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Open Position

Experienced Researcher

in Computer Science / Software Engineering (3D Light-Field Displays)

Summary

Open position for an experienced researcher in the area of software design and implementation for 3D light-field displays at Holografika, for two years. This position is for an Experienced Researcher (ER) in an EU-FP7 Marie Curie Action called PROLIGHT: Modern Signal Processing Methods for Ultra-Realistic Light-Field Displays.

Description

The PROLIGHT project is an international EU-FP7 Marie Curie Industry-Academia Partnerships and Pathways (IAPP) with a focus on advancing the research and development in the area of visual media through developing modern signal processing methods for ultra-realistic light field displays. PROLIGHT involves one academic institution (Tampere University of Technology), and one industrial partner (Holografika).

Project

This open position is for an experienced researcher in the PROLIGHT project for two years, specifically in software design for electro-optical 3D light-field displays and preferably expert in real-time 3D imaging systems, image processing and/or computer graphics.

With continuing advances in 3D display technologies, the project partners adopt the notation of light field as the most complex phenomena carrying information about visual scenes and whose reproduction brings the desired higher realism. The research programme addresses the problems of capture, analysis, modelling, compression and rendering of light fields of real-world scenes, so to support the further development of the light-field display technologies and to ensure an enhanced user experience. The approach makes case of state-of-the-art displays being developed by Holografika and while tailoring capture and compression methods for them, aims also at advancing the theory of light-field modelling and its practical application on next-generation 3D displays.

The emphasis of the open position in this context is on developing new techniques for enhancing 3D light-field displays, working closely with the existing hardware and software development team. Strong experience with C++, scientific publications and international project work, confidence with oral and written English and willingness to travel are a must. Experience with DirectX and/or OpenGL, Linux, Qt, video compression technologies and codecs, Python, and networking are plus.

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 displays and software engineering, but also in the internals of 3D displays, image processing, and collaboration with domain scientists and other institutions. Furthermore, a strong interest and good skills in learning existing designs, and working with team members is necessary, as the targeted research also builds on other and previously developed techniques.

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 and an EUREKA Award in 2012.

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.

Benefits

ERs are remunerated according to EU-FP7 regulations for Marie Curie Actions as well as according to local host regulations. ER appointments will be made with respects to local host company guidelines. Same applies for other benefits and vacation days.

Requirements

Experienced Researchers must, at the time of recruitment, (i) be in possession of a doctoral degree, independently of the time taken to acquire it or (ii) have at least four years of full-time equivalent research experience, including the period of research training, after obtaining the degree which formally allowed them to embark on a doctorate in the country in which the degree was obtained or in the country of the host institution to which they are seconded or recruited (irrespective of whether a doctorate was envisaged or not).

Mobility rule: at the time of recruitment by the host organisation, researchers must not have resided or carried out their main activity (work, studies, etc) in the country of their host organisation (Hungary) for more than 12 months in the 3 years immediately prior to the reference date.

Applications must include a detailed CV/resume, information of university level educational background and practical work experience, a statement of motivation and clear exposition of prior experience. Certified copies of transcripts and reference letters should be enclosed.

- Strong C++ experience (including templates)
- University degree
- Experience in scientific publications and international project work
- Confidence with oral and written English (to actively participate in international meetings, exhibitions)
- Orderliness and ability to work together in a small, sharp team
- Willingness to travel

Advantages

- Management experience in EU FP7 and other international project work
- Excellent written and verbal communication skills in English, knowledge of Hungarian is an advantage
- Experience with DirectX/OpenGL based 3D graphics programming (including shaders)
- Experience with Linux
- Knowledge of video compression / streaming technologies, codecs
- GUI development with Qt
- Scripting with Python
- Networking experience: TCP, UDP, Multicast, High Speed Interconnect technologies

Dates and More

- Entrance is subject to the successful evaluation of candidate(s)
- Expected start date: 1st June 2012
- Duration is expected to be 2 years

Contact

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