Special Issue

Numerical Methods and Optimization of Structures: FEM

Message from the Guest Editor

The Special Issue will address advances in the applications of the finite element method (FEM) and numerical optimization methods for modeling and analyzing various mechanical problems in materials science, joints and fasteners, furniture structures and other products manufactured of wood or wood-based composites. Numerical modeling is very important in the sustainable design of products made of bio-based materials. Designers are looking for structures with high strength and stiffness at an optimally low weight. The use of numerical methods reduces the costs of prototyping and validation, facilitates the diagnosis of damage occurrence, and enables the assessment of product safety. Original articles on numerical modeling (FEM) and the optimization of all types of materials, joints, and structures based on wood and wood-based composites under various operating conditions are invited. The published work will provide a complete understanding of how to improve the stiffness and strength of materials, as well as improved joints, structural members, and products. Contributions can be submitted in the form of original research papers and review articles.

Guest Editor

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Deadline for manuscript submissions

closed (30 March 2021)

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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