HYDRAULIC RISK OF ARCH BRIDGES

ABSTRACT:

Masonry arch bridges, historically significant structures that have withstood the test of time, are highly vulnerable to the effects of fast-flowing waters in the rivers and canals they cross.

Scour and erosion, buoyant and hydrodynamic forces, and debris clogging and impact, are among the most critical actions that can significantly undermine their structural integrity.

This session aims to bring together academics and practitioners working in the field of structural engineering, hydraulic engineering and heritage conservation, with an interest in assessment and mitigation of the hydraulic hazard, vulnerability, and risk of masonry arch bridges.

Presenters will discuss key issues such as the characterisation of scour and of the impact of water flow on bridge foundations, the effects of climate change on river systems, and the need for accurate hydraulic and vulnerability assessments to ensure long-term preservation. Case studies from both historical and contemporary bridge management projects will offer insights into strategies for risk mitigation, including the use of modern technology in monitoring and maintenance.

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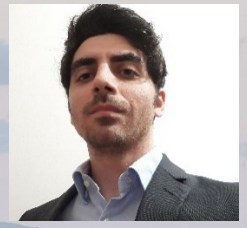

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11TH INTERNATIONAL CONFERENCE ON ARCH BRIDGES

from preservation of historical legacy to new forms

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