

Session ID: EVO-8

Title

3D CONSTRUCTION PRINTING IN STRUCTURAL AND SEISMIC ENGINEERING

Convenors

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Description

The world is rapidly adopting 3D printing technology for various applications in different fields. The building construction sector is undergoing one of the most profound transformations of its history, driven by the convergence of multiple technologies such as automation in construction and additive manufacturing. Among the various applications of 3D printing in the construction industry, even structural engineering is beginning to experiment with new applications to achieve high structural and seismic performance.

This technical session aims to showcase recent developments in the use of 3D printing in structural engineering, seismic performance, and related fields. The session will provide an overview of 3D printing technology and its benefits in structural engineering. The session will also cover topics such as using 3D printing for constructing complex structures with intricate geometries and creating new materials with desirable properties for seismic performance (e.g. mechanical properties, compressive and flexural strength, durability). Other topics that will be covered include the use of 3D printing for prototyping, structural analysis, and the fabrication of customized components. The session will also discuss the potential of 3D printing in disaster management and post-disaster reconstruction.

Experts from academia and industry who are actively involved in 3D printing in structural engineering and seismic performance are invited to present their latest research and developments. The session will provide a platform for disseminating the works developed within the project SAFE 3D PRINTED-CS in the scope of the Engineering Research Infrastructures for European Synergies (ERIES).

In conclusion, this technical session will provide an excellent opportunity to explore the innovative 3D printing applications in structural engineering, seismic performance, and related fields, and pave the way for future advancements in this area.

Invited Speakers

E. Spacone ³, M. Van Den ⁴, M. Miceli ⁵, G. Leroy ⁶, G. Van der Velden ⁷, M. Kohler ⁸, E. Ascione ⁹

Affiliations

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