



PhD Studentship in Multimedia Signal Processing



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Project: In recent years, 3D visual experiences have become quite popular, since it is now well recognized that faithful, transparent and immersive representations of the real world require more than 2D video. Moreover, 3D video representation solutions are evolving, notably by means of stereo video to deliver depth impressions and multi-view video to offer immersive 3D navigation capabilities through a continuum of viewpoints. One of the major concerns for the wide adoption of 3D video over a wide range of terminals and networks is the ability to provide satisfying quality of experience (QoE) levels to the users, in particular when the video is transmitted over networks with limited bandwidth and variable channel conditions; in fact, this may result in artifacts on the transmitted 3D content, with a higher subjective impact on perceived quality than in conventional 2D video streaming. Therefore, the development of accurate methods to assess the 3D video quality is of the highest importance for content and service providers, who need to optimize the video delivery process. The research to be pursued in this grant targets the users QoE optimization in 3D video streaming through wireless networks, by: i) designing an effective, adaptive 3D DASH-based video streaming solution, allowing an efficient delivery of the media content; ii) developing quality prediction models able to capture the impact of perceivable impairments introduced by the different components of the communication system.

Research grant: The research grant is associated to a yearly renewable contract that includes an experimental period of 6 months. The research grant consists of a tax-free stipend of 980€ per month for a PhD position. The candidates must fulfill the following conditions:

- Background on the relevant technical areas. Preference will be given to candidates that better understand video compression/ processing and computer vision fields.
- Strong motivation to perform research and to participate in a rich and stimulating project as well as to advance state-of-the-art through the publication of results in international conferences and peer reviewed journals.
- Fluent in English and with good skills in technical writing and presenting.
- Good programming skills (C/C++, Matlab, etc.) are required.

The selected candidate will be supervised by Prof. Paula Queluz and by Prof. João Ascenso (see <http://www.img.lx.it.pt/Staff.html> for details). The candidate will join a team of staff and PhD students where intense research and development activities in the image processing and coding fields are carried out.

To apply for the research grant, the following documents should be sent by e-mail to paula.queluz@lx.it.pt and joao.ascenso@lx.it.pt:

1. Detailed curriculum vitae with transcripts.
2. A motivation letter (research statement) explaining your interest in the position.
3. Recommendation letter(s).

Applications shall be received until a suitable candidate is found but before 31/07/2016. Selected candidates will be interviewed. For any clarifications, please contact Prof. Paula Queluz (paula.queluz@lx.it.pt) or Prof. João Ascenso (joao.ascenso@lx.it.pt).