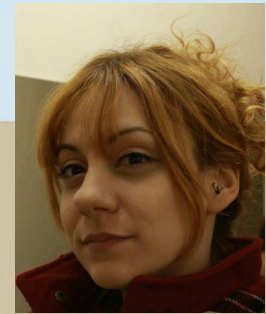### ESR 5

Name: Gina Stavropoulou

Your credentials: Surveying Engineer/Photogrammetry/Msc in GIS & Archaeology

Start day: 13/10/2014   **End day:** 12/10/2016

Involved in WP: WP3   Hosting Institution: KUL

My Research Training Activity in ITN-DCH

A. Summary of the Career Development Plan:

Long Term Goals:

- PhD Degree in Computer Vision and its implementation to Cultural Heritage
- Develope a high quality and competitive professional profile
- Acquire a professional level of research skills and be able to carry the research to the public clearly and with scientific proof.
- Publications in Computer Vision Journals & participation in peer-reviewed international conferences or other Digital Cultural Heritage related conferences.

Short Term Goals:

- Acquire teaching skills by participating in the educational team as a teaching assistant.
- Participation in the upcoming 10th Anniversary of the European Researchers' Night (NIGHT) event in Brussels on the 25th of September 2015.
- Improve technical skills on data collection by participating in the digitization process of cultural heritage objects using the Minidome by KUL.
- Improve presentation skills by participating in SEAHA conference and other project related events.
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B. Core Research Training Activity:

The central goal of my research is to explore how computer vision methods of 2D/3D shape retrieval, reconstruction and completion can be enriched and implemented to assist cultural heritage applications. At the moment and as part of the Working Package 3, I have been working on feature extraction algorithms and more specifically their implementation on 2D data collected from the byzantine church of Asinou in Cyprus, one of the project's case studies. The long-term plan is to automatically find similar parts in different frescoes, and to use such similarities to fill out missing parts, due to cracks and other deteriorations. Additionally, I have also been working on a 3D dataset of small objects of archeological interest, exploring different 3D feature extraction algorithms with ultimate purpose to automatically match and retrieve similar objects.

C. **Secondments:** (as example see below)

I have not participated in any secondments yet, but the following visits have been arranged for the immediate future. For 2016 more secondements will be arranged to other partner institutes.

1. CNRS (from 03/05/2015 to 29/05/2015)
2. KAAK (from 16/06/2015 to 03/07/2015)

D. **Dissemination & Outreach:**

- Participation in the Researcher's Night in Brussels (25/09/2015).
- Possible participation to SEAHA conference (14-15/07/2015) –abstract submitted.

E. **Added Value to my Future Research Career:**

Apart from the skills that I will hopefully acquire as a PhD student (see section A), I believe that my participation in the ITN-DCH project has more long-term benefits on my future career. A big advantage is the collaboration with the rest of the fellows and the multi-disciplinary nature of the project. Through the continuous collaboration between us, not only we improve our communication and language skills but, more importantly, we learn how to bridge the gap between any cultural, linguistic or scientific background differences, aiming towards a common goal.

Another important aspect regarding my future career is that through the project we are being introduced to a many different institutes, from both the academia and the industry and we are encouraged to form a very useful network and reflect on the all the different professional directions that we could follow in the future. Adding to this, the secondments to other partner institutes give to the fellows a more global idea of the research in the field of digital cultural heritage and arm them with very useful tools for their future development.