

Venerdì, 07/05/2021

alle ore 11.30

la **Dott.ssa SIMONA RANERI**

CNR-ICCOM

Sede di Pisa

terrà il seguente seminario:

"Geosciences for Cultural Heritage: challenges and innovative methods"

Il seminario sarà tenuto in modalità telematica, tramite accesso alla piattaforma GoToMeeting.

Si invitano tutti gli interessati a partecipare.

Dr. Francesco Vizza  
Direttore ICCOM

### Short Abstract:

In recent times, the role of *hard sciences* in Cultural Heritage studies has become increasingly important. In fact, many of archaeological and artistic objects “consist in” or “derive from” geomaterials, which is why geosciences can serve to explore issues of provenance, technology, and conservation. In the last decade, the use of innovative, non-invasive and non-destructive methodologies has become more and more frequent for analyzing these materials in order to obtain a complete characterization, even at micro-scale, and often without any sample preparation or moving objects from their original set. Moreover, recent developments in the field of nanotechnology opened new prospective in the use of innovative products for the conservation and protection of Cultural Heritages. Additionally, large scale facilities are tailoring and optimizing beamlines and set-ups for Cultural Heritage, especially for the characterization of tiny and complex micro-samples which are typical from archaeological and artistic artifacts. In this talk we will explore the role of geosciences in studying Cultural Heritages and answering the most common questions posed by archaeologists, art historians, and conservators, also in the light of the most recent innovations and technological advancements.

### Biographic sketch:

Conservator Scientist for Cultural Heritages and Geologist, she got her Ph.D. in Earth Science cum laude at the University of Catania in 2016. For her thesis work, she received in the same year the National Prize for the best Doctoral thesis in material science disciplines bestowed by the Italian Society of Mineralogy and Petrology (SIMP).

From 2016 to 2019, she was junior researcher (RTD/A) at the Dept. of Earth Sciences of the University of Pisa. She worked on EU Project Horizon 2020 NanoCathedral, ended in May 2018, focusing on natural stone characterization and efficacy evaluation of nano-structured protectives and consolidants. She also served as lecturer of Applied Mineralogy at the MS in Earth Sciences and Technologies and she was principal investigator for the project PRA Georisorse e Ambiente PRA\_2018\_41. Since Nov 2019 she is researcher at ICCOM-CNR, Pisa, Italy. She is Lecturer of Archaeometry at the SSBA of the University of Pisa and Local Coordinator for the PRIN2017 Project “Fibers: multidisciplinary mineralogical, crystal-chemical and biological project to amend the paradigm of toxicity and cancerogenicity of mineral fibres” (Prot. 20173X8WA4). Her expertise in non-invasive and non-destructive methods (Raman and X-ray Spectroscopy, X-Ray and neutron imaging; Nuclear Magnetic Resonance; Small Angle Neutron Scattering) allowed supporting several scientific research projects promoted by Italian and European research groups, mainly focused on archaeometry and geomaterials characterization in Cultural Heritages (ancient ceramics, plasters and mortars, pigments and wall paintings, glass, gems and jewellery collections). She is co-author of several scientific papers on national and international journals (Scopus source: 67 papers, 11 H-index) and has been invited to give contributes (both oral and posters) at national and international conferences. She received in 2015 the National Prize “Angelo Bianchi” bestowed by the Italian Society of Mineralogy and Petrology (SIMP).