

Research Grants for PhD students from the China Scholarship Council

Information Form (please read the guidelines carefully on the website www-csc.utt.fr)

Supervisor's name : Given names :

Status (prof., assistant prof., ...) :

Laboratory : Website address :

Institution : Website address :

Scientific competence of the supervisor:

Prof. Morin has worked a lot on 3D representation, and immersive medias processing and compression. Ass. Prof. Zhang has worked a lot on human visual attention modeling and image/video quality assessment.

Two major publications in the field proposed for the PhD :

1.
2.

Website address of the personal page :

Supervisor's email :

Description of the research work proposed for a PhD **Topic # (see list) :**

Title :

Subject :

With coming era of immersive media, the image quality assessment (IQA) appears as crucial for improving the quality of the end-users' immersive experience and reducing the side effects during the users' observation, whereas they have been little exploited until now. Both of the international standardization groups, JPEG Pleno and MPEG-I Visual have mentioned the lack but the importance of quality metrics for immersive medias at CLIM2019 workshop. To the best of our knowledge, there are less than 5 IQA metrics (IQM) dedicated to Light Field Images (LFIs) in the literature until now. Most of them focused on the distortions that also exist in the traditional 2D images (e.g. compression, noisy). The problem of LFI is not a compression only problem, since the light field needs to be rendered as dense as possible (without occlusions/holes under sparse capture and transmission/compression constraints), which involves view synthesis, which involves (often) depth estimation. However, most existing IQMs didn't consider LFI specific distortions (e.g. the synthesized view quality and the depth map quality). Thus a No Reference (NR) IQM correlated to subjective scores is in great need. The recently developed AI technologies can actually be good choices for the development of NR IQMs. On the other side, the existing subjective studies and related databases also didn't include the newest view synthesis or depth estimation algorithms, and are limited by the size and the complexity. So we need to construct a

Keywords :

Expected collaborations :

Background required from the applicant :

Existence of a PDF file detailing the proposal ("yes" or "no") :

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