



Università
Ca' Foscari
Venezia

Dipartimento di Scienze Ambientali,
Informatica e Statistica

Dipartimento di Scienze Ambientali, Informatica e Statistica
Università Ca' Foscari Venezia
Campus Scientifico – Via Torino 155, 30170 Mestre (VE)
P.IVA 00816350276 - CF 80007720271
www.unive.it/dais

Research fellowship “Consolidation of porous stone materials degraded by soluble salts” - Università Ca' Foscari Venezia (Italian law 30 December 2010, n.240, art. 22)

The present document in English is to be considered as a mere summary of the main provisions of the notice of competition which is available in Italian at the following ([link](#)). The text in Italian is the official text of the notice of competition for all legal intents and purposes and, in the event of non-conformity with the present document, it shall prevail.

Description

The Department of Environmental Sciences, Informatics and Statistics at Università Ca' Foscari Venezia invites applications for a fellowship in:

TITLE: Consolidation of porous stone materials degraded by soluble salts

SSD: CHIM/12

Tutor: Prof.ssa Elisabetta Zendri

Duration: 12 months

Abstract: The presence of soluble salts coming from seawater or high-water phenomena compromise the durability and conservation of stone materials used in cultural heritage. The intervention generally aim to limit the direct contact between artefact and seawater, usually removing the work of art, if possible, or the application of physical/chemical barriers against the raising damp and the direct contact with the seawater. Once isolated, the removal of the soluble salts absorbed by the material is fundamental and it is followed by the application of a consolidant, generally based on a hydrophobic polymer. This last operation requires great caution due to the general physical and chemical incompatibility among the complex artefact-salt-environment system. Considering that Venice has a large number of stone artefacts in a precarious state of conservation and that the removal of soluble salts is the most delicate and complex phase in the recovery of these works, the aim of this study is to study innovative systems to immobilise the salts and at the same time consolidate the supports. The aim of this project is to develop materials and techniques for the immobilization of the soluble salts and in the meantime for the consolidation of the degraded stone.

The steps of the project are:

- 1- Literature review and selection of methods for the immobilisation of soluble salts. Selection of stone supports of different porosity and representative of Venetian artefacts. Preparation of samples for experimentation
- 2- Application of conversion/immobilisation systems. Laboratory testing of the chemical, physical and mechanical effects on the substrates following conversion and analysis of the effectiveness of the methods applied
- 3- Evaluation of the behaviour of the treated materials (climatic chamber cycles) and verification of the compatibility with inorganic/organic consolidants.



The research can be carried out in English. The fellowship is intended to provide the successful candidate with the opportunity to pursue his/her own research while benefiting from the range of expertise at Università Ca' Foscari Venezia.

Who can apply

Prospective candidates are expected to hold a **Master's degree in Chemistry, or a Master's degree in Conservation and restoration of cultural heritage, or a Master's degree in Materials Science**, or related areas or equivalent foreign qualification or related disciplines.

Ca' Foscari encourages applications from researchers with positive evaluation in all the criteria in individual proposals such as Marie Skłodowska Curie Actions - Individual Fellowships/ERC Starting Grants/FIRB (Italian Fund for basic research investments)/SIR (Scientific Young Independence Research) or similar.

Researchers having successfully completed Marie Skłodowska Curie Actions - Individual Fellowships/ERC Starting Grants/FIRB (Italian Fund for basic research investments)/SIR (Scientific Young Independence Research) or similar funded projects are warmly encouraged to apply.

Duration of contract: 12 months, approximately starting: **September 2021**

Stipend: The research fellowship **amounts to 19.367,00 Euros per year**, including taxes and social charges.

Deadline for submission of applications: 12/07/2021, 12.00 noon (Italian time).

How to apply:

Candidates should submit:

1. The application form;
2. A motivation letter (max 1 page) along with their CV in European format, duly dated and signed, both to enclosed as a one single.pdf file. ([link](#))
3. A copy of a valid identity document (either Identity Card or Passport);
4. (If available) Evaluation Summary Reports of Marie Skłodowska Curie Actions - Individual Fellowships/ ERC Starting Grants/FIRB (Italian Fund for basic research investments)/SIR (Scientific Young Independence Research) individual proposals having passed all the evaluation thresholds;
5. (If available) Details of Marie Skłodowska Curie Actions - Individual Fellowships, ERC Starting Grants, FIRB (Italian Fund for basic research investments)/ SIR Scientific Young Independence Research funded projects;
6. All documents, qualifications and publications relevant for the selection procedure (please, see the notice [link](#)).

All the schemes of the quoted documentation are available on the website ([link](#)).

The form for declaring the availability to carry out the interview remotely which can be



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found at this link www.unive.it/moduli-assegni and must be sent via email to segreteria.dais@unive.it with the object: Consolidation of porous stone materials degraded by soluble salts - Prof. ssa Elisabetta Zendri.

How to submit your application

Applications should be submitted by the online procedure, available on the notice webpage ([link](#))

Or submit here:

Link: <https://apps.unive.it/domandeconcorso-en/accesso/jointresearchzendri2021>

The candidate, after the uploading, will receive a submission number and an e-mail acknowledging receipt of his/her application.

The candidate, if necessary, could access the procedures for updating any data and materials by the link provided by the e-mail, in any case any updates must be made no later than the deadline **12/07/2021, 12.00 noon (Italian time)**.

Please note that the University can be contacted for any support needs by the candidate until 24 hours prior to the deadline.

Please note that in case of a high number of applications and / or weight of the materials loaded by the candidates the system might become slower. Therefore, it is suggested not to start the process close to the deadline.

NB: The University does not take on responsibility for wrong or late communication of addresses, nor for any communication problem not depending on the University.

Evaluation

Up to 100 points, specifically:

For qualifications, publications and possible tests, from 0 to 60;

For interview, from 0 to 40.

Selection procedure

The interview will take place **on 15/07/2021 at 09.30 a.m. (Italian time)**. It will be possible to carry out the competition tests only electronically. The list of candidates admitted to the interview or any postponement will be announced on **14/07/2021** by notice that will be published on the website of this university ([link](#)) and on the web pages foreseen by current legislation.

This communication constitutes to all intents and purposes an official call and candidates will not receive any call or home communication. Therefore, candidates are required to present themselves, at the online interview, with a valid identification document, without prior notice, on the days and times indicated here. Any postponements will be made known on the day by means of a notice which will be published on the website of this university ([link](#)) and on the web pages envisaged by current legislation.



The interview:

The interview questions will cover:

- Degradation processes of stone materials due to the presence of soluble salts;
- Materials and methods for the consolidation of stone materials;
- Evaluation of the consolidation effectiveness: parameters and methods;
- Good knowledge of English;
- Good knowledge of Italian (in case of foreign candidates)

Information

The grant holder must express acceptance within 7 days from receiving the communication and must sign the relevant contract at the competent office. Considering the current travel restrictions on the whole national territory and the impossibility of accessing the structures, as a consequence of the epidemiological state of emergency from COVID-19, the grant holder must sign the relevant contract by affixing remote digital signature (<https://www.agid.gov.it/it/piattaforme/firma-elettronica-qualificata/ottenere-firma-elettronica>). In the impossibility of acquiring the digital signature remotely, exceptionally, it will be possible to proceed with the acquisition of the signature by correspondence (1). These provisions remain valid until the emergency ends, decreed by government deeds.

(1) The contract will be considered completed and fully effective between the parties, after the acquisition of all the signatures and the repertory of the deed.

- The contractor must attach a photocopy of the identity card.

Information and contacts

Candidates may find further details about the application process and the research project in the official call published on the following ([link](#))

For further information please contact Prof.ssa Elisabetta Zendri - elizen@unive.it -

Venice,

The head of the Department of
Scienze Ambientali, Informatica e Statistica
Prof. Salvatore Orlando

Digitally signed