

Session ID: BCI-1

Title

DYNAMIC CHARACTERIZATION AND VULNERABILITY ASSESSMENT OF MASONRY BRIDGES

Convenors

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Description

Masonry bridges are a crucial infrastructure system commonly found along the Mediterranean belt in southern Europe. Some of them, especially in Italy, can be traced back in history to ancient roman times when they were built with local available materials and served for centuries. This highlights the significance of the remaining bridges nowadays not only as important infrastructures, but also as inestimable artistic monuments remarking a deep social as well as cultural identity of the place and the people. Their crucial position raises an urgent need to support or rebuild, partially or completely, those masonry bridges in order to adapt them with the new necessities of the modern transportation vehicles and the different environmental and service loads. This leads to the need to several structural modification and retrofitting. Their dynamic identification is difficult for both, the unknown constitutional aspects due to the modification in time and because the great mass that makes difficult the modal identification. For this reason, high technological and innovative techniques are necessary. Much work has been done in this direction in Italy after the earthquakes of the last two decades by the ReLUIS university consortium, which led some of the conveners to propose this technical session. This Technical Session aims to provide a comprehensive retrospective of the most relevant research in the field of the dynamic characterization, vulnerability assessment and numerical simulations of masonry bridges finalized to their health monitoring.

Invited Speakers

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Affiliations

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