN H. E., İÇTEN B. M., ALPYILDIZ T.
THERMAM International Conference on Thermophysical and Mechanical Properties of Advanced Materials, Baku, Azerbaijan, 17 - 18 September 2015, (Summary Text)

XV. **Enhancement of shear performances of foam core sandwich composites**
YALKIN H. E., İÇTEN B. M., ALPYILDIZ T.
4. Uluslararası Polimerik Kompozitler Sempozyumu Sergi ve Proje Pazarı, İzmir, Turkey, 7 - 09 May 2015, (Full Text)

XVI. **Bending performances of foam core sandwich composites with through the thickness reinforcement**
İÇTEN B. M., ALPYILDIZ T., YALKIN H. E.
IMSP 15. International Materials Symposium, Denizli, Turkey, 15 - 17 October 2014, (Full Text)

XVII. **Enhancement of Compression Performances of Foam Core Sandwich Composites**
İÇTEN B. M., ALPYILDIZ T., YALKIN H. E.
THERMAM International Conference on Thermophysical and Mechanical Properties of Advanced Materials, İzmir, Turkey, 12 - 15 June 2014, (Summary Text)

Funded Projects

YAĞCI T., YALKIN H. E., GÜVEN K., Project Supported by Higher Education Institutions, BAP Other, İkincil Alüminyum Alaşımlarının Yarı-Katı Döküm Sonrası Mikroyapı Özelliklerinin Araştırılması, 2023 - 2024

KOÇAK S., BARDAK F., AKCA C., ÇAMLI PULAT Ç., DOYUK F., DİLEK TEPE H., ÖZKAN A. N., YALKIN H. E., SERT S., ASLIŞEN B., et al., Project Supported by Higher Education Institutions, BAP Infrastructure, Sudaki Mikroplastiklerin Boyutsal

Dağılımının Görüntülenmesi ve Tutulumları İçin Doğal ve Modifiye Adsorbanların Kullanımı, 2023 - 2025
KOÇAK S., ÇAMLI PULAT Ç., CİTTAN M., ASLIŞEN B., ATMACA İLHAN H., DİLEK TEPE H., GÜLTEKİN S., DOYUK F., ESKİCİ M., SERT S., et al., Project Supported by Higher Education Institutions, BAP Infrastructure, Farklı Işık Altında Polimerik Malzemelerin Davranışlarının Diferansiyel Taramalı Kalorimetre(Dsc) İle İncelenmesi, 2016 - 2018
ALPYILDIZ T., Sandviç Kompozitlerin Mekanik Performansının Arttırılması, 2014 - 2016

Peer Reviews in Scientific Publications

Progress in Additive Manufacturing, SCI Journal, September 2026
DISCOVER APPLIED SCIENCES, SCI Journal, September 2026
INTERNATIONAL JOURNAL OF POLYMER SCIENCE, SCI Journal, September 2026
Fırat Üniversitesi Mühendislik Bilimleri Dergisi, National Scientific Refreed Journal, August 2026
JOURNAL OF THE BRAZILIAN SOCIETY OF MECHANICAL SCIENCES AND ENGINEERING, SCI Journal, July 2026
JOURNAL OF THE BRAZILIAN SOCIETY OF MECHANICAL SCIENCES AND ENGINEERING, SCI Journal, May 2026
JOURNAL OF THE BRAZILIAN SOCIETY OF MECHANICAL SCIENCES AND ENGINEERING, SCI Journal, March 2026
Dokuz Eylül Üniversitesi Mühendislik Fakültesi Fen ve Mühendislik Dergisi, National Scientific Refreed Journal, September 2025
SCIENTIFIC REPORTS, SCI Journal, July 2025
Iranian Journal of Science and Technology, Transactions of Mechanical Engineering, Journal Indexed in SCI-E, June 2025
Bitlis Eren Üniversitesi Fen Bilimleri Dergisi, National Scientific Refreed Journal, March 2025
Dokuz Eylül Üniversitesi Mühendislik Fakültesi Fen ve Mühendislik Dergisi, National Scientific Refreed Journal, February 2025
Tekstil ve Mühendis, National Scientific Refreed Journal, August 2024
Tekstil ve Mühendis, National Scientific Refreed Journal, May 2024
Tekstil ve Mühendis, National Scientific Refreed Journal, February 2024
JOURNAL OF REINFORCED PLASTICS AND COMPOSITES, SCI Journal, January 2024
JOURNAL OF THE BRAZILIAN SOCIETY OF MECHANICAL SCIENCES AND ENGINEERING, SCI Journal, December 2023
Karadeniz Fen Bilimleri Dergisi, National Scientific Refreed Journal, December 2023
International Journal of Computational and Experimental Science and Engineering (IJCESEN), Other Indexed Journal, July 2023

Scientific Project Refereeing

Project Supported by Higher Education Institutions, BAP Research Project, July 2026

Metrics

Publication: 30
Citation (WoS): 196
Citation (Scopus): 186
H-Index (WoS): 5
H-Index (Scopus): 5

Non Academic Experience

Sun Tekstil San. Tic. A.Ş. Arge Merkezi, Arge Mühendisi