

ADVANCED CEMENTITIOUS MATERIALS FOR EARTHQUAKE ENGINEERING

Abstract

This special session will focus on recent advances in cementitious materials for seismic applications, presenting contributions from researchers exploring cutting-edge, multifunctional or sustainable solutions for earthquake-resistant constructions and structural retrofitting.

Topics of interest include experimental research on novel cement-based composites, such as fiber-reinforced concretes, high-performance concretes, and geopolymer materials, with enhanced mechanical properties, self-healing capabilities, or self-sensing functionalities. The special session is also devoted to studies on sustainable formulations incorporating recycled aggregates, low-carbon binders, or alternative supplementary cementitious materials for seismic applications.

Contributions may cover laboratory-scale investigations on material behavior under static or dynamic loading up to full-scale structural testing under simulated seismic conditions, and field applications assessing the applicability of these materials. Researches on numerical modeling and performance-based design approaches to optimize the use of advanced cementitious materials in the field of constructions are also welcome.

This session aims to provide a platform for academic researchers and professionals to share their findings, discuss challenges, and explore future directions in the development of innovative cementitious materials for seismic engineering.



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