



Position: Researcher in Disaster Risk Reduction – Floods

Ref No.: ERA-RDRDFLRSD-16

Category: Full-time or part-time employment

Location: ERATOSTHENES Centre of Excellence, Limassol Cyprus

ERATOSTHENES CENTRE OF EXCELLENCE

ONE (1) RESEARCHER POSITION IN DISASTER RISK REDUCTION – FLOODS -- USING EARTH OBSERVATION, SPACE & GEOSPATIAL TECHNOLOGIES AT THE RESILIENT SOCIETY DEPARTMENT

The ERATOSTHENES Centre of Excellence (ECoE) (www.eratosthenes.org.cy) of the Cyprus University of Technology (www.cut.ac.cy) invites applications for a position of Researcher at the Resilient Society Department of the ERATOSTHENES CoE. The position is open either on a full-time (100%) or part-time employment basis.

The position is open to everyone internationally in the framework of the EU-H2020 “EXCELSIOR” project (Excellence Research Centre for Earth Surveillance and Space-Based Monitoring of the Environment; <https://excelsior2020.eu/>; TEAMING Grant no. 857510). Through this project, the Cyprus University of Technology is establishing the ERATOSTHENES Centre of Excellence in Space Technology, Earth Observation and Geospatial Technology in the EMMENA (Eastern Mediterranean Middle East North Africa) region, in cooperation with the Department of Electronic Communications (DEC) from the Deputy Ministry of Research, Innovation and Digital Policy (Cyprus) and with EU advanced Partners the German Aerospace Centre (DLR, Germany), TROPOS (Germany) and the National Observatory of Athens (NOA-Greece).

The ERATOSTHENES Centre of Excellence is an autonomous Centre of Excellence with Cyprus University of Technology (CUT) as its sole stakeholder, aiming to become a viable, sustainable Centre of Excellence in earth observation, space technology and geospatial analysis. CUT has a 13-year experience in earth observations and geospatial analysis. Through the “EXCELSIOR” H2020 Teaming Project (2019-2026), the ERATOSTHENES CoE aspires to become an excellent Digital Innovation Hub for Earth Observation and Geospatial Information by offering education, responsible research, open innovation and application services capable of sustaining Cyprus’ development. The ERATOSTHENES CoE aspires to actively contribute to the European Research Area (ERA) priorities in Atmosphere and Climate, Resilient Societies and Big Earth Data Analytics, as well as to become the reference Earth Observation/Geoinformation Centre for research and innovation in the Eastern Mediterranean, Middle East and North Africa (EMMENA) region.

Description of the Position

The successful candidate will be assigned to the Department of Resilient Society within the Centre of Excellence, in which earth observation-based research will be conducted in the thematic domain of Disaster Risk Reduction: Floods. The selected Researcher will work under the Coordinator of the

Department of the Resilient Society. We are currently looking for a candidate in Disaster management with emphasis on flood hazard and flood risk analysis with skills in the field of Earth Observation data, Data Science tools and technologies (machine/deep learning) to develop downstream research, applied research and services for the purposes of flood risk management focused on prevention, protection and preparedness, to join our interdisciplinary research group tackling key global societal challenges.

In close collaboration with the Department's Coordinator, the Researcher will contribute to the strategic plan of the Centre.

A core activity of ERATOSTHENES CoE is to conduct high caliber, state-of-the-art research, both basic and applied. A central task is to acquire research funding for the Centre, to provide facilities to the researchers, and to support them to acquire funding for their research independently and via international and local collaborations. Collaborations with industrial partners will be particularly encouraged and facilitated.

Appropriate measures of success will be collaboratively determined based on the Centre's strategic growth plan and sustainability targets. These will be revised periodically by the Executive Committee and the Board of Directors.

We seek excellent, responsive professionals and researchers who are comfortable working in a demanding international setting with an ability to quickly absorb new technologies and synthesize inputs to generate new research ideas and develop added value services. The candidate should bring the appropriate knowledge in the relevant state of the art frameworks, at European and international level, such as Sendai framework for DRR, Agenda 2030, Copernicus EMS etc. in relation to fire hazard, flood risk and adaptation of flood risk management to climate change.

Duties and Responsibilities

The successful candidate is expected to assist the ECoE to develop predictive models that can be utilized by the local authorities as road maps for a future sustainable urban planning; to establish an integrated service for local authorities (e.g., preparedness, risk reduction); to contribute to the next Flood Risk Maps 2016-2021 and to contribute to the Cyprus Law on Floods. Moreover, the successful candidate is expected to integrate Earth Observation, hydraulics (e.g. HEC-RAS), hydrology (e.g. HEC-HMS), in-situ techniques (e.g. field spectroscopy, surveying techniques) and crowdsourcing for flood risk early warning system, as well as contribute to the development of integrated services to local and regional authorities for emergency response.

The successful candidate will be responsible for helping to shape and advance the ERATOSTHENES CoE's research and innovation agenda by:

1. Developing and implementing R&D strategies appropriate to the ERATOSTHENES CoE's mission to become a regional knowledge hub in the fields of the Department, capitalizing on earth observation, space technologies and geospatial technologies;
2. Actively participating and ultimately leading world-class research programs (bottom-up) in the field of Disaster Risk Reduction: Floods, using state-of-the-art infrastructure;
3. Aligning the Department's research agenda with ERA priorities, EU, ESA, and International Funding and Regulatory frameworks, e.g., Sustainable goals, open innovation and responsible research;
4. Securing financial and other resources from national, regional and international sources;

5. Establishing local, regional, and international research networks that can support the long-term research agenda and priorities of the Department;
6. Developing activities to support the scientific integration of Europe and to strengthen its international outreach;
7. Foreseeing the European Roadmap for Research Infrastructures (ESFRI) systematically;
8. Support mentoring, educating and providing research guidance to graduate students in the Cyprus University of Technology & ERATOSTHENES CoE PhD programmes;
9. Overseeing the career-development plans of the PhD-candidates of the Department;
10. Initiating and sustaining high-level collaborative Coordination and support actions (CSA) and Research and Innovation Actions (RIA) projects with leading partners that conduct research in areas related to his/her respective fields;
11. Communicating the results and implications of research conducted at ERATOSTHENES CoE, including the academic community, the public at large and policy and economic decision makers;
12. Exercising an active role in the development of the organization-wide strategy of ERATOSTHENES CoE, working towards meeting its mission goals, promote a vigorous research environment and foster inter-departmental effective collaboration;
13. Consulting with the Consortium Partners of the EXCELSIOR project, to formulate and regularly update the ERATOSTHENES CoE research strategy;
14. Engaging with government and industry bodies and institutions to raise the profile of ERATOSTHENES CoE as a research-intensive institution;
15. Ensuring that the KPIs and other performance targets as set by the Centre are delivered;
16. Any other relevant duties deemed necessary.

Qualifications:

1. PhD in a relevant subject; for example: Geology; Meteorology; Hydraulic Engineering; Hydrology; Civil Engineering; Remote Sensing; Geoinformatics; Surveying Engineering; Spatial Planning; Computer Science; Physics; Mathematics;
2. The candidate must fulfill the requirements of at least the Post-Doctoral Research Fellow. The position is opened from the level of the Post-Doctoral Research fellow up to Researcher (A & B) as described below;
3. Proven work experience in hydrological and hydraulic studies of more than two years;
4. Know-how and experience in Remote sensing / Earth Observation / satellite data processing;
5. Proven work experience in the use and/or management of geospatial databases data over two years;
6. Know-how and experience in flood behavior, methodologies for flood mapping, flood modelling (e.g. HEC-RAS etc.);
7. Knowledge of at least one scripting language (Python, R, MATLAB);
8. Experience in working for European Commission / European Space Agency projects will be considered an asset;
9. State-of-the-art scientific expertise in one or more of the following areas will be considered as an advantage:

- Exploiting multi-source data EO-based and in-situ/crowd data and development/assimilation of data/models to support cross-sector research and services/solution provision in the field of Disaster Risk Reduction: Floods;
- Risk Analysis/Risk Reduction/ Decision Making;
- Artificial Intelligence/Machine Learning techniques;
- Computer Science and Geoinformation Engineering;
- Big data management and distributed processing of big satellite scientific data;
- Development of automated application systems will be an asset but not mandatory (experience in relational and non-relational databases, application programming interfaces, Linux scripting, web frameworks);
- Working for European Commission / European Space Agency projects.

10. Excellent knowledge of the English language both verbal and in writing.

The qualifications required for this position are the same as those required for the post of Post-Doctoral Research Fellow, Researcher A and B at the Cyprus University of Technology, as follows:

Minimum Requirements for the posts of Post-Doctoral Research Fellow, Researcher A and B

The minimum requirement for the position of **Post-doctoral Research fellow** is a doctoral degree from a recognized university.

The minimum requirements for the position of **Special Scientist/ Researcher B** are the following:
To have a doctoral degree from a recognized university and demonstrate that they are able to teach and/or conduct research at a university level. Regarding employees who work in public institutions with cognitive subjects which will be included in the University and they possess a doctoral degree from a recognized university or will acquire such a degree, according to the provisions of Article 44 of the current legislation, it is presumed that until the date of the commencement of the University operations, service in institutions currently under incorporation require academic experience in teaching/research according to the provisions of the current section.

The minimum requirements for the position of **Special Scientist/ Researcher A**, are the following:
To be qualified for the Lecturer position and have at least three years of self-reliant academic level teaching experience or research after the acquisition of a doctoral degree from a recognized university or research centre and Original publications in valid international scientific journals or other publications of recognized value that forebode important contribution to science.

The appointment will be for a period of twenty-four (24) months with the prospect of renewal for twelve (12) months or up to 60 (sixty) months. The monthly gross salary for the (full-time) position will range from 3060.94€ to €5564.11, depending on qualifications. It is noted that there is provision for 13th salary (the cost of the 13th salary has been proportionally incorporated in the monthly remuneration as analysed above).

Interested candidates must submit their application comprising of all documents listed below via email to vacancies@eratosthenes.org.cy, conspicuously entering in the subject line: "Application for Researcher Position in Disaster Risk Reduction: Floods using Earth Observation, Space & Geospatial Technologies at the Resilient Society Department" no later than 14/05/2021 at 14.00 CYPRUS TIME, which is the deadline for the submission of the applications.

1. A letter in which the candidate should state the Department, the rank, the specialization in which he/she is interested in, as well as the date on which he/she can undertake responsibilities in case he/she is appointed, in English;
2. *Curriculum vitae* in English;
3. A short review of the research interests as well as a brief description of the future research plans, in English - up to 1500 words;
4. List of publications in English;
5. Reprints of their three most representative publications;
6. Copies of the candidate's degree certificates;
7. Contact details;
8. Names and contact details of at least three senior academic/research referees. Candidates should request confidential letters of reference in English from the above senior academic/research referees, which must be sent by the referees themselves directly to the ERATOSTHENES CoE via email to vacancies@eratosthenes.org.cy, by the deadline for the submission of the applications. The names and addresses of the referees should be submitted together with the application because the ERATOSTHENES CoE may also request additional confidential information. The ERATOSTHENES CoE may also request reference letters from independent referees of the choice of members of the Appointed Committee, if considered necessary.

For further information visit the ERATOSTHENES CoE's webpage at <http://www.eratosthenes.org.cy>

It is noted that:

- For non-EU applicants a work permit will be required;
- Applications will be treated in strict confidence. All information provided will comply with the General Data Protection Regulation (GDPR) of the European Union;
- The job requires that the Senior Researcher is or becomes a resident in the area of employment;
- The ERATOSTHENES CoE adopts an equal opportunity policy at recruitment and the subsequent career stages and encourages both genders to submit an application for all levels of Academic and Administrative Staff;
- The ERATOSTHENES CoE does not discriminate in any way on the basis of gender, religion or belief, ethnic, national or social origin, age, physical ability, marital status and sexual orientation.
- The title of the position may be modified upon approval of the HR regulations of the ERATOSTHENES CoE.

The employment of the successful candidate will start upon approval of the contract amendment for including ERATOSTHENES CoE as a new partner in the "EXCELSIOR" H2020 consortium.

CONSORTIUM



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