Special issue on
Advances in 3D Video Processing
Journal of Visual Communication and Image Representation (JVCI)

With the emerging market in 3D imaging products, 3D video has become an active area of research in recent years. 3D video is the key to provide more realistic and immersive perceptual experiences than the existing 2D counterpart. There are many applications of 3D video, such as 3DTV, which is considered the main drive of the next TV revolution. Stereoscopic display is the current mainstream technology for 3DTV, while auto-stereoscopic display is a more promising solution that requires more research endeavors to resolve the associated technical difficulties. The success of 3D video industry relies on the technical maturity of 3D video technology, including its representation, capturing, compression, transmission, and rendering. All of these components are very critical to the success of the 3D video industry. Thus, more extensive research on the related techniques is required. In addition to the 3DTV systems, there are some other 3D video display systems on various platforms, such as mobile devices, free-viewpoint TV, and 3D cinema. Although each 3D video platform has its own characteristics and specialized problems, in general they share the same 3D video processing problems.

In this special issue, we aim to bring together researchers in the related areas to present the latest developments and technical solutions concerning various aspects of 3D video processing problems. We welcome original research papers that present novel research ideas as well as review papers that review the state-of-the-art techniques and discuss the new technology trends related to the above topics or general 3D video processing.

Scope
This special issue seeks original unpublished papers focusing on emerging visual processing techniques for 3D video. The topics of interest in this special issue include, but not limited to, the following list:
- Novel 3D video systems
- New 3D video representation methods
- 3D video content generation techniques
- Depth estimation from multi-view images/videos
- 2D-to-3D video conversion
- 3D video processing for depth adaption/adjustment
- 3D video retargeting algorithms
- Novel 3D video processing/editing algorithms
- Multi-view Video Coding (MVC)
- 3D video coding

- 3D video transmission systems
- Novel view image/video synthesis
- Two-view to multi-view synthesis
- Free-viewpoint TV systems/algorithms
- 3D video quality assessment based on human perception

Information for Authors

Authors should prepare their manuscript according to the Guide for Authors available from the online submission page of the *'Journal of Visual Communication and Image Representation'* at http://ees.elsevier.com/jvci/. When submitting via this page, please select *"3DVideo2012"* as the Article Type. Prospective authors should submit high quality, original manuscripts that have not appeared, nor are under consideration, in any other journals. All submissions will be peer reviewed following the JVCI reviewing procedures.

Important Dates:

Manuscript submission deadline: July 31, 2012
First-round decision: Oct. 31, 2012
Revised manuscript due: Dec. 31, 2012
Acceptance notification: Feb. 28, 2013
Final manuscript due: March 31, 2013
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