Special Issue

Advanced Numerical and Experimental Methods for Timber Structures

Message from the Guest Editors

The anisotropic and heterogeneous nature of wood, along with the complexity of modern engineered wood products like cross-laminated timber, hybrid timber beams, and their connections, presents challenges in accurately predicting structural behavior under varying loads and environmental conditions. We welcome contributions on advanced numerical methods, including multi-scale finite element modeling (linear and nonlinear), multi-physics simulations, and probabilistic or stochastic approaches. Studies incorporating machine learning or data-driven optimization to address moisture transport, time- and moisture-dependent phenomena (e.g., creep and mechanosorption), and fracture mechanics are also welcomed. This Special Issue aims to bridge material science, structural engineering, and digital innovation to support the safe, efficient, and sustainable application of timber in tall and complex structures. We look forward to receiving contributions that advance the state of the art in numerical and experimental methods for the design and analysis of timber structures.

Guest Editors

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Message from the Editor-in-Chief

Forests (ISSN 1999-4907) is an international and cross-disciplinary, scholarly forestry journal. The distinguished editorial board and refereeing process ensures the highest degree of scientific rigor and review of all published articles. Original research articles and timely reviews are released online, with unlimited free access. Our goal is to have *Forests* be recognized as one of the foremost publication outlets for high quality, leading edge research in this broad and diverse field. We therefore invite you to be one of our authors, and in doing so share your important research findings with the global forestry community.

Editor-in-Chief

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