Open Position in QoE-Net Innovative Training Network

We are looking for an encouraged and self-motivated early stage researcher (ESR), who will join our team contributing to the success of future 3D displays. The candidate must hold a Master degree in a relevant field, and have no more than 4 years of full-time work / research experience. The application procedure will be carried out in compliance with the Code of Conduct for Recruitment of the European Charter and Code for Researchers.

ITN applicants have to ensure compliance with the Marie Sklodowska-Curie mobility rule: At the time of recruitment, the applicant must not have lived for more than 12 out of the past 36 months in the country of the institution for which he or she applies. When applying for a position at Holografika in Hungary, the applicant must not have lived in Hungary for more than one year in the past three years. Short stays, such as holidays, are not taken into account. In the application form, please make sure that you select a position for which you are eligible.

Application materials: the application should (as indicated by the application portal) contain the following documents, compiled in the following order into to a single PDF file:

- Cover letter
- Curriculum Vitae
- The Master (or equivalent) degree applied with, including transcripts of records, where applicable.
- List of publications, if applicable
- Recommendation letter(s) from previous supervisors or employers
- Proof of English proficiency
- Work experience certificates, if applicable
- Manuscripts of the listed publications, if listed earlier

The ESR will be one of twelve ESRs of the QOE-NET Innovative Training Network project started 1st January, 2015 and lasting till 31st December 2018.

The summary of QOE-NET and the specific description for the open positions for ESR12 is listed below.

In case of open questions, please contact:

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Project description of QoE-Net

The realization of the paradigm of Internet anywhere, anytime and any-device and the diffusion of end-user multimedia devices with powerful and user-friendly capabilities such as smartphones, tablets PCs, mobile gaming terminals and ebooks, are leading to the proliferation of a significant amount of emerging multimedia services: immersive environments, mobile online gaming, 3D virtual world, book/newspaper consumption, social networking, IPTV applications, just to cite a few. Some of these services have already reached a major market success, such as the case of newspaper/magazine mobile readers and smartphone multimedia apps. Their success has been achieved especially because a user-centered approach has been followed to design the whole process of content production, service activation, content consumption, service management and updating. From these considerations it arises that management of QOE-NET is undoubtedly a crucial concept in the deployment of future successful services and it is straightforward to be understood but complex to be implemented in real systems, since there are many variables which will affect QOE-NET, and these variables are changeable and span multidisciplinary areas including multimedia signal processing, communications, computer networking, psychology and sociology. This Network focuses on the analysis, design, optimization and management of the QOE-NET in advanced multimedia services, creating a fully-integrated and multi-disciplinary network of 12 ESRs working in and seconded by 7 academic institutions, 3 private companies and 1 standardization institute distributed in 6 European countries and in Korea. This Network will offer to a group of newly recruited Fellows in a cross-sectoral environment to shape their long-term research view and get fundamental methodological tools on various research fields, namely: multimedia networking, signal processing, communications, business, psychology and sociology.

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. In 2014, Holografika won the "One to Watch" award at the GPU Technology Conference.

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 QOE-NET 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, Germany).

ESR12 – QoE-Net project

Host Institution: Holografika, Budapest, Hungary
Supervisors: Tibor Balogh, Attila Barsi

Holografika invites applications for the position of an Early Stage Researcher (ESR) within QOE-NET Innovative Training Network (ITN), funded by the MARIE SKŁODOWSKA-CURIE ACTIONS of the Horizon2020 Framework Programme of the European Commission.

The recruited ESR will be offered the possibility to conduct PhD studies at a local university in Budapest, Hungary, visit other network partners for secondments, and attend the training events of the network. The position is fully funded (100% employment) according to the MARIE SKŁODOWSKA-CURIE ACTIONS programme, which offers highly competitive and attractive salary and working conditions.

Description

The objective is the definition and validation models for 3D video quality, focusing on wide-viewing angle 3D content. Such content, typically captured with many cameras requires different approach than typical stereoscopic 3D quality models, due to the possibility of head and motion parallax, and the depth cues caused by them. The proposed quality models will be validated on a range of light-field displays available on site, using subjective experiments.

The effect of the display technology on QOE-NET will be investigated, i.e. what are the details that are visible to viewers and which remain invisible. The candidate will exploit these results in the area of 3D video coding strategies, and will evaluate 3D video coding techniques and parameterizations for maximizing the QOE-NET under different use cases (pre-processed or real-time, i.e. 3D video conferencing), display devices (small or large screen, narrow of wide Field Of View) and system abilities (processing, memory, bandwidth, parallelism). He / she will investigate alternative coding / compression strategies for efficiently transmitting light-field 3D as well as less demanding 3D video formats, using sample light-field material created by Holografika and other sources, encoding and decoding them and analyzing the decoded material using the proposed model. The perceptual aspects of light-field 3D video might lead to alternative coding strategies previously not employed for multi-view 3D video.

Applicant Profile

- Master degree in computer science, electrical engineering, telecommunications or similar
- Excellent background in computer science, familiarity with SoA computer hardware
- Strong mathematical and programming skills, preferably in C++
- Team player
- Practical approach to achieve goals, independent, proactive
- Creativity and willingness to work in an international and inter-disciplinary project
- Familiarity with 3D displays, video coding or FPGA programming are considered as major advantages
- Excellent communication skills (both written and oral) in English.
- Hungarian communication skills are a plus

Benefits

ESR fellows are remunerated according to EU-H2020 regulations for Marie-Sklodowska Curie Actions 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.

Expected starting date and duration

Entrance is subject to the successful evaluation of candidate(s). The position remains open until filled.

Application deadline: 17th November, 2017

Expected start date: 1st December, 2017 - but at the earliest possible

Period: till 31st December, 2018

Due to the short deadline EU citizens or EU working visa holders have an advantage

Applications to be sent: zs.dobranyi@holografika.com