



Position: Researcher in Water Resources Management/ Hydrology / Hydraulic Engineering

Ref No.: ERA-RWRHERSECD-20

Category: Full-time or part-time employment

Location: ERATOSTHENES Centre of Excellence, Limassol Cyprus

ERATOSTHENES CENTRE OF EXCELLENCE

TWO (2) RESEARCHER POSITIONS IN WATER RESOURCES MANAGEMENT/ HYDROLOGY / HYDRAULIC ENGINEERING AT THE RESILIENT SOCIETY AND/OR ENVIRONMENT & CLIMATE DEPARTEMENTS

The ERATOSTHENES Centre of Excellence (ECoE) (www.eratosthenes.org.cy) of the Cyprus University of Technology (www.cut.ac.cy) invites applications for two positions of Researcher at the Resilient Society or Environment and Climate Departments 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 candidates will be assigned to the Resilient Society and/or the Environment & Climate Department, within the Centre of Excellence, in which earth observation-based research will be

conducted in the thematic domain of Water Resources Management/ Hydraulic Engineering/ Hydrogeology/ Water Quality/ Floods. The selected Researcher will work under the Coordinator of the respective Department.

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.

Duties and Responsibilities

The successful candidates will assist the ECoE's Water Resources Management/ Hydrology / Hydraulic Engineering cluster to develop an integrated Earth Observation-based system for assessing human exposure to various adverse environments and conditions affecting human health, such as weather patterns favouring vector-borne disease spread or air quality linked to respiratory diseases, at various scales. Moreover, the successful candidate is expected to assist the ECoE to develop services stemming from this system, including regional or local early warnings in the form of a Web-GIS, as well as personalized spatiotemporal activity paths for minimizing adverse exposure delivered via mobile phones.

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 fields of Water Resources Management/ Hydrology / Hydraulic Engineering 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. Following the European Roadmap for Research Infrastructures (ESFRI) systematically;
8. 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. Fulfilling any other relevant duties deemed necessary.

Qualifications:

1. PhD in a relevant subject; for example: Water Resources Management; Hydrology; Hydraulic Engineering; Hydrogeology; Water Quality; Floods Geography; Remote Sensing; Geoinformatics; Civil Engineering; Environmental Engineering; Surveying Engineering; Spatial Planning; Computer Science; Physics; Mathematics.
2. The candidates must fulfill the requirements of at least the Post-Doctoral Research Fellow. The positions are opened from the level of the Post-Doctoral Research fellow up to Researcher (A & B) as described below;
3. Proven work experience in the use and / or management of geospatial databases data over two years will be an advantage;
4. Know-how and experience in Remote sensing / Earth Observation / satellite data processing;
5. Knowledge of at least one scripting language (Python, R, MATLAB);
6. Proven work experience in relevant subject;
7. Experience in working for European Commission / European Space Agency projects will be considered an asset;
8. 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 fields of ECoE's Water Resources Management/ Hydrology / Hydraulic Engineering;
 - 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.

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

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

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 C** are the following: This position concerns researchers who have documented specialized knowledge, abilities and experience that is related to their post-graduate education, professional title or specialized service in the field of the project.

The minimum requirements for the position of **Special Scientist/ Researcher B** are the following: This position concerns researchers who have documented specialized knowledge, abilities and experience that is related to their Ph.D topic in the field of the project. The required qualifications for the Research B position are comparable with the position of Teaching and Research Staff at the position of Lecturer, at the Cyprus University of Technology, not including the teaching qualifications.

The minimum requirements for the position of **Special Scientist/ Researcher A**, are the following: This position concerns researchers who have documented specialized knowledge, abilities and experience that is related to their Ph.D topic in the field of the project, specialized pre-service and proven scientific work. The required qualifications for the Research A position are comparable with the position of Teaching and Research Staff at the position of Assistant Professor, at the Cyprus University of Technology, not including the teaching qualifications.

The appointment will be for a period of two years (24 months) with the prospect of renewal for another two years. The monthly gross salary for the (full-time) position will range from €36732.10 to €66770.90, 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 in Water Resources Management/ Hydrology / Hydraulic Engineering at the Resilient Society and/or Environment & Climate Departments" no later than 24/3/2022 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.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 857510



This project has received funding from the Government of the Republic of Cyprus through the Directorate General of the European's Programmes, Coordination and Development