



**EUROPEAN ACADEMY**  
of Sciences and Arts

# COLLOQUIUM of the Global p-XRF Network with European Academy of Sciences & Arts



## Colloquia on portable X-Ray Fluorescence **March 27th 2025, 06:00-07:30 pm CET**

**Prof. Robert H. Tykot**

*"Up-to-Date Assessment of Non-Destructive pXRF Analysis of Obsidian in the Mediterranean"*

**Abstract:**

Over the past 17 years, more than 13,000 obsidian artifacts in the Mediterranean have been tested non-destructively using a portable XRF instrument. This revolutionary number has totally changed our understanding of the extent, directions, and changes over time of obsidian distribution from each source. This has involved four different instrument models, and repeated testing for each of geological samples from all sources to ensure direct comparisons as well as calibrated values. The use of pXRF for obsidian sourcing in this region has many advantages and very few disadvantages.

**Dr. Theodora Moutsiou**

*"Obsidian Maritime Connections in the Eastern Mediterranean Prehistory"*

**Abstract:**

The long-standing narratives of the Mediterranean islands as too impoverished to have sustained hunter-gatherers and limited abilities of these populations to adapt to insular landscapes are largely responsible for the view that Cyprus could not have been populated by populations practising hunting and gathering subsistence activities at all. Hunter-gatherer-forager subsistence attributes are now documented in some early Aceramic (Pre-Pottery) Neolithic sites, which challenges persisting narratives regarding Cyprus as a remote and marginal environment to a hunter-fisher-gatherer lifestyle and coastal adaptations. Obsidian artefacts have been documented in several of these sites indicating a much denser social landscape in Cyprus during the Early Holocene, which needs to be examined in the context of human-human interactions locally and interregionally (within the island and beyond). Decision-making processes, especially with regards to mobility and spatial positioning, rely not only on ecological factors but also on social parameters. The creation and maintenance of social networks of information/material exchange are crucial to the long-term survival of populations moving to new territories and these social factors are important when these populations make decisions regarding where to go and how to position themselves in wider social networks. Investigating the consumption of obsidian in the Early Holocene landscape of Cyprus opens up an exciting opportunity to investigate the hunter-gatherer exploitation of insular environments in the Mediterranean and elucidate patterns of early human mobility and migration, maritime connectivity, cognition and adaptation especially during climatically challenging times.

Led by the network and endorsed by the European Academy of Sciences & Arts/STEMAC Expert Group, we are organizing a series of online colloquia to explore the use of pXRF in archaeology and cultural heritage. The colloquia aim to provide a platform for knowledge exchange, featuring expert presentations from both the natural sciences and the humanities. Each session will include 30-minute talks by specialists from archaeology and natural sciences, followed by a 30-minute discussion. Topics include:

- Resources and guidance for the XRF community
- Case studies and exemplary applications
- Opportunities for knowledge exchange

Recordings of the colloquia will be available, and participants can submit case study reviews for publication in PEASA ([www.peasa.eu](http://www.peasa.eu)).

**Contact us:**

Michaela Schauer (VIAS, UNIWI AUSTRIA; <https://homepage.univie.ac.at/michaela.schauer/>)

Ioannis Liritzis (Dean Class IV, EASA, Salzburg; [www.euro-acad.eu](http://www.euro-acad.eu))

Keelie S. Rix (CASEs Universitat Pompeu Fabra, CAMP ERC; <https://www.upf.edu/web/camp>)

Email inquiries: [keelie.rix@upf.edu](mailto:keelie.rix@upf.edu), [michaela.schauer@univie.ac.at](mailto:michaela.schauer@univie.ac.at)  
or [ioannis.liritzis@euro-acad.eu](mailto:ioannis.liritzis@euro-acad.eu)