Research fellowship - *Analysis of the atmospheric aerosol and water resources in mountain areas in view of climate changes (in the framework of the activities of Spoke 1 of the PNRR iNEST Project, Interconnected North-East Innovation Ecosystem).* **PNRR Project no.: ECS_00000043 Title of the project: iNEST - Interconnected Nord-Est Innovation Ecosystem Area: Digital, Industry, Aerospace Actuating Subject: University of Padua CUP: H43C22000540006. Call issued by Ca' Foscari University of Venice (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 CESA Center at Università Ca' Foscari Venezia, in charge of the administrative management of the above mentioned project, invites applications for a fellowship in:

Title Analysis of aerosol and water resources in mountain settings from the perspective of climate change
SSD and/or sector GEO/08
Scientific coordinators and tutors prof. Mauro Masiol and prof. Barbara Stenni
Duration 12 months
Abstract *Climate change is affecting the water cycle and the aerosol system as warming global temperatures raise worldwide, for example modifying the rate of evaporation and precipitation and the chemical composition of the airborne particulate matter. Also, a warmer atmosphere containing more water vapor is potentially affected by more intense rainstorms, causing major damages to people, buildings, goods, and agriculture.*
The study of the water stable isotopes in atmospheric, hydrological, and agricultural research has received a significant boost in the last decades leading to an advance in the understanding of water transport processes, its mixing and phase changes. In the same way, the interest in the geochemical composition of aerosols, species and particles dissolved in waters, snow and ice is growing since it provides important information on sources and processes involved in the hydrologic cycle and climate change.
The research fellow position is part of the National Recovery and Resilience Plan (NRRP) project "Interconnected Nord-Est Innovation Ecosystem" (iNEST) funded from the European Union - NextGenerationEU. The goal of the project is to create an innovation ecosystem whose characterizing dimension is the synergy across the territory and the digital technology as the common theme to ultimately overcome its fragmentation. The research fellow will in particular contribute to Research Topic 2 (RT2 - Resilience of mountain production systems and supply chains) and 3 (RT3 - Decentralization of mountain structures and infrastructures) of Spoke 1 (Ecosystems for Mountain Innovation) of the iNEST project, by carrying out research on the following topics in mountain regions: a) analysis of aerosol and atmospheric depositions; b) the effects of atmospheric depositions on the snow surface and melting processes; c) analysis of the water stable isotopes of liquid and solid atmospheric precipitations; d) isotopic and elemental analyses of hydrological resources (rivers, wells, springs, runoff, soil water, etc.).
Furthermore, he/she will actively take part and/or contribute to other (current or future) activities of the Spoke 1 as well as the whole I-NEST ecosystem (e.g., technology transfer, networking, citizen engagement, and reporting).
The outcomes of the proposed research activities include the characterization of atmospheric precipitations (rain, snow, hailstones), shallow/deep aquifers and spring water for recharge area assessment, glacial ice, atmospheric vapors and aerosols, water in soil as well as biological matrices.
This research is fundamental for studying the terrestrial hydrological cycle, particularly important in an evolving climate system and in mountain regions.

The research may 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 Environmental and Land Sciences and

Technology (LM-75), Geological Sciences and Technology (LM-74), Geophysical Sciences (LM-79) or related disciplines, or an equivalent degree obtained abroad, and a curriculum suitable for carrying out research activities.

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.

The following are considered preferential qualifications:
Publications in scientific journals
Documented research activities within the scope of the research grant topic;

Duration of contract: twelve months (approximately starting: Dec. 27th, 2022.

Stipend: The research fellowship amounts to 19,367.00 Euros per year, including taxes and social charges.

Deadline for submission of applications: December 1st, 2022, 12.00 noon CET.

How to apply:

Candidates must submit:

1. The application form;
2. A motivation letter (max 1 page) along with their CV in European format, duly dated and signed, both documents are to be 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. Declaration of availability to hold the interview online (LINK), which must be emailed to: inest_pnrr@unive.it
7. All documents, qualifications and publications relevant for the selection procedure (please, see the notice at this link).

All the templates of the above mentioned documentation are available on the website (link).

How to submit your application

Applications must be submitted online, exclusively through the procedure that can be entered at the following link: - https://apps.unive.it/domandeconcorso-en/accesso/inest01122022analisi

After submitting the application, the candidate will receive a submission number and an e-mail acknowledging receipt of his/her application.
The candidate can, if necessary, access the procedures and update uploaded data and materials via the link provided by the e-mail. Updates are only accepted before the deadline of **December 1st, 2022, 12.00 noon CET**
Please note that the candidate can contact the University for any support needs until 24 hours prior to the deadline.
In case of a high number of applications and / or weight of the materials uploaded by the candidates the system might become slower, therefore it is suggested not to start the application 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 and publications: from 0 up to 60 points (42 points is the minimum score for admission to the interview)
For the interview: from 0 up to 40 points (28 point is the minimum score for passing the interview)

Selection procedure

Interviews will take place online on December 7th, 2022, at 2.00 pm CET.
The list of candidates admitted to the interview together with notice of any postponements, or changes in the time of the interview, will be announced on **December 5th**, 2022 by means of a notice that will be published at the following (link).

The interview may ascertain knowledge of the following topics:

The hydrologic cycle. Variability of the isotopic composition of precipitation. Knowledge of the analytical techniques in environmental geochemistry and isotope geochemistry; methodologies for the analysis of the water isotopic composition in different matrices. The aerosol system and the atmospheric pollution. Geochemical methodologies applied to the study of environmental processes in the atmosphere, hydrosphere, cryosphere. Knowledge of English.

Information and contacts

Candidates may find further details about the application process and the research project in the official call published at the following (link)
For further information please contact CESA, email: inest_pnrr@unive.it