



Mathematical Approaches to Advancements in Mechanics and Virtual Engineering

Guest Editor:

**Prof. Dr. Maria Luminița
Scutaru**

Department of Mechanical
Engineering, Transilvania
University of Brașov, B-dul Eroilor
20, 500036 Brașov, Romania

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Message from the Guest Editor

Dear Colleagues,

We are inviting submissions to this Special Issue. In recent decades, mathematical approximation procedures such as Finite Element Analysis or the Boundary Element Method continue to evolve with more complex and accurate simulations. Research into structural mechanics involves optimizing the design of materials and structures for various applications, including aerospace, civil engineering, and manufacturing. Topics include mathematical methods used in advanced materials, composite structures, or non-destructive testing methods. Integrating mathematics with mechanical engineering, electronics, and computer science has led to exciting developments in mechatronics and robotics. These developments involve improving realism as well as interactions and integration with engineering software.

Specific topics of interest for publication include but are not limited to:

- Finite Element Analysis and Simulation
- Structural Mechanics
- Mechatronics and Robotics
- Additive Manufacturing (3D Printing)
- Virtual Reality and Augmented Reality
- Digital Twin Technology
- Machine Learning and Artificial Intelligence
- Human–Machine Interaction
- Bioengineering and Biomechanics





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.

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Mathematics Editorial Office
MDPI, St. Alban-Anlage 66
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