CURRICULUM VITAE AND PUBLICATIONS LIST



CURRICULUM VITAE

Name and Surname:	İbrahim Talha Teke
Academic Title:	Assistant Professor
Work Address:	
Email:	15674867408@biruni.edu.tr
Foreign Languages Known (Score and Year):	English, C1 Advanced, 2020 English, C1 Advanced, 2020
Area of Expertise:	Biomechanics Finite Element Methods Fracture Mechanics Mechanical Mechanical Testing Solid Mechanics

Degree	Department/Program	University	Year
Doctorate	MAKİNE MÜHENDİSLİĞİ (DR)	Bursa Technical University	2025
Master's Degree	MAKİNE MÜHENDİSLİĞİ (YL) (TEZLİ)	Bursa Technical University	2021
Bachelor's Degree	MAKİNE MÜHENDİSLİĞİ BÖLÜMÜ	İstanbul University	2019

Master's Thesis Title (abstract attached) and Thesis Supervisor(s):

Bir yük kancasının topoloji optimizasyon ile tasarım ve analizi

Doctoral Thesis/Proficiency Study/Medical Specialization Thesis Title (abstract attached) and Supervisor(s):

Hibrit topoloji optimizasyon platformu geliştirilerek kalıp ve parça tasarımının eş zamanlı gerçekleştirilmesi

Position Title	Workplace	Year
Assistant Professor	Biruni University	2026-Continues
Research Assistant	Haliç University	2023-2026

PUBLICATIONS

A. Articles published in international peer-reviewed journals:

A1. Teke İ. T., Ertas A. H., "A geometry-driven optimization framework for tuning cyclic stiffness and dissipative response in additively manufactured implant-like lattices", *Journal of the Mechanical Behavior of Biomedical Materials*, vol. 181, 2026.

A2. Baykara C., Teke İ. T., Ertas A. H., "Carrier skid design for multi-model vehicle bodies: experimental and numerical insights", *World Journal of Engineering*, vol. 23, no. 3, pp. 666-686, 2026.

A3. Baykara C., Akbulut M., Oz H. R., Teke İ. T., Ertas A. H., "Fatigue performance and damage mechanisms of hybrid adhesive joints: ınfluence of surface coatings and adhesive thickness", *Journal of Adhesion Science and Technology*, 2026.

A4. Akbulut M., Teke İ. T., Ertas A. H., "Fatigue behavior and vibration-based integrity management of advanced composite structures: A comprehensive review", *Journal of Low Frequency Noise Vibration and Active Control*, 2026.

A5. Akbulut M., Teke İ. T., Ertas A. H., "Natural frequency optimization of composite plates with cutouts", *Journal of Low Frequency Noise Vibration and Active Control*, 2026.

A6. Teke İ. T., Baykara C., Akbulut M., Ertas A. H., "A Predictive Model for Fatigue Performance in Spot Welded and Bolted Joints", *Iranian Journal of Science and Technology - Transactions of Mechanical Engineering*, vol. 49, no. 6, pp. 2521-2546, 2025.

A7. Teke İ. T., Ertas A. H., "Fatigue Testing and Life Prediction of Tensile Shear Spot-Welded Joints: A Comprehensive Review with Regression Modeling", *Iranian Journal of Science and Technology - Transactions of Mechanical Engineering*, vol. 49, no. 4, pp. 1619-1647, 2025.

A8. Teke İ. T., Ertas A. H., "Fatigue Resistance in Engineering Components: A Comprehensive Review on the Role of Geometry and Its Optimization", *CMES - Computer Modeling in Engineering and Sciences*, vol. 144, no. 1, pp. 201-237, 2025.

A9. Teke İ. T., Ertas A. H., "Pre-stress-integrated FEA for failure prediction in 3D-printed and injection-molded polymers", *Multidiscipline Modeling in Materials and Structures*, vol. 21, no. 6, pp. 1453-1480, 2025.

A10. Teke İ. T., Ertas A. H., "Hybrid Framework for Structural Analysis: Integrating Topology Optimization, Adjacent Element Temperature-Driven Pre-Stress, and Greedy Algorithms", *Computers, Materials and Continua*, vol. 84, no. 1, pp. 243-264, 2025.

A11. Teke İ. T., Ertas A. H., "Enhancing structural analysis efficiency: a comprehensive review and experimental validation of advanced submodeling techniques, introducing the submodeling-density-shape-element removal (S-D-S-ER) method", *Engineering Computations (Swansea, Wales)*, vol. 41, no. 7, pp. 1790-1823, 2024.

A12. Teke İ. T., Ertas A. H., "An Experimental Study on Nodular Iron Machined Surfaces Utilizing a Capable 2D Finite Element Model for Precise Surface Roughness Estimation", *Processes*, vol. 12, no. 3, 2024.

A13. Teke İ. T., Yilmaz Y., Baykara C., Ertas A. H., "A New Hybrid Method, Density-Shape-Element Removal (D-S-ER), for the Optimization of Continuum Structures", *Mechanics of Solids*, vol. 58, no. 5, pp. 1738-1756, 2023.

E. Papers presented at national scientific meetings and published in proceedings:

E1. Teke İ. T., Ertas A. H., Enhancing Structural Analysis of Dissimilar Metal Spot-welded Lap-Joints Utilizing Thermal Strain Generation Algorithm, In: *28th International Conference on Fracture and Structural Integrity - 3rd Mediterranean Conference on Fracture and Structural Integrity*, Italy, 2026.

E2. Teke İ. T., Ertas A. H., Assessment of Fatigue Life Under Three-Point Bending: Comparing S-D-S-ER and D-S-ER Techniques, In: *European Conference on Fracture 2024*, Croatia, 2025.

E3. Teke İ. T., Ertas A. H., Design optimization of a well-known geometry for minimum weight utilizing the Density-Shape-Element Removal method (D-S-ER), In: *International Conference on Green Energy: Intelligent Transport Systems - Clean Energy Transitions (GreenEnergy 2023)*, Ukraine, 2024.

E4. Teke İ. T., Oktay M., Baykara C., Ertas A. H., Microstructure and Surface Roughness Connection on Machined Ductile Iron: An Experimental Determination, In: *International Conference on Smart Technologies and Applied Research (STAR'2023)*, Turkey, 2024.

E5. Baykara C., Teke İ. T., Ertas A. H., Effects of the single-lap joint on fatigue strength of metals with different surface coatings: a numerical simulation, In: *International Scientific Siberian Transport Forum - TransSiberia 2023*, Russia, 2023.

E6. Teke İ. T., Akbulut M., Ertas A. H., Topology optimization and fatigue analysis of a lifting hook, In: *26th International Conference on Fracture and Structural Integrity*, Italy, 2021.