

Special Session at ICME 2021

Recent Advance in Depth-Related Processing and Applications

Biologically, the human visual system can not only perceive appearance information such as the color and texture, but also capture depth information of the scene through the binocular structure and generate stereo perception. Inspired by the human stereo perception system, depth sensing has become one of core components of many computer vision tasks, such as 3D scene reconstruction, virtual reality, scene understanding, and automatic drive. With the rapid development of depth imaging technologies and hardware devices, the acquisition of depth information has become more convenient and even some smartphones are equipped with depth sensors. Although depth information enables machines to comprehensively understand the objective world, it also brings some new problems and challenges in depth-related processing and applications. We invite full-length papers related (but not limited) to the following topics for depth processing together with widespread applications.

- Depth related processing, such as
 - ✓ depth estimation from single image/stereo image/light field image/video
 - ✓ depth map enhancement, including hole-filling, denoising, completion, super-resolution
 - ✓ depth/disparity adjustment and registration
 - ✓ depth map/video coding and compression
 - ✓ point cloud data processing, including upsampling, detection, segmentation
- Depth assisted applications, such as
 - ✓ low-level applications, including editing, inpainting, retargeting, matching, quality assessment, etc
 - ✓ high-level applications, including segmentation, recognition, classification, object detection, tracking, reconstruction, retrieval, SLAM, pose estimation, scene understanding, etc

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Important Dates

Regular Paper submission (including Special Sessions) : November 29, 2020

Submission of papers to workshops and other tracks : March 13, 2021

Industry/Application track paper submission : March 22, 2021