

Session ID: REC-2

Title

EARTHQUAKES IN THE BALKAN REGION: CONSEQUENCES, LESSONS, RECOVERY, AND RESILIENCE

Convenors

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Description

Countries in the Balkan region have been affected by numerous earthquakes since ancient times, and the entire region is characterized by moderate to high seismic hazard. Vulnerable unreinforced masonry buildings constitute a significant fraction of the existing building stock in the region, in spite of the boom of reinforced concrete construction after WWII. The Balkan region has been exposed to several damaging earthquakes, including the 1963 Skopje (M 6.1), 1969 Banja Luka (M 6.6), 1979 Montenegro (MW 6.9), 1990 Gevgelija (M 5.6), 1994 Bitola (M 5.2), 2010 Kraljevo (M 5.5), 2016 Skopje (M 5.2), 2019 Durrës (M 6.4), 2020 Zagreb (MW 5.4) and Petrinja (MW 6.4) earthquakes. These earthquakes caused significant damage and economic losses. For example, the 1963 Skopje earthquake caused 1071 fatalities, and approximately 80% of the building stock in Skopje (mostly unreinforced masonry buildings) was rendered unusable after the earthquake. On the other hand, many modern reinforced concrete buildings performed poorly in the 2019 Albania earthquake. Damage and/or collapse of residential buildings after these earthquakes prompted a need for large scale repair, retrofit, and reconstruction efforts. In most cases, these earthquakes did not lead to local or national initiatives directed towards enhancing the resilience of affected communities and nations. There have been neither initiatives nor incentives for reducing seismic vulnerability of existing residential buildings, such as unreinforced masonry buildings, which had been affected by past earthquakes.

This technical session welcomes papers that respond to one or more of the issues outlined above including:

- consequences and lessons learned from past earthquakes,
- case studies of post-earthquake recovery projects,
- post-earthquake damage survey approaches,
- seismic performance criteria for retrofitting/reconstruction projects,
- seismic retrofitting techniques, and
- enhancing seismic resilience for future earthquakes.

Invited Speakers

M. Marinkovic ⁴, M. Baballeku ⁵, G. Jekic ⁶, J. Atalic ³, M. Uros ³

Affiliations

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