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Fire Safety in Modern Timber Buildings

Guest Editor:

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Deadline for manuscript submissions:
closed (30 November 2023)

Message from the Guest Editor

The construction industry has shown more interest in eco-responsible building materials and systems with a low environmental footprint, including wood products and bio-based materials. Approaches and methods used in fire safety engineering require knowledge of fire dynamics, fire safety concepts, the life safety of occupants and firefighters, as well as the protection of neighboring buildings. Engineering approaches would also use numerical models, such as those using the finite element method (FEM) or computational fluid dynamics (CFD), among others.

The special issue aims to gather the latest advances in fire science and timber engineering to gain a holistic understanding of how innovative and/or emerging timber or bio-based systems or materials affect fire safety in buildings. Fire safety concepts such as reaction to fire, fire resistance of elements and connections, fire dynamics, thermal properties, and numerical modeling will be included. The outcomes from fire tests at all scales will also be examined, with the ultimate objective of disseminating science-based evidence to support fire safety engineering designs.