



NATIONAL CENTRE FOR  
SCIENTIFIC RESEARCH "DEMOKRITOS"

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**PlaCe-ITN**  
Pre-modern Plasters and Ceramics

## INSTITUTE OF NANOSCIENCE AND NANOTECHNOLOGY

### Training the next generation of archaeological scientists: Interdisciplinary studies of pre-modern Plasters and Ceramics from the eastern Mediterranean (PlaCe-ITN)

A Marie Skłodowska-Curie Innovative Training Network

<b>Title:</b>	Early-Stage Researcher (ESR11)
<b>Category:</b>	Contract for 36 months without provisions for extension
<b>Expected starting date:</b>	1st of September 2021
<b>Place of employment:</b>	National Centre for Scientific Research "Demokritos", Athens, Greece

#### Research position

As a partner institution in the PlaCe Innovative Training Network (ITN), the Institute of Nanoscience and Nanotechnology in the National Centre for Scientific Research "Demokritos" (NCSR Demokritos), Athens, Greece offers a fully funded 36-month position for doctoral training and research on the topic of ***A Diachronic Study of the Design and Technology of Attic Transport Jars.***

#### PlaCe ITN

NCSR "Demokritos" is a partner in the Horizon 2020 MSCA-ETN-ITN, *Training the next generation of archaeological scientists: interdisciplinary studies of premodern Plasters and Ceramics from the eastern Mediterranean* (PlaCe-ITN), whose 48-month activities commenced in March 2021. This high-profile *Innovative Training Network* aims to train Early-Stage Researchers (ESRs) to conduct state-of-the-art, science-based research on the provenance, use, and technology of plasters and ceramics, in pre-modern societies in different regions of the eastern Mediterranean. This advertised post comprises one of the 15 ESR positions that are being offered in the PlaCe ITN (<https://place-itn.cyi.ac.cy/>).

#### The Host Research Team

The Ceramics and Composite Materials Research Group is based at the Institute of Nanoscience and Nanotechnology (INN), NCSR "Demokritos". It has an international reputation in analytical approaches to ceramics and composite cultural materials, including the reconstruction of ancient technologies, and the determination of the physical, chemical and technological parameters that affect the function and performance of composite materials found in archaeological sites, historic and modern structures (<https://inn.demokritos.gr/>).

### **ESR Research and Training**

The selected candidate will conduct doctoral research on the specified topic, leading to the submission of a PhD, for which the ESR is anticipated to be registered at The University of Thessaly Greece, with a supervisory team from both institutions. The research will address technological choices and elements of design, through changes in component materials, their treatment and the vessel morphology of transport amphorae from Attica, Greece, from the early third millennium BCE to the 9<sup>th</sup> century CE. This will include a focus on ceramic production in south-western Attica, about which the research group has been active in recent years.

This analytical project involves an anthropologically and archaeologically informed approach to objects, embedded technologies and processes of innovation. It will develop and apply a long-term perspective on the design and technology of transport amphora, viewing them as socially contingent responses to changes in contents, developments in ceramic technology, changes in naval technology, contextualised within a social world in which tradition, reputation, and branding are also important motivations. The materials of these jars changed radically during that time, as did their shape and surface appearance, with important elements of continuity.

A range of key transport amphora types of the time period considered will be chosen for detailed analytical study, to establish the choice and manipulation of raw materials, techniques of forming and construction, surface modification and firing. The testing of the properties of the material of the jars will be combined with data on their shapes, in order to examine the physical properties and the affordances of the objects. Central to this effort will be material testing of strength and toughness, 3D scanning and digital modelling of individual objects, and their stowage as cargoes in ships' holds.

The team at INN, Demokritos has world leading expertise in a wide range of analytical approaches to ceramics, as well as the facilities and instrumentation to train the Early-Stage Researcher and support them to complete the research. Techniques applicable to this project involve thin section petrography, mineralogical analysis by XRD, chemical analysis (NAA, pXRF), and the investigation of surfaces and firing by SEM. A speciality of the team has been the investigation of thermal and mechanical properties of ceramic materials and objects, and the student will be trained in Finite Element Analysis. The approach will involve raw material prospection in western Attica, as well as experimental approaches and technological reconstruction. Training and facilities in all these aspects are available at Demokritos. The PlaCe-ITN will also offer the ESRs an exceptional opportunity for structured training over their three-year contracts, in a wide variety of aspects of the study of plasters and ceramics.

### **Qualifications**

The successful candidate is expected to have a Master's degree in archaeology, earth or materials science, cultural heritage, heritage science or a related field, and a good Bachelor's degree in a cognate discipline. Applicants should have a strong commitment to scientific research, an independent and well-organized working style, the motivation to produce high quality work, an ability to work in an interdisciplinary team, excellent interpersonal and communicative skills, proven ability in presentation and good oral and written communication skills in English.

## Eligibility Criteria

According to the eligibility criteria set by the European Commission and the particular MSCA-ITN-2020 call, the recruited Early-Stage Researcher must comply with the following conditions:

1. The researcher cannot have resided or carried out his/her main activity (work, studies, etc.) in Greece for more than 12 months in the three years immediately before the recruitment date). Compulsory national service, short stays such as holidays and time spent as part of a procedure for obtaining refugee status (under the 1951 Geneva Convention and the 1967 Protocol) are not taken into account.
2. To be, at the date of recruitment, an 'early-stage researcher' (i.e. be in the first four years - full-time equivalent research experience - of their research careers and have not been awarded a doctoral degree).

The position is open to interested candidates of any ethnicity or gender; it adheres to the European policy of balanced ethnicity, age, and gender.

## Financial Support and Employment Conditions

This Marie Skłodowska-Curie Actions (MSCA) ITN offers a competitive and attractive salary and working conditions. The successful candidate will receive a gross salary in accordance with the MSCA regulations for Early-Stage Researchers; it includes living and mobility allowances, and a family allowance, if the researcher is married or with children. The exact salary will be confirmed upon appointment.

*Tuition fees:* covered by PlaCe-ITN

*Employment basis:* Temporary for specified duration of the contract: 36 months without provisions for extension

*Maximum hours per week:* 40 (full-time)

## How to Apply

Applicants must submit their application online ([v.kilikoglou@inn.demokritos.gr](mailto:v.kilikoglou@inn.demokritos.gr) [a.hein@inn.demokritos.gr](mailto:a.hein@inn.demokritos.gr)), together with the following supporting documents (in English):

- A *curriculum vitae* (6 pages max.)
- A letter of motivation (1,000 words max.)
- At least two reference letters from a (former) supervisor, lecturer, tutor, and/or manager with full contact information.
- A copy of official academic degree(s) and the corresponding transcripts
- A copy of the most up to-date Masters and Bachelor grades in English
- A proof of English proficiency. ESR candidates must demonstrate that their ability to understand and express themselves in both written and spoken English is sufficient for them to derive the full benefit of the network training.

If candidates are interested in multiple positions within PlaCe ITN, they must apply independently and separately to each of them, following the indications provided in each ESR description page.

**Deadline for applications**

The deadline for applications is Monday, 3 May 2021.

**Contact us**

For any enquiries or further information on an informal basis about this position, please contact Dr. Vassilis Kilikoglou ([v.kilikoglou@inn.demokritos.gr](mailto:v.kilikoglou@inn.demokritos.gr)), Head of the Ceramics and Composite Materials Research Group.



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