TS-16
STRUCTURAL RETROFITTING AND MONITORING BY SUSTAINABLE AND COMPATIBLE METHODS

Keywords: Monitoring; Retrofit Existing Buildings; UAV; Eco-Friendly Materials; Image Analysis.

Italy has the world's most extensive cultural heritage.
In this regard, it is essential that cultural heritage is properly and fully detected, monitored and properly recovered. To this end, the use of modern survey methodologies and innovative monitoring techniques requires ever-wider interdisciplinary contributions.
Recovery and structural retrofitting of the existing building stock is a complex issue. In particular, interventions on masonry buildings and on reinforced concrete buildings, need to ensure basic performance levels concerning the structural safety as well as the resolution of critical issues in terms of energy consumption. Today, the maintenance of the safety and usability of existing structures is becoming a challenging task for architects and engineers because repairing and/or strengthening interventions need to meet both the seismic safety and the conservation criteria.
The difficulty to implement technological and structural solutions being compatible with the existing buildings to be preserved, is prompting scientific community to develop innovative techniques and materials able of improving the mechanical response of structures in case of seismic actions while responding to the increasingly requirements of sustainable interventions.
This session aims to collect original research dedicated to methodologies, applications and case studies on Cultural heritage/structures/infrastructures management and preservation and on surveying/monitoring/enhancement interventions.

CHAIRS

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University researcher in ICAR/09, specializing in the structural analysis of buildings and infrastructure using drone image analysis. Dedicated to advancing knowledge in the field through innovative research methods.

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PhD Icar/09 researcher focused on structural retrofitting through sustainable and compatible methods. Committed to advancing knowledge in the field of structural engineering with a focus on environmentally friendly and effective solutions.