

Session ID: RES-4

Title

RECONSTRUCTION PRIORITISATION FOR OPTIMISING CRITICAL INFRASTRUCTURE RESILIENCE AND SUSTAINABILITY

Convenors

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Description

Earthquake-torn societies and countries face immense challenges in rebuilding damaged critical infrastructure. Existing post-earthquake recovery frameworks mainly focus on social impacts and mitigation. Also, existing frameworks for resilience to natural hazards are mainly based on design and intervention. Yet, they are not always fit for post-earthquake infrastructure recovery, especially when the destruction is widespread, e.g. in countries that faced the wrath of the earthquake and sustained extreme damage to their infrastructure. This is the case of the southern Turkey and Syria, February 6, 2023, earthquakes.

This technical session is in response to recent extreme damage due to natural hazards with focus on earthquakes. The main aim of this session is to examine ways and frameworks for transforming decision-making in prioritisation that optimise communicable sustainability, resilience finances, and social benefits. In doing so, it is expected that this session will provide insights on novel reconstruction approaches, that exploit, e.g. the power of digital data such as robotics, UAV, space, and other emerging technologies or Big Data, and participatory decision making strategies, to deliver solutions that comply to the UN SDGs and make people feel safer and included. Case studies on decision-making for reconstruction and prioritisation after the recent events, e.g. Kahramanmaraş seismic sequence, are welcome to the session.

This session is expected to provide a steppingstone for informed decision-making to the engineering community but also to organisations, such as the European Bank for Reconstruction and Development and the World Bank.

Invited Speakers

M. Koliou ⁴, B. Stojadinovic ⁵, J. Van de Lindt ⁶

Affiliations

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