

A multidisciplinary approach for the diagnostics of the stone building materials of architectural structures

Casula G.^a, Fais S.^{b, c, d}, Cuccuru F.^b, Bianchi M.G.^a, Ligas P.^b and Cannas L.^e

**^a INGV Istituto Nazionale di Geofisica e Vulcanologia, Sezione di Bologna – Viale Berti Pichat, 6/2 – 40127 Bologna, Italy
giuseppe.casula@ingv.it; mariagiovanna.bianchi@ingv.it**

**^b Department of Civil and Environmental Engineering and Architecture (DICAAR), University of Cagliari – Cagliari, Italy
sfais@unica.it; pligas@unica.it; cuccuruf@unica.it**

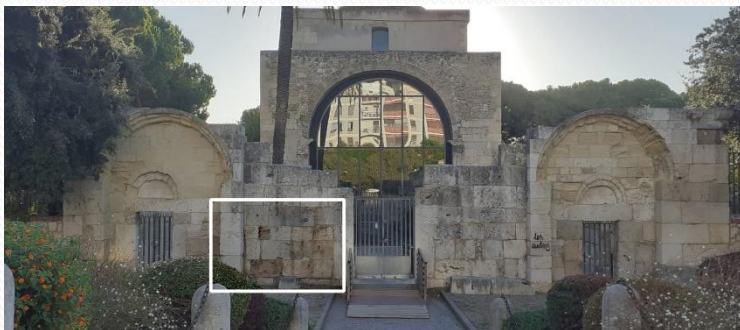
^c CiniGeo – Corso Vittorio Emanuele II, 244 – 00186 Roma, Italy

^d National Research Council of Italy (CNR) - Institute of Environmental Geology and Geoengineering (IGAG), Cagliari (Italy); sfais@unica.it

**^e Direzione Generale Musei - Direzione Regionale Musei Sardegna (Italy)
(luciano.cannas@cultura.gov.it)**



In this study is presented an integrated approach combining advanced geomatic survey procedures, such as close-range photogrammetry (CRP) and Terrestrial Laser Scanner (TLS) techniques with a few geophysical techniques such as the ultrasonic and resistivity ones to provide an effective tool aimed at the external, shallow and internal diagnostics of stone building materials in the Basilica di San Saturnino (Cagliari – Italy), the oldest monument of the town of Cagliari (Italy) representing an interesting synthesis of different construction techniques with heterogeneous stone materials of different origins.





DICAAR
Dipartimento Ingegneria Civile, Ambientale e
Architettura



**European Geosciences Union
General Assembly 2024**
Vienna | Austria | 14-19 April 2024

Thank You for the Attention !!!