KIOS RESEARCH AND INNOVATION CENTER OF EXCELLENCE
UNIVERSITY OF CYPRUS

ERC Synergy Grant Research Position

Title : Special Scietist for Research Research Associate or Post-Doctoral Researcher
No. of Positions : One (1) position
Location : University of Cyprus, Nicosia, Cyprus.

The KIOS Research and Innovation Center of Excellence (www.kios.ucy.ac.cy) at the University of Cyprus (https://www.ucy.ac.cy) announces one Special Scientist Research position, for full-time employment. The successful candidate will have the opportunity to conduct research with **Prof. Marios Polycarpou** towards the goals of the flagship **ERC Synergy Grant** entitled **Water-Futures: Designing the Next Generation of Urban Drinking Water Systems** (https://waterfutures.eu), funded by the European Research Council (ERC).

The required skills and expertise for the announced position include one or more of the following areas:

- Water distribution systems modelling and analysis
- Applied Mathematics, Optimization, Machine Learning
- Systems and Control

KIOS Research and Innovation Center of Excellence (https://www.kios.ucy.ac.cy/)

The KIOS Research and Innovation Center of Excellence is the largest research center at the University of Cyprus. Currently, the Center employs more than 180 people, who are supported by externally funded research and innovation projects. KIOS provides an inspiring environment for carrying out top-level research in the area of Information and Communication Technologies, with emphasis on the Monitoring, Control and Security of Critical Infrastructure Systems. The Center instigates interdisciplinary interaction and promotes collaboration between industry, academia and research organizations in high-tech areas of global importance. The KIOS CoE operates in a diverse environment as an equal opportunities' employer.

ERC Synergy Grant Water-Futures (https://waterfutures.eu)

The world population living in urban areas is expected to increase to 70% by 2050. Historically, as cities grew, new water infrastructures followed as needed. However, these developments had less to do with real planning than with reacting to crisis situations and urgent needs, due to the inability of urban water planners to consider long-term, deeply uncertain and ambiguous factors affecting urban development and water demand. These, coupled with increasing uncertain climate conditions, indicate the need for a more holistic and intelligent decision-making framework for managing water infrastructures in the cities of the future.

This project aims to develop a new theoretical framework for the allocation and development decisions on drinking water infrastructure systems, so that they are socially equitable, economically efficient and environmentally resilient, as advocated by the UN Agenda 2030,

Sustainable Development Goals. The framework will integrate real-time monitoring and control with long-term robustness and flexibility-based pathway methods, and incorporate economic, social, ethical and environmental considerations for sustainable transitioning of urban water systems under deep uncertainty with multiple possible futures. Specifically, we focus on the theory and application of monitoring and control in urban water distribution systems, while considering their evolution in time, unpredictable events such as contamination, device faults and failures, as well as the evolution of risk in the system and the presence of humans-in-the-loop.

Job details:

Short Description – Duties and Responsibilities:

The successful candidate will be responsible to conduct fundamental and/or applied research in the area of Information and Communication Technologies, with emphasis on the Monitoring, Control and Security of Smart Water Systems. The successful candidate is expected to publish his/her research results in high-impact international conferences and journals.

Profile of the ideal candidate:

The ideal candidate must be able to work independently and/or in a team in fundamental and/or applied research. The ideal candidate must be able to produce, publish, and present research results in high-quality conferences and journals, attend academic and/or other conferences and seminars for further personal and professional development, possibly assist in the preparation of research proposals, present periodically to KIOS personnel the progress of their research, and assist in the training, education, and dissemination activities of the KIOS CoE.

Qualifications and Experience:

- Doctorate degree or equivalent in Engineering, Computer Science, Applied Mathematics or other related field from an accredited institution.

Employment Terms:

The position is on a contract basis. Initially, a one-year contract will be offered, which is renewable based on performance. The gross monthly salary depends on the candidate's qualifications and expertise and will be between €2000 - €3400. From this amount, employee contributions to the Cyprus government funds will be deducted. The 13th salary bonus is incorporated in the monthly salary. The Employee has the right το maternity leave according to Maternity Protection Law 1997(N.100(I)/1997), and the existing amendment laws.

Application:

Interested candidates should submit the following items online through the link: https://applications.ucy.ac.cy/recruitment.

i. Cover letter that specifies their employment availability date
ii. Short description of their academic and research experiences (can be combined with the

cover letter) (1-page maximum)

iii. A detailed curriculum vitae in English
iv. Copies of transcripts of BSc/MSc/PhD degree(s)
v. Copy of English language certificate (GCSE, IELTS, ETS TOEFL, or other relevant certificate demonstrating proficiency in English).
vi. The names and contact information of at least two (2) academics, who can provide reference letters upon request.

The University of Cyprus shall collect and process the candidates' personal data according to the provisions of the General Regulation on Personal Data 2016/679 (EU).

The applications should be submitted as soon as possible, but not later than **Friday, 27th October 2023, at 5 pm.** The evaluation of the applications will begin immediately after receipt. At least the best three candidates that satisfy the required qualifications, will be interviewed by a 3-member Committee.

For more information, please contact Prof. Marios Polycarpou (mpolycar@ucy.ac.cy), or the KIOS Center of Excellence, by phone at +357 22893460 or via e-mail at kioshiring@ucy.ac.cy .

The University of Cyprus (UCY) is committed to promoting inclusivity, diversity, and equality, as well as the elimination of all forms of discrimination in order to provide a fair, safe, and pleasant environment for the entire university community, where students and staff members will feel supported both in their professional and personal development, within and beyond their multiple identities. To this end, UCY seeks to create the necessary conditions that will encourage and respect diversity, and ensure dignity both in the workplace and society at large. Moreover, UCY has adopted specific policies to promote equal opportunities, as well as respect and understanding of diversity, while it is committed to promoting and maintaining a working, teaching, and learning environment, free from any form of discrimination, whether direct or indirect.