

Monitoring & Control

ABSTRACT:

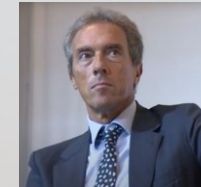
The “Monitoring and Control” session at ARCH25 addresses critical aspects of ensuring the safety and longevity of arch bridges, both older and newer ones, including modern long-span steel designs launched using innovative methods. The focus is on advanced structural health monitoring (SHM) systems that use real-time sensors to assess bridge integrity, along with methods for early detection of damage, such as cracks and material fatigue. The use of artificial intelligence technologies that is pervading the world of construction and infrastructure management will also be welcomed, as well as innovative management blockchain-based methods.

The special session is also open to contributions related to environmental factors, such as climate and corrosion, and their impact on bridge durability. The session will also highlight the role of data analytics in optimizing maintenance and repair strategies, along with automated control systems for load management and vibration control, ensuring the structural performance of bridges under dynamic conditions.

This session also aims to present the latest technologies and promote collaboration among experts to support the sustainable management of arch bridges worldwide.

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from preservation of historical legacy to new forms

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