DIVA: Data Intensive Visualization and Analysis	Zsuzsa Dobrányi Holografika Kft Baross u. 3. Budapest 1192 Hungary	tel +36 1 2824921 fax +36 1 3581208 email zs.dobranyi@holografika.com

Assistant Researcher

in Computer Science (3D Displays – Light-field Visualization)

Job Summary

Open position for a research assistant / PhD student in the area of content generation / visualization / rendering on wide Field Of View 3D light-field displays at Holografika. This position is for an Early Stage Researcher (ESR) in an EU-FP7 Marie Curie Actions Initial Training Network called DIVA: Data Intensive Visualization and Analysis.

Description

The DIVA project is an international EU-FP7 Marie Curie Initial Training Network (ITN) with a focus on structured and collaborative research and teaching activities in Data Intensive Visualization and Analysis methodologies in data-driven science and technology application domains. DIVA involves three academic institutions (University of Zürich, University of Rostock and Chalmers Technical University), one research lab (CRS4) and two industrial partners (Diginext and Holografika).

Project

This open position is for a research assistantship in the DIVA project, specifically in computer science with a focus on 3D light-field displays and related visualization / content generation / rendering methods.

With continuing advances in 3D display technologies, such displays are able to show an ever increasing amount of image information to viewers, resulting in more freedom given to the viewers. The raw amount of pixels or light-rays emitted by such displays calls for the exploitation of parallel techniques and GPU-supported computation when it comes to real-time visualization of synthetic or live 3D content. The emphasis of the open position in this context is on understanding the process of display design, and accordingly - in cooperation with other partners in the project - view generation methods, real-time and distributed rendering, 3D video segmentation and compression techniques. Currently targeted application domains include the aerospace industry, advanced display systems, bio-medical imaging, geo-visualization, urban planning, architectural modeling, material science, molecular visualization and more.

On the part of the applicant, this requires interest not only in 3D graphics related algorithms and data structures but also in the internals of 3D light-field displays, image processing and video compression domains, and collaboration with domain scientists and other institutions. Furthermore, a strong interest and good skills in learning new programming frameworks, 3rd-party code and applied mathematics is necessary, as the targeted research project also builds on other and previously developed techniques.

The activities of the position not only include research for young researchers, but also support in software development, cluster programming as well as administrative tasks. The main goal is to conduct excellent research generating results which are published and presented in top international conferences, and optionally to work towards achieving a PhD degree.

Company

This advertised position is at Holografika, which is an internationally recognized 3D display research and development company with closely working groups of optical, electrical, mechanical and software engineers. Holografika is one of the few high-tech SMEs in Hungary which have been granted with numerous research awards in the past years, acknowledging the excellence of their work done in the field of 3D display design, application specific rendering and acceleration techniques, and research related to the future of 3DTV. In 2005 Holografika Ltd. was a recipient of Red Herring 100 Europe award. In 2006 The World Economic Forum has announced Holografika as a Technology Pioneer. In 2008, Holografika won the „Best Exhibit" Silver Prize at ICT Lyon Exhibition.

DIVA: Data Intensive Visualization and Analysis

Workplace

Holografika is located in the historic and vibrant city of Budapest, in the garden city suburb Wekerle. The company's offices are conveniently located a few minutes from the underground station, making the city center reachable in 15 minutes. Also the Budapest international airport (BUD) is reachable under 30 minutes.

The DIVA project involves frequent interactions, internships, workshops and summer schools with the other international network partners. Hence the workplace incorporates short stays at other research labs and companies in other European countries and cities (i.e. Switzerland, Italy).

Benefits

ESR fellows and PhD students are remunerated according to EU-FP7 regulations for Marie Curie ITNs as well as according to local host regulations. ESR appointments will be made with respects to local host company guidelines. Same applies for other benefits and vacation days.

Comment/web site for additional job details

Applicants are obliged to engage in the DIVA training and research activities at the host institution.

For application and further information contact: Zsuzsa Dobrányi, zs.dobranyi@holografika.com

Requirements

A MSc degree in computer science or closely related area from a research university is required to enter the program.

The prospective candidates are supposed to have an excellent background in computer science and systems as well as strong mathematical skills and practical experience with computer graphics. Exposure to parallel programming and distributed systems is also welcome. Strong interests in 3D displays and collaboration with domain scientists is of further importance as well.

Applications must include a detailed CV/resume, information of university level educational background and practical work experience in computer science or a closely related field, a statement of motivation and clear exposition of prior 3D graphics experience. Certified copies of transcripts and reference letters should be enclosed.

Dates and More

- Entrance is subject to the successful evaluation of candidate(s)
- Expected start date: 1st January 2012
- Duration is expected to be about 3 years

Contact

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