



Advances in Elastic Micro-Structured Systems and Metamaterials

Guest Editor:

Dr. Giorgio Carta

Department of Mechanical,
Chemical and Materials
Engineering, University of
Cagliari, Cagliari, Italy

Deadline for manuscript
submissions:

closed (30 August 2022)

Message from the Guest Editor

The interest in elastic media with engineered micro-structures has recently exploded due to the unique characteristics that can be achieved by a clever arrangement of the micro-components. Artificially designed composite materials are generally referred to as metamaterials, since they possess extraordinary properties that can rarely be found in nature.

The aim of this Special Issue is to gather novel concepts and advanced results in the design and implementation of elastic micro-structured media exhibiting unconventional properties. The focus is on dynamic phenomena associated with propagation of elastic waves in discrete and continuous periodic structures. Special attention is also given to chiral systems and auxetic materials.

We invite prospective authors to submit high-quality papers discussing current cutting-edge research topics, such as wave polarization and localization, filtering, eigenfrequency manipulation, generation of negative effective material parameters, dynamic crack propagation, and topological protection. Analytical, numerical, and experimental works are welcome.

- Micro-structured systems
- Elastic metamaterials
- Dynamic fracture
- Vibration control





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo

Dipartimento di Fisica,
Politecnico di Milano, Piazza L.
da Vinci 32, 20133 Milano, Italy

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), Inspec, CAPlus / SciFinder, and other databases.

Journal Rank: JCR - Q2 (*Engineering, Multidisciplinary*) / CiteScore - Q1 (*General Engineering*)

Contact Us

Applied Sciences Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/applsci
applsci@mdpi.com
[X@Applsci](https://twitter.com/Applsci)