ESR 14

Name: Nikoletta Skordaki

Your credentials: MSc Chemical Engineer

Start day: 8/6/2014 **End day:** 8/7/2016

Involved in WP: WP1, WP2, WP4, WP5, WP7 Hosting Institution: UL FGG

My Research Training Activity in ITN-DCH

A. Summary of the Career Development Plan:

The title of the fellow's participation in the project is '*Environmental factors in digital cultural heritage*'. The objectives of this position are environmental issues and the examination of long-term environmental factors their impact to the built Cultural Heritage (CH) and the examination of the decay processes of both building materials and structure.

Fellow's goals are to develop and enhance her educational and academic background through the ITN – DCH project (research in the host Institute, secondments, workshops etc.) and gain more knowledge and research experience regarding the comprehension of how the environment affects the built CH and the decay processes and therefore to contribute to decision making for the most suitable and compatible conservation and/or restoration of Cultural Heritage assets. In additional, through the project the fellow intends to enhance her IT skills, communication skills, team working and to promote the significance of the interdisciplinary in the field of documentation and protection of CH.

B. Core Research Training Activity:

The fellow is mainly focused on the study of the long-term environmental factors that can influence the built CH. Long-term environmental factors are divided into the following 8 categories (EU-CHIC project):
A1. Bio-attack
A2. Climate conditions fluctuations
A3. Aeolic impact
A4: Water (atmospheric, ground)
A5: Solar radiation
A6: Particle matter and aerosols
A7: Long term loading
A8: Geological conditions (including local particularities

Moreover the fellow was trained in the use of the DIGITAL MICROSCOPE KH – 3000. 3D digital microscopy is a non destructive technique implemented in the surface of cultural assets for the examination of the surface's current condition and for the determination and measurement of various types of decays, such as the presence of salt crystals, cracks, biodegradation, peeling, efflorescence etc. With the application of 3D digital microscope we can take high-resolution pictures and also the 3D profile of the surface under examination.

In parallel to her research activity the fellow contributed to the Deliverables 1.1 and 1.2 of WP1 (according to ANNEX I) and to Deliverable 2.1 of WP2 (voluntarily). The titles of the Deliverables are given below:

D 1.1. INITIAL CULTURAL HERITAGE REQUIREMENTS AND SCENARIO DESCRIPTION FROM END-USERS' POINT TO VIEW (*contribution: state of the art regarding data models and legislation, writing an end-user scenario)*

D 1.2. SURVEY OF CURRENT SPECIFICATIONS USED IN CH REPOSITORIES (*contribution: repositories*)

D2.1. DESIGN OF THE DIGITALIZATION ARCHITECTURE (*contribution: in situ non destructive techniques*)

C. **Secondments:**

The fellow's planned secondments for 2015 are given below (first secondment will start in May 2015):

1. CNRS: for 24 days (from 2.5.2015 to 27.5.2015)
2. KAAK: for 23 days (from 16.6.2015 to 8.7.2015)
3. UMU: for one month (from 18.7.2015 to 15.8.215)
4. NTUA: for one month (from 28.9.2015 to 28.10.2015)

D. **Dissemination & Outreach:**

Apart from the attendance to the activities of ITN – DCH project (1st Summer School in Stuttgart, 2nd Workshop in Carnuntum) and the attendance to the 5th International Euro-Mediterranean Conference (EuroMed 2014), the fellow participated in the HISTCAPE final Conference, which was held in Podsreda Castle, Slovenia (15 -18.9.2014). The fellow contributed to the organization of the meeting (organization of conference material, organization of the participants' transfer to and from the hotel, registration of the participants to the conference). Moreover the fellow was the co-editor of the Proceedings (*Barbara Vodopivec, Nikoletta Skordaki, Roko Žarnić, HISTCAPE and beyond, Proceedings of the final conference Legacy of the HISTCAPE project, Podsreda Castle, Slovenia, 16 September 2014*) and she made a presentation with the title '*Initial Training Network for Digital Cultural Heritage: Projecting the past to the future – presentation of the Project (Nikoletta Skordaki, Anais Guillem, Marinos Ioannides*'. The scope of the presentation was a short description of ITN-DCH project as well as a description of the project's workpackages and network.

As the outcome of her current research the fellow submitted a paper and an abstract to the following conference:

- <u>25th International CIPA Symposium, TAIPEI (31.8 – 5.9.2015)</u>
  Participation in the ITN – DCH workshop
  Submission of a paper with the title '*A CONTRIBUTION TO THE BUILT HERITAGE ENVIRONMENTAL IMPACT ASSESSMENT – Roko Zarnic, Vlatka Rajcic, Nikoletta Skordaki*' (waiting for reviewing)

- <u>1st International Conference on Science and Engineering in Arts, Heritage and Archaeology (SEAHA), University College London, 14-15 July 2015</u>
  Submission of an abstract with the title '*LONG-TERM ENVIRONMENTAL IMPACT IN ASINOU CHURCH, CYPRUS– Nikoletta Skordaki, Roko Zarnic, Marinos Ioannides*' (waiting for reviewing)

Moreover the fellow is focused on the creation and editing of an eBook about Asinou Church, Cyprus (free application by applestore). The eBook is entitled '*ITN-DCH FIRST CASE STUDY: ASINOU CHURCH –Editors: Nikoletta*

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 608013.

Skordaki, Roko Zarnic' and it is an effort to collect and present all the data of our research concerning ITN-DCH first case study in order to promote an integrated and interdisciplinary work for Asinou to the public.

E. <u>Added Value</u> to my Future Research Career: …

The participation in the ITN-DCH project will help the fellow for her future research work. The fellow improves her skills through her training to different Institutions and academic bodies (host institution and secondments), which they have a different way of thinking and approaching of the CH. The fellow is introduced to new techniques (3D Optical Microscope) as well as to new technologies and therefore she improves her computing skills, a tool which will be very helpful for the future.

Moreover her collaboration with the UL – FGG Personnel, the ITN – DCH co-fellows and partners involves in the improvement of her communication skills and her knowledge to English language, whereas the study of the Slovenian language helps her to better understanding the culture of the host country and also to facilitate the further study to the other Slavic languages.

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