



## **CYPRUS UNIVERSITY OF TECHNOLOGY (CUT)**

### **DEPARTMENT OF ELECTRICAL and COMPUTER ENGINEERING and INFORMATICS**

#### **Full Time Marie Curie Early Stage Researcher (ESR) in the field of**

#### ***New techniques for data storage and archiving of massive and complex amounts of 2D/3D/4D Cultural assets.***

Applications are invited from candidates who possess the necessary qualifications in order to fill one (1) full time Marie Curie Early Stage Researcher (ESR) Fellow Position in the Digital Heritage Research Lab of the Cyprus University of Technology (CUT) in the research fields of 2D/3D/4D Digitalization (automated methodologies for 2D and 3D data acquisition: photogrammetry, Laser Scanning, depth camera sensors, SfM etc.), Computer Vision (Image processing, geometric invariant visual features, data-preprocessing/filtering, Pattern recognition), Computer Graphics (modeling), Metadata enrichment for tangible and intangible Cultural Heritage, Big Data and Cloud Computing applications. The selected Marie Curie ESR will work for 25 months within the ITN-Digital Cultural Heritage (ITN-DCH) Marie Curie ITN Programme which, is the only EU funded programme bringing together fourteen (14) leading European Institutions as full partners and nine (9) other as associated partners in a transnational network, aiming at implementing a multidisciplinary and intersectorial research and training programme between the academic and the industrial partners.

#### **Description**

Cultural Heritage (CH) is an integral element of Europe and vital for the creation of a common European identity and one of the greatest assets for steering Europe's social, economic development and job creation. However, the current research training activities in CH are fragmented and mostly designed to be of a single-discipline, failing to cover the whole lifecycle of Digital Cultural Heritage (DCH) research, which is by nature a multi-disciplinary and intersectorial research agenda. ITN-DCH brings for the first time worldwide top Universities, research centers, industries and CH stakeholders, end-users and standardized bodies together to collaborate in order to train the next generation of researchers in DCH. The project aims to analyze, design, research, develop and validate an innovative multi-disciplinary and intersectorial research training framework that covers the whole lifecycle of digital CH research for cost-effective preservation, documentation, protection and presentation of CH. ITN-DCH targets innovations that cover all aspects of CH ranging from tangible (books, newspapers, images, drawings, manuscripts, uniforms, maps, artifacts, archaeological sites, monuments) to intangible content (e.g., music, performing arts, folklore, theatrical performances) and their inter-relationships. The project also aims to boost the added value of CH assets by re-using them in real application environments (protection of CH, education, tourism industry, advertising, fashion, films, music, publishing, video games and TV) through research on (i) new personalized, interactive, mixed and augmented reality enabled e- services, (ii) new recommendations in data acquisition, (iii) new forms of representations (3D/4D) of both tangible /intangible assets and (iv) interoperable metadata forms that allow easy data exchange and archiving. One ESR will be recruited by the host organization of the Cyprus University of Technology.

## Position:

One ESR to be recruited by the host organization of the Cyprus University of Technology in Limassol, Cyprus for the duration of 25 months under full employment contract. The fellow will work on:

***Development of Innovative methodologies for 2D, 3D and 4D Data capturing, including new metadata interface for tangible cultural heritage (2D/3D/4D forms), New metadata schemas for tangible/intangible Cultural Heritage, Innovative and automated methodologies for data storage and archiving of massive and complex amounts of 3D/4D cultural assets. Moreover, the fellowship will focus on the following objectives:***

- *Study and analysis of massive and complex amounts of multimedia 3D/4D data*
- *Study and analysis of data storage and archiving in multimedia digital libraries*
- *Development of Innovative methodologies for harvesting of massive and complex multimedia data sets in digital libraries taking into account object's semantic signatures*
- *Development of Innovative methodologies for reuse of such complex structures from digital libraries.*

## **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 and/or Surveying Engineering with less than four (4) years of continuous full-time research experience in the above fields, with excellent programming skills and very good language and communication / implementation skills**
2. **At the time of recruitment, not have resided (or carried out his/her main activity e.g. work, studies, etc.) in Cyprus, for more than 12 months in the last 3 years immediately prior to the reference recruitment date.**
3. **Excellent knowledge of the English language at a proficiency level (spoken and written)**

## Career Stage

Early stage researcher or 0-4 years of experience (Post graduate) – According to the FP7-PEOPLE (Marie Curie Actions) Regulations. Eligibility rules for the Marie Curie fellows can be found at the FP7-PEOPLE 2013 Work programme:

[http://ec.europa.eu/research/mariecurieactions/documents/about-mca/actions/itn/marie-curie-actions-fellowships-people-wp-201301\\_en.pdf](http://ec.europa.eu/research/mariecurieactions/documents/about-mca/actions/itn/marie-curie-actions-fellowships-people-wp-201301_en.pdf)

## Research Profile

First Stage Researcher (R1)

## Benefits

- Competitive salary to cover living, mobility costs, social and health insurance (**according to the FP7-PEOPLE ITN2013 Marie Curie Actions Programme regulations**).
- In the context of a personal Career Development Plan, opportunities for international collaboration and exchanges to world-class academic and industrial partners will take place.
- Opportunity to register for a PhD at the CUT, Limassol, Cyprus.
- Training in a range of state-of-the-art scientific skills, intellectual property and project management skills and visiting GR language courses.
- Secondment placements within the network's partners (up to max. two months).

For more details on the fellow salary and other benefits/eligibility criteria please refer to the FP7-PEOPLE Marie Curie actions website at:

[http://ec.europa.eu/research/mariecurieactions/careers\\_en.htm](http://ec.europa.eu/research/mariecurieactions/careers_en.htm) and the FP7-PEOPLE ITN2013 work programme: [http://ec.europa.eu/research/mariecurieactions/documents/about-mca/actions/itn/marie-curie-actions-fellowships-people-wp-201301\\_en.pdf](http://ec.europa.eu/research/mariecurieactions/documents/about-mca/actions/itn/marie-curie-actions-fellowships-people-wp-201301_en.pdf)

**Applicants are requested to submit the following:**

1. Detailed Curriculum Vitae - 2 copies
2. Motivation Letter - 2 copies
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 fulfillment of the required obligations for entering a graduate PhD programme - 2 copies
4. Official certified copies of titles in English language - 2 copies
5. Names of three referees who, upon request, can provide recommendation letters - 2 copies
6. Copies of any related research papers or other significant work by the applicant - 2 copies

Applications must be submitted in a closed envelop marked as "*Application for FP7-PEOPLE Marie Curie ITN-DCH Research Fellow Position (ESR)*" – Department of Electrical and Computer Engineering and Informatics at the premises of the Cyprus University of Technology, Human Resource Department, Limassol Savings Co-operative Bank Building, 4th Floor, Arch. Kyprianos 31, 3036 Limassol via express courier or must be sent via registered post (P.O. Box 50329, CY-3603 Limassol) with a clearly visible post office stamp of a date not later than 15th October 2014, 24:00 which is the deadline for the submission of the applications.

Applicants are also requested to send their applications electronically to these email addresses [marinos.ioannides@cut.ac.cy](mailto:marinos.ioannides@cut.ac.cy) before the deadline of 15th of October 2014, 24:00, however, please note that the electronic submission alone will not be considered as a formal application unless the printed application is received as requested in the previous paragraph.

For further information please contact Dr. Marinos Ioannides at email [marinos.ioannides@cut.ac.cy](mailto:marinos.ioannides@cut.ac.cy) and telephone number +357-25-002020 or visit the website [www.itn-dch.eu](http://www.itn-dch.eu) and [www.itn-dch.org](http://www.itn-dch.org).

**Research Fields**

Computer Science, Geomatics, Photogrammetry, Computer Vision, Computer Graphics, Big Data

**Start of the fellowship: 15th of January 2015**