mathematics

an Open Access Journal by MDPI

IMPACT FACTOR 2.3

CITESCORE 4.0

Analytical and Numerical Methods for Linear and Nonlinear Analysis of Structures at Macro, Micro and Nano Scale

Guest Editors:

Prof. Dr. Krzysztof Kamil Żur
Department of Mechanical Engineering, Bialystok University of Technology, Wiejska 45C, 15-351 Bialystok, Poland

Dr. Jinseok Kim
Department of Mechanical and Aerospace Engineering, Western Michigan University, Kalamazoo, MI 49008-5343, USA

Prof. Dr. J. N. Reddy
J. Mike Walker '66 Department of Mechanical Engineering, Texas A & M University, College Station, TX 77843-3123, USA

Deadline for manuscript submissions:
closed (30 April 2022)

Message from the Guest Editors

The mathematical models of physical phenomena are based on the fundamental scientific laws of physics. Mathematical models consist of a combination of algebraic and differential (sometimes even integral) equations. Mathematical models of structural elements (e.g., beams, plates, and shells) based on continuum assumption require a proper treatment of the kinematic, kinetic, and constitutive issues accounting for possible sources of non-local and non-classical continuum mechanics concepts and solving associated boundary value problems. The development of mathematical models and their solutions by analytical and numerical methods have been the focus of many researchers. <false,>This special issue is aimed at collecting high-quality papers on the latest developments, techniques, and approaches for the modeling and simulation of the mechanical behavior of structures at macro, micro and nano scales. Advanced accurate numerical and analytical methods to solve PDEs are of high interest. The vibrational response, buckling instability, wave propagation analysis, and static deformation of macro, micro and nano scales' structural components are covered in this special issue.

mathematics

an Open Access Journal by MDPI

IMPACT FACTOR 2.3

CITESCORE 4.0

Editor-in-Chief

Prof. Dr. Francisco Chiclana
School of Computer Science and Informatics, De Montfort University, The Gateway, Leicester LE1 9BH, UK

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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), RePEc, and other databases.
Journal Rank: JCR - Q1 (Mathematics) / CiteScore - Q1 (General Mathematics)

Contact Us

Mathematics Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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

mdpi.com/journal/mathematics
mathematics@mdpi.com
𝕏@MathematicsMDPI