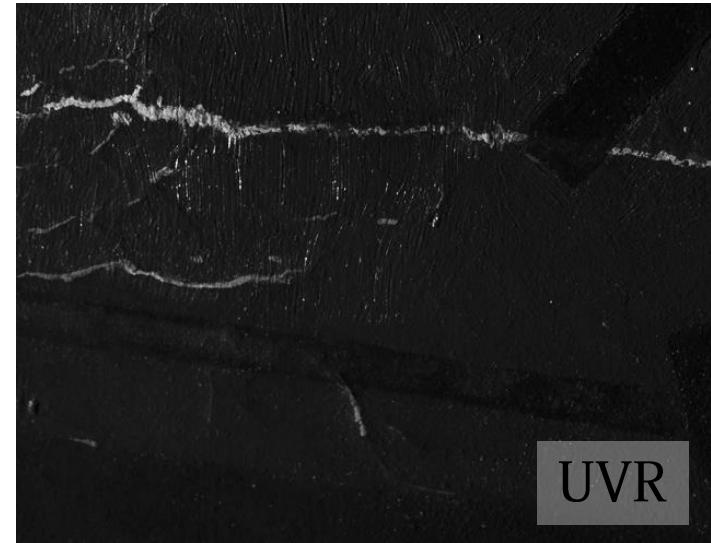
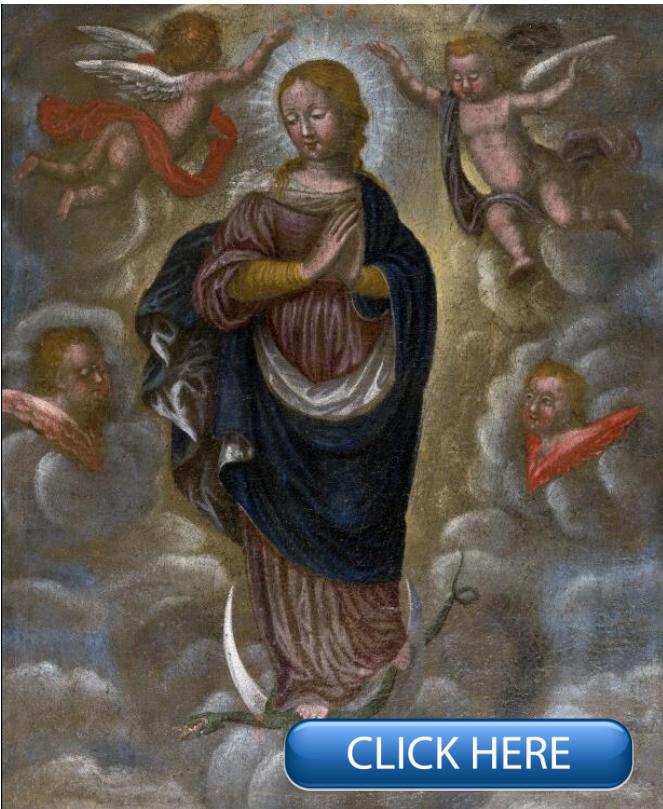


Onsite, non-invasive and non-destructive Technical Examination for paintings

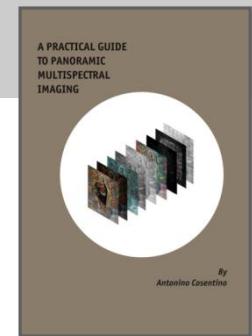


Panoramic photography



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High resolution documentation of paintings for study and printing



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Raking light photography



Photo

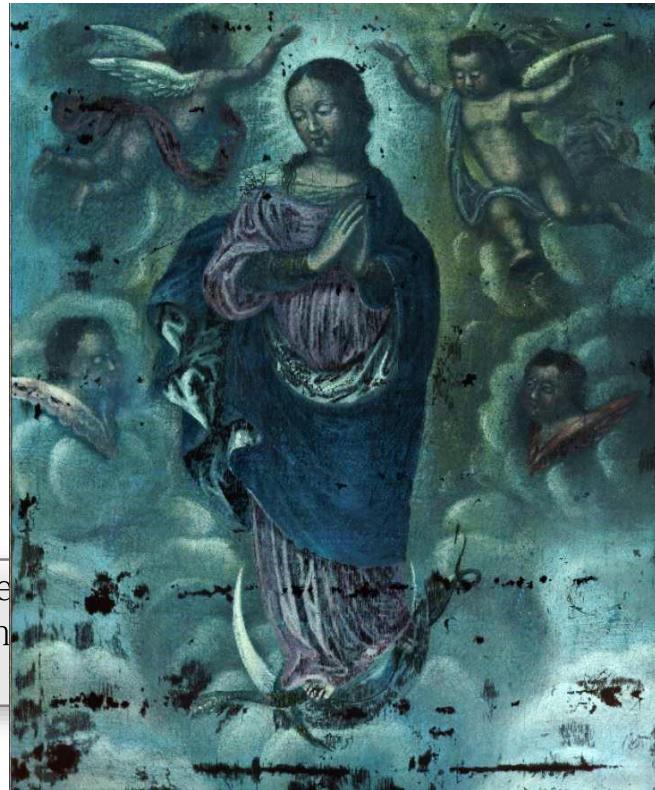


Raking light (RAK)

Raking Light photography brush work, losses and inpaints.

Ultraviolet Fluorescence Photography (UVF)

Map Inpaints



Practical notes on ultraviolet technical photography for art examination

Adriana Cordero

Practical notes on ultraviolet technical photography for art examination

Method

Notes

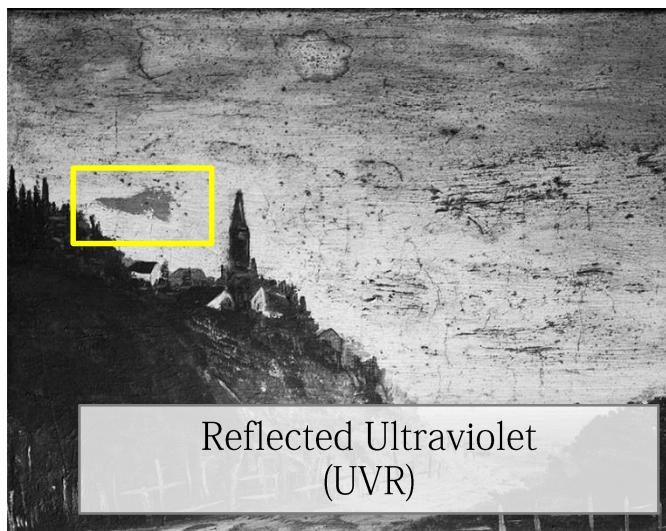
References

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ISBN 2-8502-0002
Cognac Pression 2010-05-15 42 | 460 14400000000000
<http://cognacpression.org>

Ultraviolet photography documents inpaints and organic materials , such as old and new varnishes.

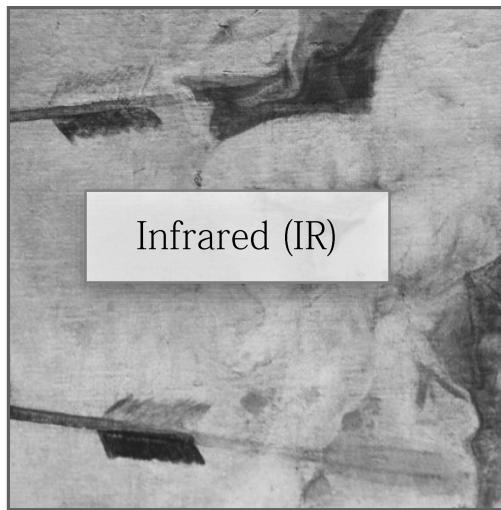
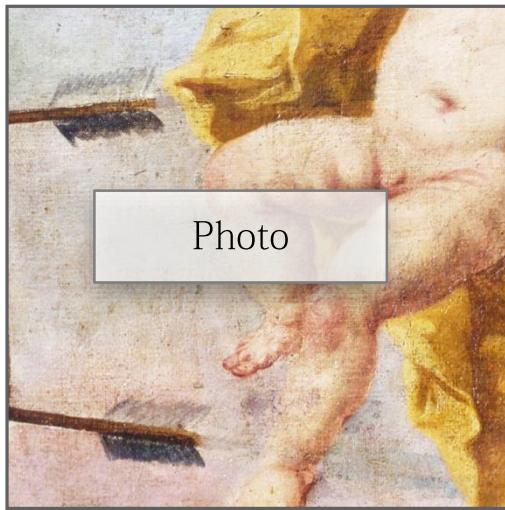
Reflected Ultraviolet Photography (UVR)



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Reflected Ultraviolet photography documents inpaints with titanium white and zinc white.

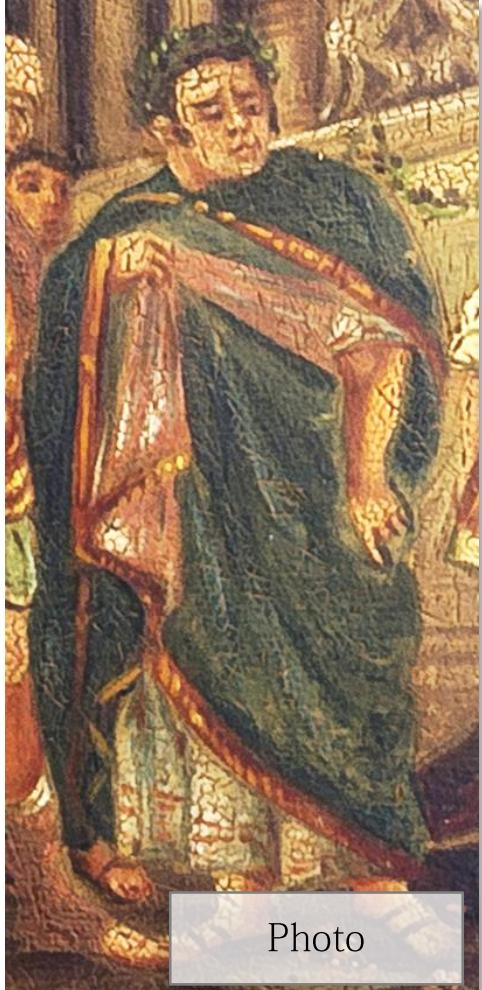
Infrared photography (IR)



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Infrared photography reveals lost details in paintings

Infrared Reflectography (IRR)



Photo



Infrared (IRR)



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Infrared photography makes visible
underdrawing and changes (*pentimenti*)

Infrared False Color Photography (IRFC)

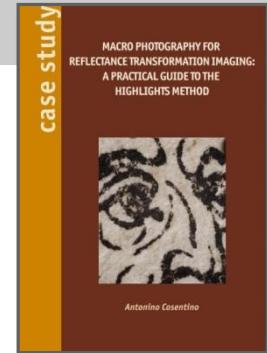


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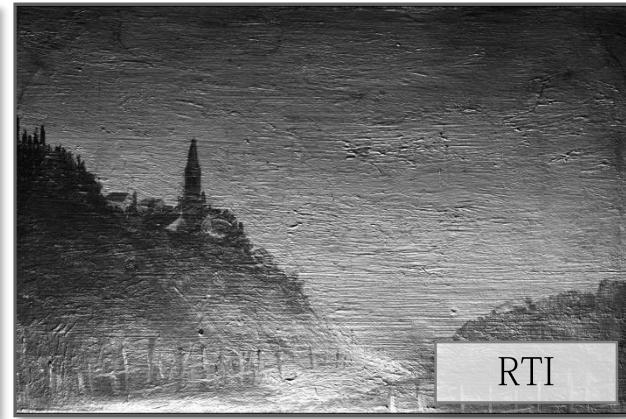


Infrared False Color photography locates inpaints with modern pigments

Reflectance Transformation Imaging (RTI)



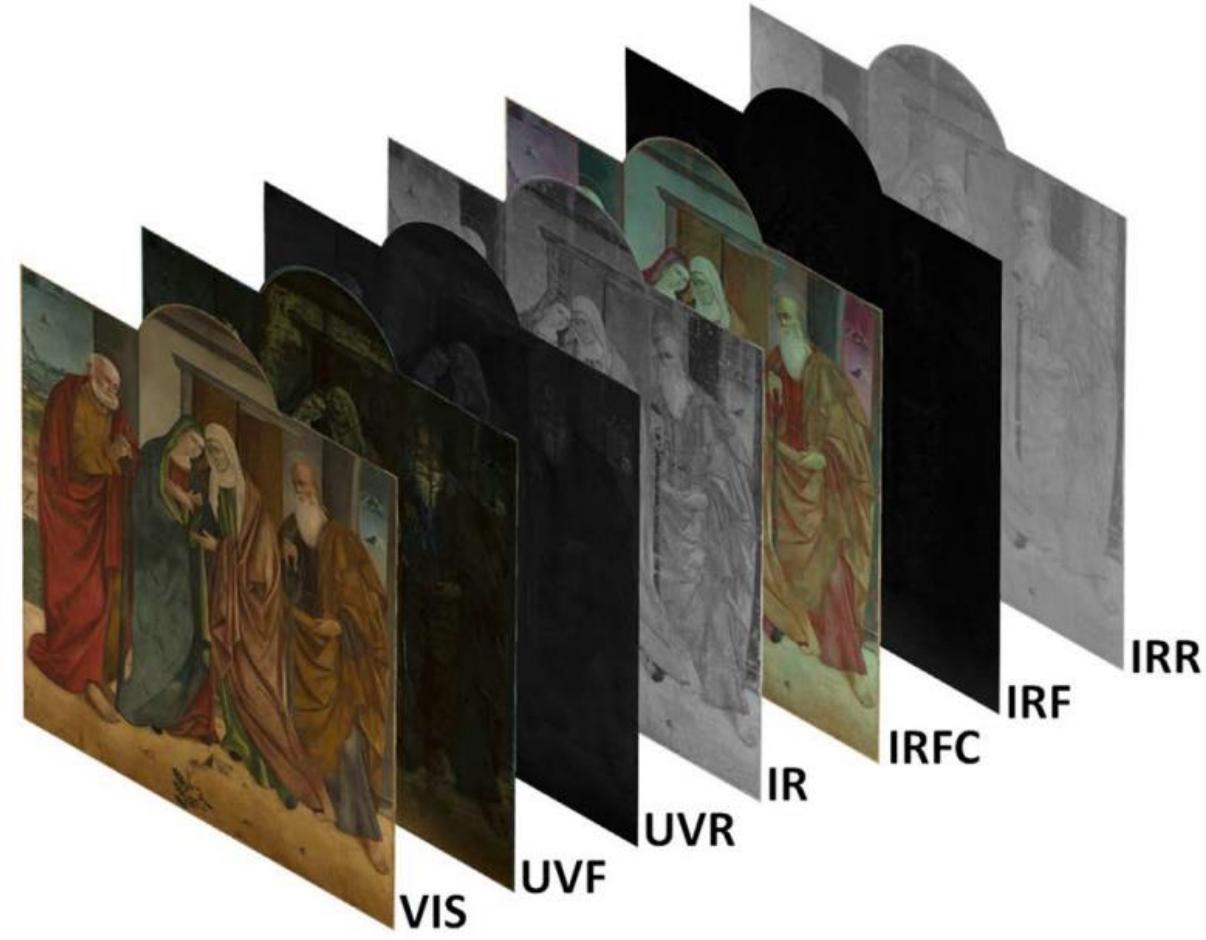
Incisions



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RTI (Reflectance Transformation Imaging) documents incisions which indicative the painting techniques.

Technical Photography



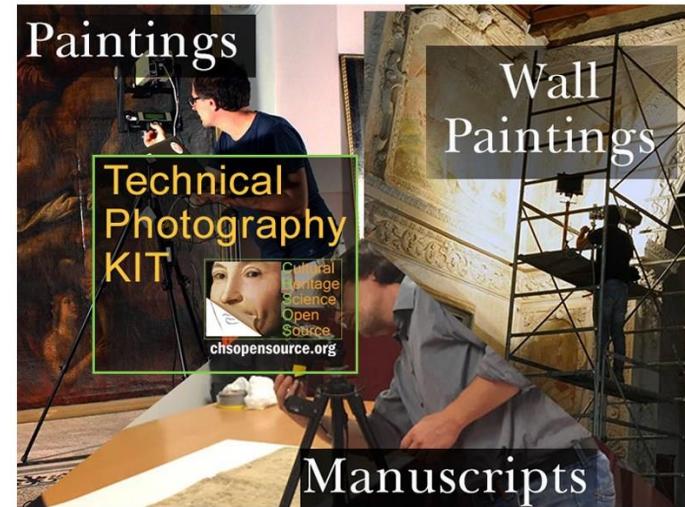
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A complete Technical Photography (TP) documentation allows a preliminary identification of pigments

CHSOS Technical Photography kit

We designed a Technical Photography kit specifically for art professionals and educational institutions.

It's the best compromise among Quality, Adaptability and Costs and it allows to realize a complete set of 7 technical photo documentation methods: VIS (visible photography), UVF (Ultraviolet Fluorescence), UVR (Reflected Ultraviolet), IR (Infrared), IRF (Infrared Fluorescence), IRFC (Infrared False Color), IRT (Infrared Transmitted). This is a kit for art professionals: conservators, art appraisers, archaeologists, art historians. Use it for fast and informative examination of easel paintings, wall paintings, manuscripts and historical documents.

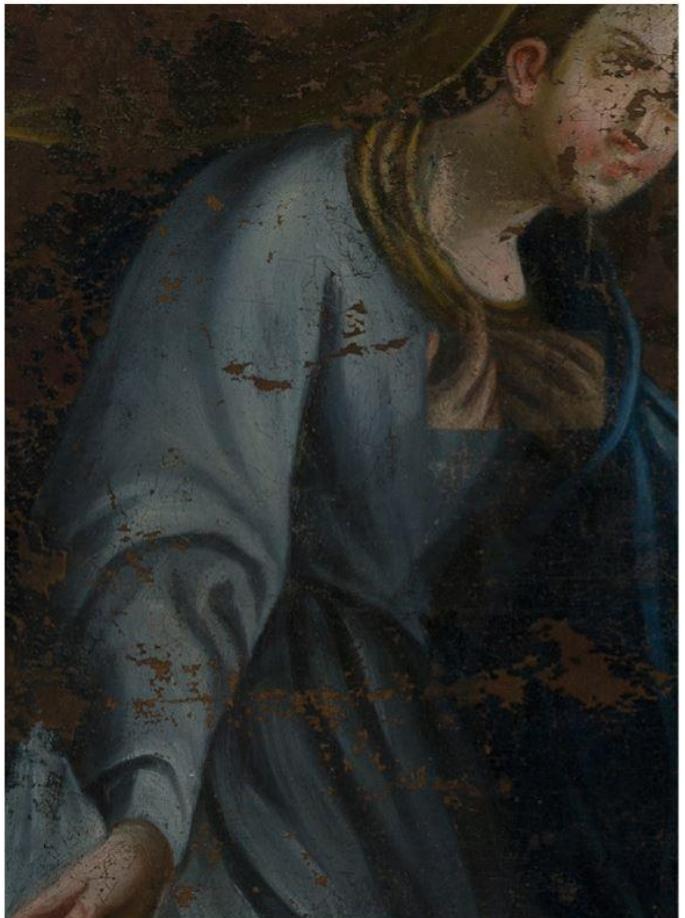


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Technical Photography **KIT**

X Radiography



VIS



RX

X-Radiography (RX) reveals hidden paintings

RIVELAZIONI

**L'ANNUNCIAZIONE RITROVATA.
NUNZIATA DI MASCALI, SICILIA**

di Antonio Calvano,
Giovanni Calvano, Giacomo Calvano,
Carlo Cicali, Giuseppe Cicali, Achille
Dandolo e Peter Uhl Japan

La complessa storia
dell'Annunciazione "ritrovata"
è digiato venuta alla luce
a seguito di un'indagine
restauri realizzata dalla città
Nunziata di Mascali per l'intera
restaurazione del quadro.
Le indagini diagnostiche hanno
alcuni particolari insoliti nella
rappresentazione tradizionale
e energetica.

Fig. 1 - L'annunciazione ritrovata prima delle indagini. La volta di
cattivo stato di conservazione con la rappresentazione della
Madonna in piedi che annuncia a Maria il suo destino.

Fig. 2 - L'annunciazione ritrovata dopo le indagini non invadente ultrasoniche.
L'immagine mostra i dettagli della rappresentazione dell'annunciazione
della Vergine Maria, spesso nascosta da camuffamenti ottici.

Fig. 3 - L'annunciazione ritrovata dopo le indagini non invadente ultrasoniche.
L'immagine mostra i dettagli della rappresentazione dell'annunciazione
della Vergine Maria, spesso nascosta da camuffamenti ottici.

L'anno di Nunziata di Mascali, Sicilia, approvato nel 2011 il progetto della volta
dell'annunciazione rappresentante l'annunciazione della Vergine Maria a Maria, una
scena che sotto i numerosi disegni di per
tutto il mondo è stata ripetuta più volte.
È stata eseguita in questo caso con un
disegno solitario appartenente al stile
pittorico siciliano del Cinquecento.
La volta era in pessimo stato di conservazione
gatta con successo, mettendo in evidenza
una storia composta da molti strati di camuffamenti
e di riparazioni, ma anche da molte
rappresentazioni parallele. In questa attuale
dagli strati di camuffamento si vede
anche l'angelo in piedi e la sua braccia aperte
che presentavano tridimensionale della scena rimpicciolita.
Inoltre, si vede la Vergine Maria con le mani
sulla testa, mentre l'angelo ha le mani
sulla testa della figura prima della cattura, mentre la radiografia è solo quella che
ha permesso di rintracciare le camuffature e ridurla drasticamente la procedura
di restauro in metà.

ARCHIMETICA N°1 MARZO 2010

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Multispectral Imaging



ARTICLE

Multispectral imaging and the art expert

Antonella Goriely
Cultural Heritage Open Source, Empretecno, Asl Siena, Italy. E-mail: antonella@choso.org

In the last decade, multispectral imaging (MSI) systems have been widely adopted by art restorers and conservators to study and analyze artworks and artifacts. These are used to map and analyze the spectral properties of the materials used in the artwork, such as pigments, dyes, and varnishes, and to detect differences between them. This method has an unique advantage over other non-destructive methods because it does not require physical contact with the object, and thus, it can reveal many subtle details that would be lost if the object were handled or disturbed. MSI can be an indispensable tool in the field of art conservation, especially when dealing with fragile and delicate objects. It is also useful for the identification of materials used in the artwork, such as pigments, dyes, and varnishes, and for the detection of any damage or deterioration that may have occurred over time. The multispectral images obtained from MSI can be used to identify the different materials used in the artwork, and to determine their chemical composition. This information can be used to develop appropriate treatment plans and to ensure the long-term preservation of the artwork.

The spectral cube obtained from the multispectral imaging system is a 3D volume consisting of three dimensions: the spatial dimensions (x and y axes) and the spectral dimension (z axis). The spectral dimension represents the wavelength of the light and is measured in nanometers (nm). The multispectral images are usually processed using specialized software to extract the spectral information contained in the images. This information can be used to identify the different materials used in the artwork, and to determine their chemical composition. This information can be used to develop appropriate treatment plans and to ensure the long-term preservation of the artwork.

Figure 1. Comparison of a traditional icon painting (left) and its multispectral image (right). The multispectral image reveals the hidden layers and inpaints beneath the surface. The Virgin's face and the Christ Child are shown in various colors (red, yellow, green) indicating different pigments used in their depiction.

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Pigments can be mapped with multispectral imaging to locate inpaints and differentiate among pigments with the same hue and tone but different chemical composition.

Antonello – Multispectral Imaging system for Art

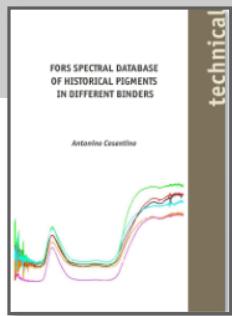
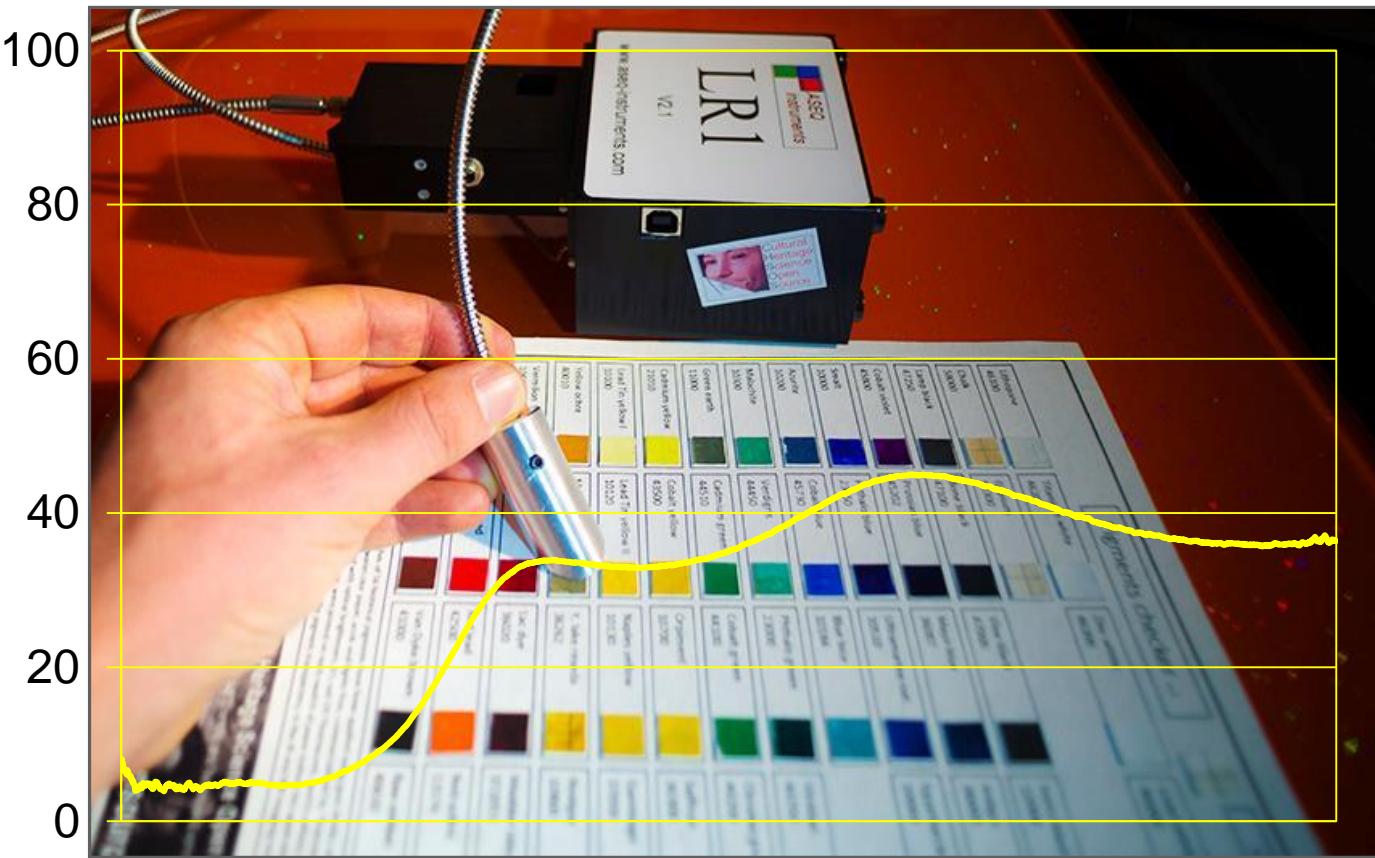
Antonello is a simple MSI system composed of 18 bandpass filters and a full spectrum DSLR camera, covering the 400-925 nm spectral range.

Conservators and art historians need non-invasive methodologies to identify and map pigments on works of art and archaeology. These tools allow them to select appropriate conservation procedures, acquire information on the workshop practices, distinguish original sections from inpaints and to enhance visualization of faded pigments and inks.



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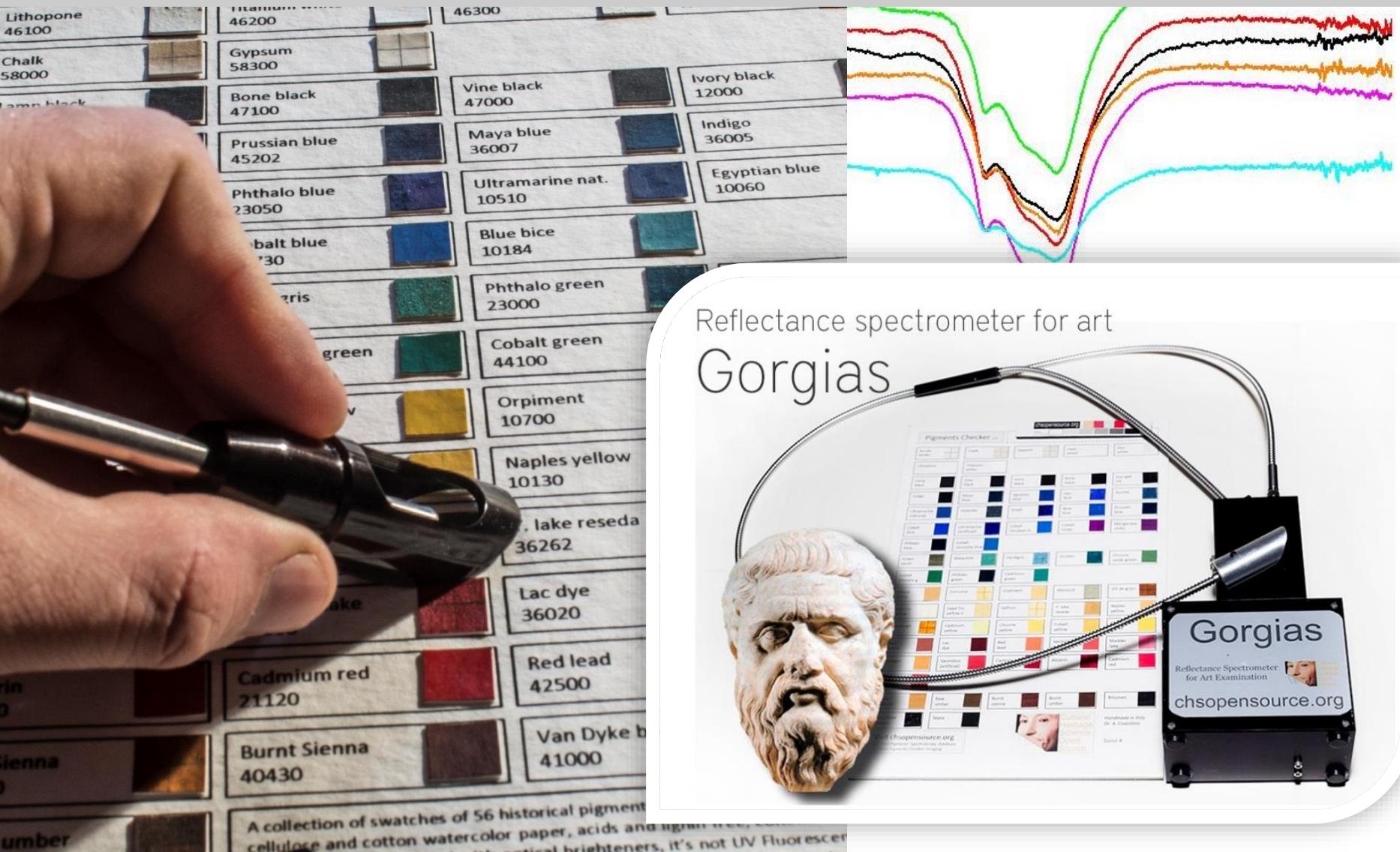
Reflectance Spectroscopy



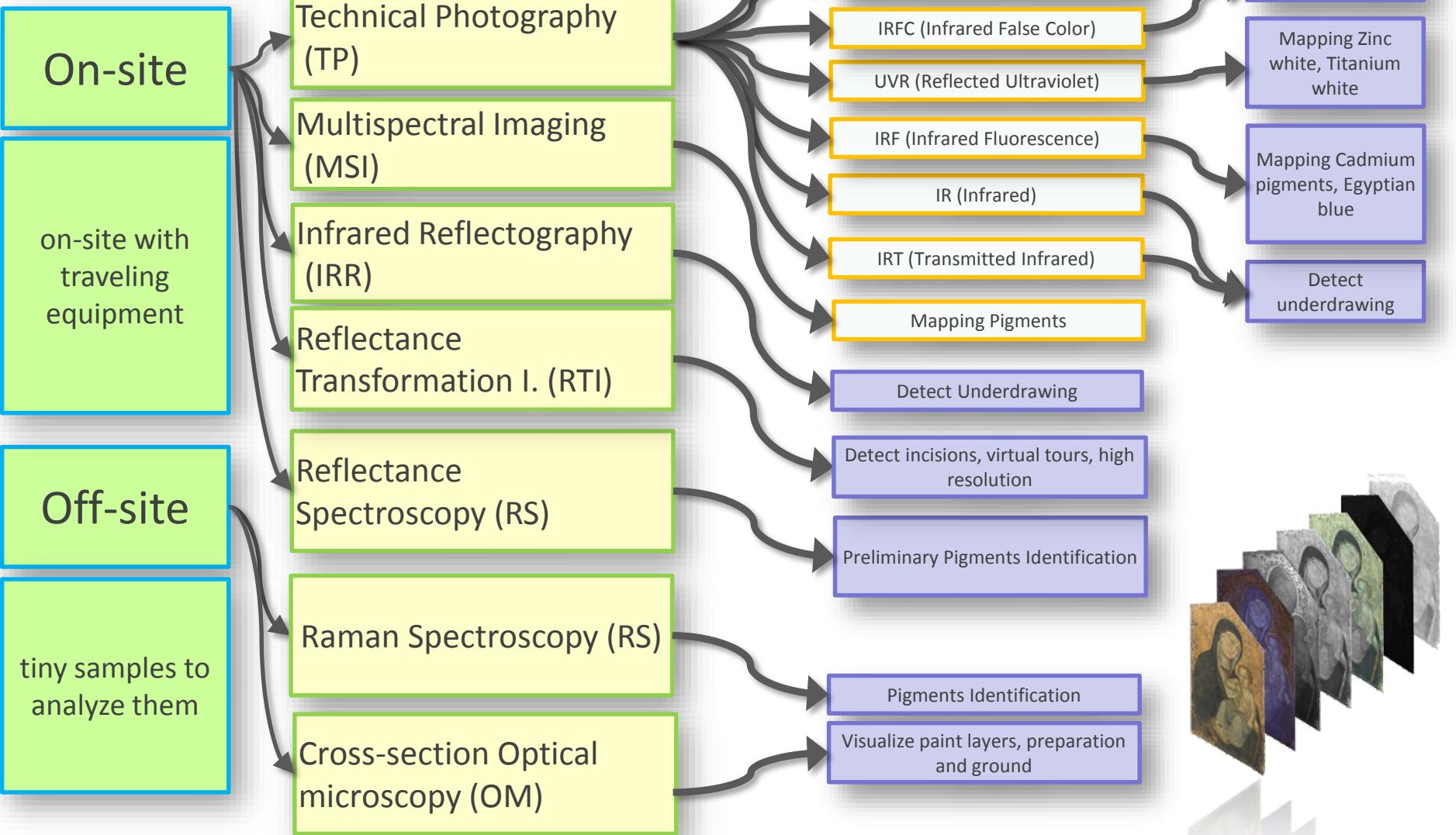
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Pigments identification with onsite, non-invasive and non-destructive Reflectance Spectroscopy (RS).

Gorgias – Reflectance Spectrometer for Art



CHSOS – art examination methods



Any questions?

Contact CHSOS:

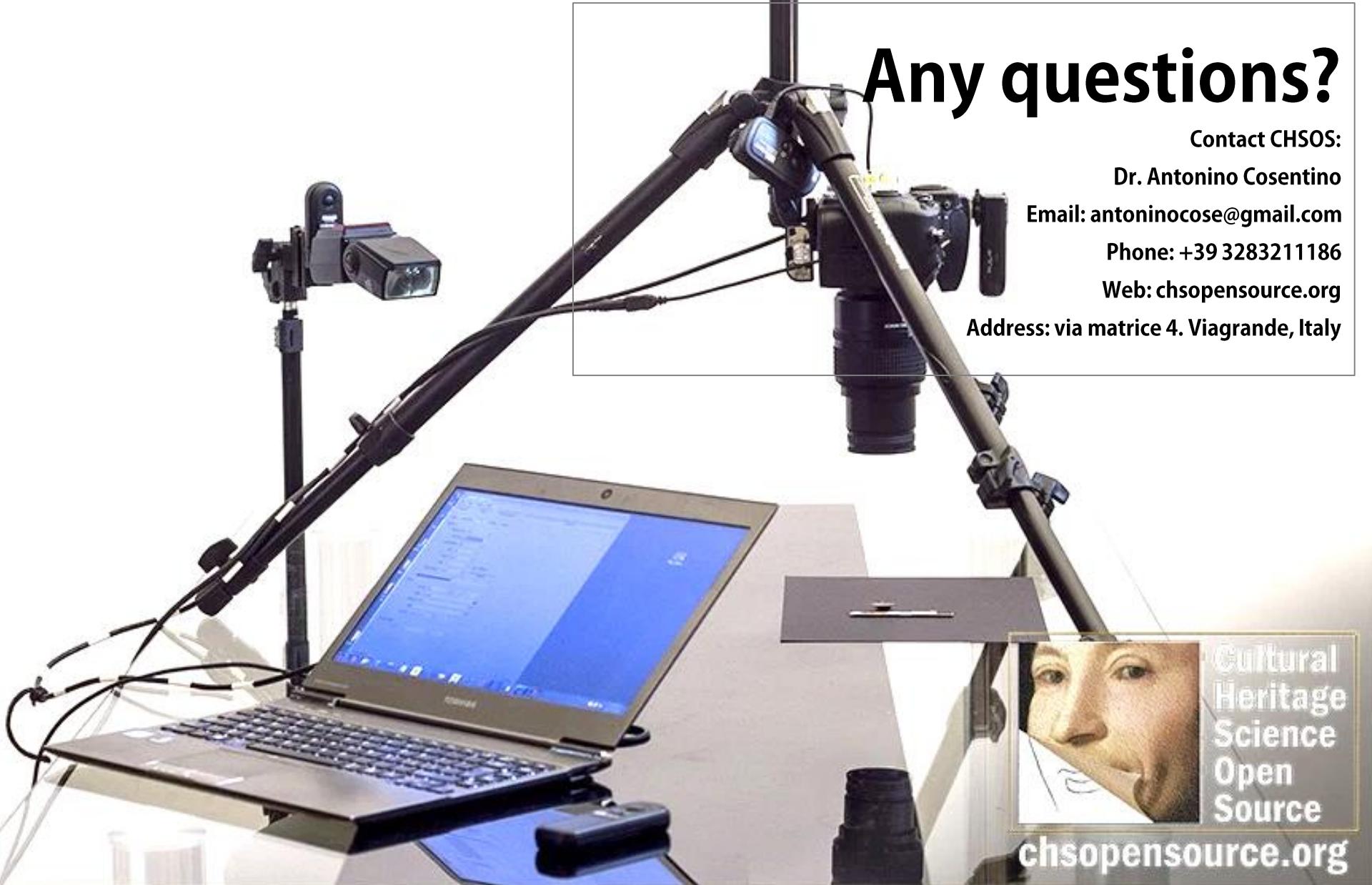
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