

## CYPRUS UNIVERSITY OF TECHNOLOGY - ANNOUNCEMENT OF ACADEMIC POSITION

Applications are invited from candidates who possess the necessary qualifications in order to fill three (3) PhD fellows / ESR places at the newly established UNESCO and European Research Area Chairs on Digital Cultural Heritage within the Digital Heritage Research Laboratory (DHRLab) of the Cyprus University of Technology (CUT) in the research field of *Digital Heritage and Cultural Informatics*.

The selected scientists will work for a period of twenty-seven (27) months within the EU H2020 ERA Chair ‘Mnemosyne Project’, a unique EU-funded programme, beginning from September 2021.

They will help design, refine and deliver a structured and coherent three-phase research programme under the supervision of the ERA and UNESCO Chair holders, in order to achieve its objectives in the Holistic Documentation life cycle for digital heritage and to establish a programme of structural change and support at CUT which enables the outcomes of the research programme. Each of the three PhD fellows/students will work in a small team focusing primarily on the definition and resolution of set of key challenges in the digital documentation life-cycle concerning, for example, aspects of:

- Data Acquisition
- Data Processing
- Modelling
- Knowledge Management
- Preservation and
- Use and reuse

### **Position:**

The ERA Chair researchers will be recruited by the host organization of the Cyprus University of Technology in Limassol, Cyprus under a full employment contract with the possibility of extension (earliest day for the start of contract: beginning on September 2021). The researchers will work closely together with the Director of Digital Heritage Research Lab at CUT and the teams of the UNESCO and ERA Chair on Digital Cultural Heritage and be responsible for the planned Research /Innovation topics and areas.

### **The Applicant should:**

1. Have completed at least a four or five-year education cycle (e.g. Diploma in Engineering, Master’s Degree etc) from a recognized university in Geomatics, Computer- / Electrical Engineering Computer Science, Surveying Engineering and/or Social sciences / Humanities

with less than four (4) years of continuous full-time research experience in the below listed fields, with excellent programming skills and very good language and communication / implementation skills

2. Possess excellent knowledge of the English language at a proficiency level (spoken and written)

An outline of the research topics under consideration includes:

### **1st position**

#### **A. DCH Knowledge Management (Interpretation)**

- establishing meaningful narratives (Storytelling) for DCH objects which are meaningful to identified user groups for interpretation purposes;
- using **Crowdsourcing** and the Internet to provide documentation resources for experiencing, contributing and gaining understanding in Cultural Heritage scenarios;
- systems for **managing and re-using complex documentation and deriving knowledge** e.g. for Monuments and Sites;
- applications of **Artificial Intelligence/ Machine Learning** in DCH;
- applying Big-Data Analytics to DCH;
- the role and applications of **Linked Open-Data in enriching DCH information**, linking exhibited content to other relevant content to provide greater understanding;
- **curation of digital assets**;
- linking exhibited content to other relevant content to provide greater understanding of the viewed item.

### **2nd position**

#### **B. DCH Preservation**

- documentation for the preservation of European Heritage;
- the virtual or actual reconstruction of Destroyed or degraded sites and Artefacts including the digital restoration of important monuments destroyed during conflict protecting against or remedying Looting and Destruction;
- virtual ‘reunification’ of CH assets which have been scattered to different parts of Europe and the world.

### **3rd position**

### **C. DCH Use and Re-Use**

- cost reduction and simplification of digital technologies;
- Personalisation and interactivity of viewing experiences in DCH, including the use of social media;
- new types of User-Experiences (UX) with DCH that arise from the current ‘hardware and software revolution’ in the realms of VR/AR; interface selection (e.g. Augmented Reality, holograms) to allow seamless blending of on-site and on-line dimensions;
- visualisation techniques and their combination in different contexts, drawing on the state of the art in technology and standards e.g. for Interactive Video (IV); Immersive VR (IVR); Augmented Reality (AR); 3D Real-time Editors (Game-Engines), Ultra High and Giga-Pixel Panoramas; infinite zooming images; VR Wearables and Gesture Recognition Interfaces;
- inter-disciplinary collaborative research to establish paradigms in socio-economic areas of DCH impact e.g. Tourism, Education, Employment, Economic Growth;
- crowdsourcing, co-creation and Citizen Science;
- using innovative Social Platforms to exchange user experiences and support multidisciplinary approaches.

### **Benefits**

The yearly gross salary of the ESRs is based upon qualifications and experience. From this amount employer and employee contributions to the Cyprus government funds will be deducted. A 13th monthly salary is incorporated into the monthly gross salary. In addition, health and social insurance will be funded by the project

### **About the hosting institution:**

Cyprus University of Technology (CUT), was established by law in 2004, and enrolled its first students in 2007. With its orientation towards applied research, the University aspires to establish for itself a role in support of the state and society in their efforts to confront problems, which cover all areas of science and technology. CUT involvement in research can be recognized from the fact that within the last four years, projects with more than 30M Euro have been funded. CUT is an advanced University equipped with the most modern infrastructures and technological equipment which makes it possible to be the strongest on the island in research, with specialized units directed by distinguished professionals. The Digital Heritage Research Laboratory (DHRLab), established in 2013, is directed by Dr. Marinos Ioannides and already works in the digital and holistic documentation of Cultural Heritage Objects as well as contributing to

national and European policies for DCH. Moreover, the Lab is very active in 3D Reconstruction and HBIM with a special focus on semantics and symbolic representation.

**UNESCO Chair on Digital Heritage:** The main scope of this unique Chair is to extend the successful work of the DHRLab and address a full range of key aspects of novel research and innovative developments such as:

- the e-documentation and analysis of cultural heritage data for both tangible and intangible heritage;
- technical areas, including 2D and 3D virtual environments (tangible and intangible), archives and collections management systems, web and museum based interactive applications and language technologies;
- non-technical areas, including testing, economic and social impact evaluation in support of the development of the cultural heritage sector and its opportunities in tourism, entertainment and education.

Applicants are requested to submit the following:

1. Detailed EuroPass - Curriculum Vitae in English – (see also: <https://europass.cedefop.europa.eu/documents/curriculum-vitae>),
2. Motivation Letter,
3. Official certified transcripts of grades from all academic institutions of higher education listed in his/her application, certified copies of degrees, or/and certifications of fulfilment of the required obligations for entering a graduate PhD programme
4. Official certified copies of titles in English language
5. Names and full address (including valid email) of three referees who, upon request, can provide recommendation letters
6. Copies of any related research papers or other significant achievements/work by the applicant

**Applications must be sent ONLY via email at: [HRrecruits@cut.ac.cy](mailto:HRrecruits@cut.ac.cy) with the subject:**

**“Application for PhD Fellows / Early Stage Researchers (ESR fellows) Department of Electrical and Computer Engineering and Informatics” no later than Monday 14th of Jun 2021 12:00 (noon) which is the deadline for the submission of the applications.**

**For further information please contact Dr. Marinos Ioannides (Director of the UNESCO Chair on Digital Cultural Heritage) at email [marinos.ioannides@cut.ac.cy](mailto:marinos.ioannides@cut.ac.cy) and**

**telephone number +357-25-002020**