Session ID: CMS-11

Title
INNOVATIVE SOLUTIONS IN MASS TIMBER CONSTRUCTION: ALTERNATIVES TO CONVENTIONAL PLATFORM CONSTRUCTION

Convenors
A. Palermo [1], M. Li [2]

Description
In the last two decades, the advancements in research and the constant developments of novel engineered wood products (CLT, LVL and glulam) allowed to extend the applications of mass timber construction to commercial and large-scale medium-to-tall timber buildings. Many medium-to-high rise mass timber buildings using mainly CLT platform construction were built and/or are under construction. More importantly, the climate change challenges and the need to reduce the carbon-footprints of the built environment sparked more interest in mass timber within the profession.

However, the so-called platform construction and the solely use of engineered wood products presents strong limitations especially if tall buildings is the target. More importantly, the distributed connections and the large numbers of fasteners make the post-earthquake repairability a challenge.

The aim of the session is to overview the recent research advancements developed by different countries by exploring alternative solutions to overcome the limits of conventional timber construction technology. These alternatives include post-tensioned rocking frames and/or buildings, timber-concrete composite walls, steel-timber hybrid systems, coupled balloon type walls, etc. The topics in this session vary from experimental testing to analytical and numerical simulations. The presentations will include interesting and novel construction details that can be implemented in the industry.

Invited Speakers
S. Pampanin [3], A. Barbosa [4], H. Isoda [5], M. Shinohara [6], F. Lam [2], T. Yang [2], M. He [7], X. Wang [7], T. Tannert [8]

Affiliations
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