

Call for Papers

Special Collection on Advances in Performance Assessment and Design of Timber and Hybrid Buildings



Aims & Scope

The rapid growth of urban populations and the associated environmental concerns are challenging city planners and developers to consider sustainable building systems. In Canada, a change in the height limit of light timber buildings, from four to six stories, was followed by increasing utilization in mid-rise residential buildings. The recent introduction of cross-laminated timber (CLT) and the use of performance-based design, however, have further pushed the height limit to high rise. Better performance and a further increase in building height can be achieved by hybridizing timber with steel, concrete, or masonry. Hybrid (composite or mixed) systems utilize different materials, e.g., timber-concrete, timber-steel, and steel-concrete. The different materials can be integrated at the component level (e.g., beams, columns, bracings) and the building system level (e.g., hybrid shear wall, vertical mixed systems). Better performance can also be realized through passive and active control systems, such as base isolations, tuned-mass and viscous dampers, and self-centering systems.

With the building height increased, however, the design and performance of structures should be investigated for various hazard types (e.g., earthquake, wind, fire). Continued research and developments in timber-based structural and innovative control systems and advanced design approaches pave the path towards sustainable and resilient urban systems.

This special collection of the *Journal of Performance of Constructed Facilities* (JPCF) is dedicated to highlight the recent advances in the experimental and analytical research work undertaken for the performance assessment and design of light-timber, mass-timber, and timber-based hybrid buildings for the different hazard types (e.g. earthquake, wind, fire, blast). Through this collection, the current state of the art/practice is provided, and future areas of research are highlighted.

Submission Guidelines

Submissions will be accepted on a rolling basis. Authors should submit manuscripts electronically through the journal's Editorial Manager website: <https://www.editorialmanager.com/jrncfeng/default.aspx>

Authors should prepare their manuscripts according to guidelines found in "Publishing in ASCE Journals: A Guide for Authors" (<https://ascelibrary.org/doi/book/10.1061/9780784479018>).

When submitting, authors should indicate in the submission questions that the paper is being submitted in response to this call for papers (Special Collection: Advances in Performance Assessment and Design of Timber and Hybrid Buildings)

Guest Editor:

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Please note that this is an invitation to submit papers for peer review and does not imply acceptance for publication. Acceptance of submitted papers depends on the results of the normal refereed peer review process of the journal.

All accepted papers submitted through this solicitation will be published in regular issues of the journal as they are accepted, and they will be added to a special online collection (which is similar to a print version of a special issue) and will be indexed for citations like other regular journal papers.

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