

SAFEGUARD OF ARCH BRIDGES: THE DIGITAL CONSTRUCTION HISTORY APPROACH

ABSTRACT:

The preservation, management, and maintenance of infrastructure is one of the most significant challenges in engineering. Arch bridges present a great diversity of structural and construction types, as well as materials (masonry, steel and iron, reinforced concrete), which have been developed and used over the centuries, complicating the actual analyses for safeguarding existing bridges.

The studies conducted within the Construction History discipline provide key data for the historical and technical knowledge of the existing structures concerning the 'hidden' construction details, the building process, and the maintenance intervention that occurred during the service life. The actual approach of Building Information Modelling supports documental analyses based on archival sources and on-site surveys, producing a historical-technical data framework to be exploited in the management and safeguarding of existing structures.

The session aims to collect papers in the Construction History field with special attention on the:

- building technologies and materials in the construction of arch bridges;
- historical-technical analysis of relevant case studies;
- archival sources and digital models approaches;

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