

Flights into the past: from photo-interpretation to LiDAR elaboration and virtual reconstruction

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The recent increasing development of ground, aerial and space remote sensing techniques and the tremendous advances of Information and Communication Technologies (ICT) have focused a great interest in the use of remote sensing and ICT for supporting cultural heritage applications. In particular, the improved capability of active and passive aerial sensors has opened new challenges for the detection but also for the management, valorisation, monitoring and preservation of cultural resources and the virtual reconstruction of ancient landscapes. Additional strategic challenges to this field of research are related to the crucial importance of the integration of remote sensing with other traditional archaeological data sources, such as field surveys, trials, excavations and historical documentation.

This strategic integration requires great efforts aimed at creating a strong interaction among archaeologists, scientists and managers interested in using remote sensing and ICT for supporting cultural heritage applications. The continuous collaboration among scientists working in different fields of Cultural Heritage can contribute to take benefits from the new aerial sensors, for a wide range of investigation and application fields. A constructive and complementary multidisciplinary approach can open a revolutionary scenario unthinkable several decades ago.

The session will focus on new advanced technologies from hyperspectral to LiDAR and virtual reconstruction providing detailed information on data processing chain and study cases selected from different geographic regions