



CNR-INO

ISTITUTO NAZIONALE DI OTTICA
CONSIGLIO NAZIONALE DELLE RICERCHE

Raffaella FONTANA

Evento:

Tirociniamoci 2022

Introduction



- CNR Consiglio Nazionale delle Ricerche



- INO-CNR Istituto Nazionale di Ottica



- HSG Heritage Science Group



Consiglio Nazionale
delle Ricerche



CNR-INO

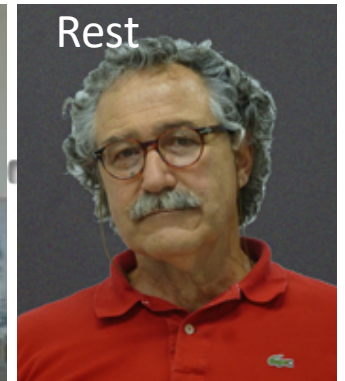
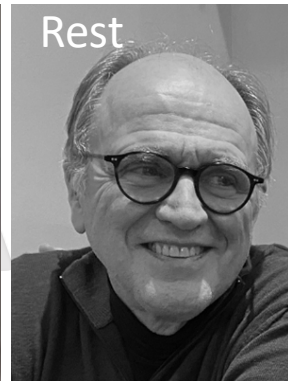
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Heritage
Science
Group



WHO?

Heritage Science Group (HSG)



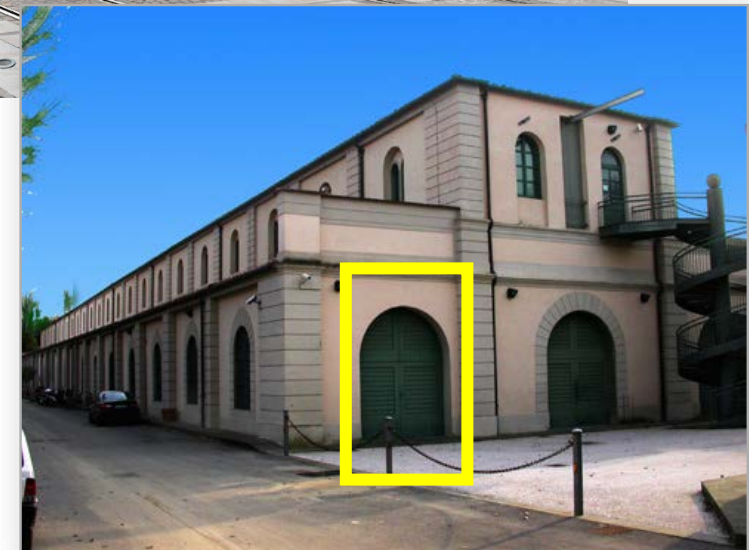
WHERE?



Arcetri



Lab@Opificio
delle Pietre Dure



WHAT?



- Painting on canvas, panel paintings, mural paintings, tapestries, drawings on paper, etc.
- Marble, wood or bronze statues/artworks

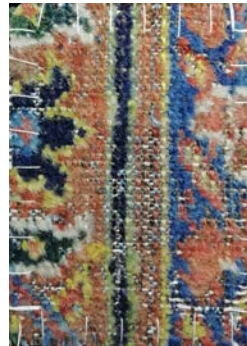
fresco



panel painting



tapestry



bronze statues



drawing on paper



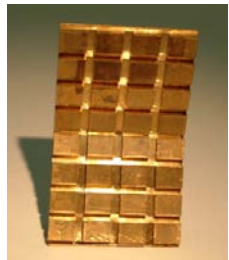
painting on canvas



marble statues



samples



HOW?



- *1D*: FORS (spectro-photometric characterization of surfaces), Raman spectroscopy (composite analysis)
- *2D*: VIS-NIR multispectral imaging, multispectral UV fluorescence
- *3D*: Microprofilometry (for morphological analysis, roughness computation, strain analysis, etc.), photogrammetry
- *3.5D*: OCT (non-invasive stratigraphy)
- *NLO*: TPF, SHG, THG, FLI

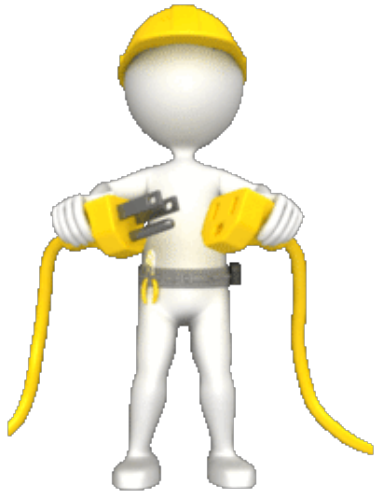


Prototype



Commercial device

PERSPECTIVES 4 INTERNSHIP



^{14}C – Accelerator Mass Spectrometry

- ***Preparazione campioni***

- Innovative procedures per estrazione frazione carboniosa databile
- Innovative procedures per rimozione possibili contaminanti

- ***Misure (AMS) con acceleratore***

- Ottimizzazione delle condizioni di trasporto del fascio

- ***Analisi dati***

- Ottimizzazione delle procedure di calibrazione delle età convenzionali di radiocarbonio misurate



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**Laboratorio di tecniche nucleari
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Grazie
per la vostra attenzione!