

Mertol Tufekci
Materials and Structures
Centre for Engineering Research
Department of Engineering and Technology
School of Physics, Engineering & Computer Science
Email: m.tufekci@herts.ac.uk



Employment

Materials and Structures

University of Hertfordshire
4 Feb 2024 → present

Centre for Engineering Research

University of Hertfordshire
4 Feb 2024 → present

Department of Engineering and Technology

University of Hertfordshire
5 Feb 2024 → present

School of Physics, Engineering & Computer Science

University of Hertfordshire
5 Feb 2024 → present

Academic Visitor

HEI: Imperial College London
London, United Kingdom
1 Jan 2024 → present

Research outputs

Mechanics of Epoxy Nanocomposites: A Study on the Synergy of the Reinforcements

Pir, İ., Tufekci, M., Acarer Arat, S. & Tufekci, E., 9 Feb 2026, (Accepted/In press) In: ACS Omega.

A Novel Analytical Beam Formulation and Its Application on Composite Wind Turbine Blades

Tufekci, M. & Tufekci, E., 31 Jan 2026, In: European Journal of Mechanics / A Solids. 115, 12 p., 105832.

Investigation of static behavior of single-walled carbon nanotubes with helical axes: exact analytical solution

Dalgıç, A. M., Tufekci, M., Pir, İ. & Tufekci, E., 29 Jan 2026, (E-pub ahead of print) In: International Journal of Smart and Nano Materials. 17, 1, 41 p.

Investigating various nonlinear vibration problems using VIBRANT: A tool based on Abaqus and Python

Tufekci, M., Sevensan, F. & Yurdakul, O., 21 Jan 2026, (E-pub ahead of print) In: PLoS ONE. 21, 1, 16 p., e0338419.

Sustainable Water Treatment Membranes Made with Mussel-Sourced Polydopamine Reinforced Polymers: Thermo-Mechanical Characterisation

Demirkol, G. T., Rukiah, K., Pir, İ., Sağlam, S., Tufekci, M., Gunes-Durak, S., Çavuş, S. & Tufekci, N., 31 Mar 2026, In: Colloids and Surfaces A: Physicochemical and Engineering Aspects. 733, 17 p., 139353.

Structural Topology Optimisation of a Composite Wind Turbine Blade Under Various Constraints

Khan, M. N. A. & Tufekci, M., 28 Sept 2025, In: Wind. 54, 4, 17 p., 23.

Exact Analytical Solutions for Static Response of Helical Single-Walled Carbon Nanotubes Using Nonlocal Euler–Bernoulli Beam Theory

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Analytical Modelling and Exact Solution for the Static Behaviour of Helical Beams: A Novel Approach

Aya, S. A., Tufekci, M. & Tufekci, E., 11 Sept 2025, (E-pub ahead of print) In: *Mechanics Based Design of Structures and Machines*. 32 p.

Predicting Biogas Production in Real Scale Anaerobic Digester under Dynamic Conditions with Machine Learning Approach

Isenkul, M. E., Güneş Durak, S., Poyraz Kocak, Y., Pir, İ., Tufekci, M., Türkoğlu Demirkol, G., Sevgen, S., Çiğgin, A. S. & Tufekci, N., 13 Jun 2025, (E-pub ahead of print) In: *Environmental Research Communications*. 7, 6, p. 1-13 13 p., 065016.

A Comprehensive Numerical Modelling of a Benchmark Wind Turbine Blade

Vieira, F., Tufekci, M., Patel, S. & Pimenta, S., 11 Jun 2025, (E-pub ahead of print) *Proceedings of the ASME 2025 Aerospace Structures, Structural Dynamics, and Materials Conference SSDM2025*. USA: American Society of Mechanical Engineers (ASME), 14 p. SSDM2025-152052, V001T01A009

Fatigue performance assessment of auxetic lattice structures

Şahin, S. A., Pir, İ., Tufekci, M. & Tufekci, E., 11 Jun 2025, *Proceedings of ASME 2025 Aerospace Structures, Structural Dynamics, and Materials Conference, SSDM 2025*. USA: American Society of Mechanical Engineers (ASME), p. 1-9 9 p. 152404. (Proceedings of ASME 2025 Aerospace Structures, Structural Dynamics, and Materials Conference, SSDM 2025).

Forced Vibration Analysis of Rotating Blades Subjected to Large Deformations: A Numerical Investigation With VIBRANT

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Production, characterization and water filtration performance of polyvinylidene fluoride-based membranes performance of polyvinylidene fluoride membranes: Performance of Polyvinylidene Fluoride Membranes

Acarer Arat, S., Pir, İ., Tufekci, M. & Tufekci, N., 28 Feb 2025, (E-pub ahead of print) In: *Polymer-Plastics Technology and Materials*. p. 1-19 19 p., 2469081.

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Nanocellulose in Polyvinylidene Fluoride (PVDF) Membranes: Assessing Reinforcement Impact and Modelling Techniques

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Acarer Arat, S., Pir, İ., Tufekci, M., Öz, N. & Tufekci, N., 18 Dec 2024, In: *Polymers*. 16, 24, p. 1-30 30 p., 3531.

Comparative Assessment of Material Homogenisation Techniques

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Numerical Evaluation of Mechanical Behaviour of Lattice Structures for Rotating Blades

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Evaluation of Mechanical Properties of Additively Manufactured Beams with Lattice Structures

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Modelling the Effects of Nanomaterial Addition on the Permeability of the Compacted Clay Soil Using Machine Learning - Based Flow Resistance Analysis

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Characterisation and Mechanical Modelling of Polyacrylonitrile-Based Nanocomposite Membranes Reinforced with Silica Nanoparticles

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Manufacturing and characterisation of polymeric membranes for water treatment and numerical investigation of mechanics of nanocomposite membranes

Acarer, S., Pir, İ., Tüfekci, M., Türkoğlu Demirkol, G. & Tüfekci, N., 20 May 2021, In: Polymers. 13, 10

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Manufacturing, characterisation and mechanical analysis of polyacrylonitrile membranes

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