GERMAN VIRTUAL HERITAGE SCHOOL

Virtual and Augmented Reality for the Digital Cultural Heritage

v-must

CALL FOR GERMAN DIGITAL HERITAGE SCHOOL
VIRTUAL AND AUGMENTED REALITY FOR THE DIGITAL HERITAGE

Call identifier: 01/2012
Date of publication: 16/05/2012
Deadline: 23/06/2012
Object: Call for participation to the German Virtual Heritage School - Year 2012
Number of selected applicants: max 30

Eligibility conditions: Bachelor/Master's Degree
How to apply: fill in the application form on line (http://www.v-must.net/schools/german-virtual-heritage-school/registration)
Evaluation procedure: see section below
web: http://www.v-must.net/schools/german-virtual-heritage-school/
facebook: http://www.facebook.com/events/359430594121222/
mail: {holger.graf|marion.christ}@igd.fraunhofer.de

1. About V-MUST training program

The V-MUST training program consists of **3 modules**, aims at creating qualified professionals, with mixed expertise (in CH, ICT and Natural Sciences). It is addressed to post-graduate and Ph.D. students, to young researchers and professionals who are already employed in a specific sector. It is designed with a 3-step multidisciplinary training approach: **module 1** (1 introductory International School), **module 2** (5 hands-on practical National Schools) and **module 3** (technical details training tutorials).

In **Module 2** V-must organizes 5 regional schools every year. It is organized at national level, once a year, hosted by: UK/King's College; Italy/CNR-CINECA; Sweden/University of Lund; **Germany/Fraunhofer Institut für Graphische Datenverarbeitung**; Cyprus/ Cyprus Institute. Their goal is to introduce participants to advanced digital technologies and to test this knowledge through lab practice (hands-on), focusing the exercises on a specific case-study in order to rapidly acquire a targeted knowledge. The number

of attendees and costs for each school is dependent on each individual institution.

2. About the GERMAN VIRTUAL HERITAGE SCHOOL

This is the first edition of the german national summer school conducted by the Fraunhofer IGD. The school introduces participants to the new field on **web deployment of VR** and **web based AR Applications** ("**VR/AR Apps**") as well as related topics on **applied CG technology** in the area of **virtual** and **augmented digital heritage**, **3D reconstruction**, technological tools dedicated to processing and integration into web front ends, ported to **mobile smartphones** and registered with the physical world. The students will learn basic concepts on **3D documentation**, **capturing**, **tracking** and **reconstruction technologies** required for **online/offline** and **mobile virtual museums**. The topics to be addressed are:

- ▪ **Virtual Reality on the web** (VR Apps) – HTML 5 embedding of interactive 3D graphics, X3DOM, 3D event handling and routing, interaction and advanced visualisation techniques within web browsers, online virtual museums (www.x3dom.org; http://examples.x3dom.org/IG/syn/index-inline.html)

- ▪ **Augmented Reality** (AR Apps) – capturing, registration, analysis-by-synthesis techniques, extensions to browser front-ends, remote tracking and advanced feature based registration methods (e.g. http://www.youtube.com/watch?v=LSWxrDrvDy8)

- ▪ **3D Documentation** – basic technologies on digitisation, pre- and postprocessing as well as 3D annotation and metadata handling for 3D digital assets (e.g. http://www.3dcoform.eu/x3domCatalogue//)

Participants will gain practical experiences on developing compelling and sophisticated 3D interactive applications for the web as well as mobile platforms. Minimal requirements are basic experiences with modern Web Design technologies i.e. HTML 5, Javascript, CSS3). The programme consists of **8 theoretical blocks** on the diverse technologies as well as **6 practical afternoon blocks** in which students will get "**hands-on**" experiences on VR/AR web app development.

The approach aims to leverage 3 key factors: 1) intensive lectures from 3D documentation, acquisition as well as presentation in the field of VR/AR; 2) intensive exchange for students and teachers living in the same environment; 3) multidisciplinary approach.

Professionals from CH institutions (cultural foundations, museums), **young researchers** and **students** are invited to submit their application to attend the school. A limited number of scholarships is available and will be allocated through a competitive evaluation by the scientific committee. Applications and registrations should be done through:

http://v-must.net/schools/german-virtual-heritage-school/

3. Objective of the Calls

The aim of this call is to invite early research carrier professionals/students to submit a proposal for the German Virtual Heritage School. One call will be launched each year from 2012 to 2015.

3.1 Timetable for 2012 call

15 May 2012	Open Call 1 – Registration for Applications
25 June 2012	Close of Call and Deadline for Application (Formal required documents are sent by applicants)
25 June 2012	Begin of Evaluation and Selection of Applicants
11 July 2012	Notification of Acceptance
25 July 2012	Registration of selected applicants & Payment of Fees
3rd – 7th September 2012	German Virtual Heritage School

4. Guidelines

To participate in the call, certain criteria for eligibility and evaluation are defined.

4.1   Eligibility criteria

These criteria have to be met in order to be eligible for participation.
1. Submit a completely filled in on-line application form (accessible at: http://www.v-must.net/schools/german-virtual-heritage-school/registration)
2. Submit all required documentation within the timeframe indicated.
3. Have at least a Bachelor's Degree.

4.2   Evaluation Criteria *(see table)*

1. Undergrad/Grad Career (vote of the exams and of the bachelor or master's degree)
2. Previous experience in the field of Computer Graphics, 3D Modelling
3. Knowledge of Web Design technologies (HTML5, CSS3, Javascript)

4.3   Additional Evaluation Criteria *(see table)*

4. Academic Career (PhD, Specialization School)
5. Training courses in the field of the Virtual Cultural Heritage
6. Have carried out research projects on the field of Virtual Heritage
7. Work experience in the field of Virtual Heritage
8. Personal statement

5. Selection process

The selection process contains two steps:
1. **Formality** and **Eligibility Check**
   The Scientific Committee will be responsible for the formality and eligibility check. Applications which do not comply with the eligibility criteria will not be considered within the following evaluation process.
   - complete and correct forms and documents
   - eligibility of participants (within the eligibility criteria)

2. **Evaluation by the Scientific Committee**
   The evaluation will be done by the Scientific Committee. Members of the Scientific Committee will be provided with guidance and will use an evaluation model based on given criteria and a specified scoring matrix (see below). Each member will give a score for each evaluation criterion and a total score for each application. The Scientific Secretary will compile the evaluation results and provide a ranking list of the applications, based on the total score achieved in the evaluation. According to the ranking the first ten applications are eligible for scholarships.

Scoring Matrix

Evaluation Criteria	Score
Undergraduate Career (vote of the exams and of the bachelor or master's degree)	5.00%
Academic Career (PhD, Specialization School)	5.00%
Publications	5.00%
Knowledge of Web Design technologies	20.00%
Training course in the field of the Virtual Cultural Heritage	10.00%
Research projects on the field of Virtual Heritage	10.00%
Work experience in the field of Virtual Heritage	10.00%
Personal statement	35.00%

After the selection process the applicants will be informed about the outcome by e-mail.
In order to finalize the inscription each selected student have to:

3. **Transmit a confirmation of participation**

4. **Send the proof of payment**

6. Submission of Applications

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The application form can be found here: http://www.v-must.net/schools/german-virtual-heritage-school/registration . All formal applications have to be sent to {holger.graf|marion.christ}@igd.fraunhofer.de with subject: 'German National Summer School 2012'.