



Special Issue on 3D Imaging and Computer Vision

Call for Papers

3D imaging is an interesting topic which finds a wide range of applications. The applications include medical imaging, autonomous driving perception, manufacturing quality control imaging, robot navigation, and automation. The applications have continuously enabled the innovation in new hardware design and methodology development. The new challenges are steadily overcome through hard work of engineers and researchers in both civilian and military sectors for successful applications.

Computer vision as one of important domains of artificial intelligence has become the central pitch point of modern science. In specific, the birth of deep learning has led the new wave of AI revolution and further enables the rapid development of computer vision. It is in particular interesting that the 3D computer vision has found significant growth in recent years fueled by the promises of autonomous driving, 3D medical imaging, video understanding, and others. The evolution of 2D to 3D and higher dimensional hyperspectral imaging has brought many opportunities for the active research in the field.

The connection between 3D imaging and computer vision has become unprecedentedly deepened. The relationships between these two disciplines have become ever stronger with the applications such as end-to-end 3D AI camera and Lidar systems. Such strong connection is also driven by the strong growth need of autonomous manufacturing and healthcare applications. Therefore, we see a strong emerging need to consolidate these two conventionally separated research disciplines into one integral scientific discipline. For this special issue, we are interested in the research with the following topics:

- 3D Imaging: Digital holography imaging
- 3D Imaging: Structured light projection imaging
- 3D Imaging: Transport of intensity imaging
- 3D Imaging: Emerging topics
- 3D Imaging: Medical imaging
- Computer Vision: 2D/3D object classification
- Computer Vision: 2D/3D object recognition
- Computer Vision: 2D/3D object reconstruction
- Computer Vision: 2D/3D object generation
- Computer Vision: 2D/3D object detection
- Computer Vision: 2D/3D semantic/instance segmentation
- Computer Vision: 2D/3D scene understanding
- Computer Vision: 2D/3D Emerging optics



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- Computer Vision: Video understanding

Authors should read over the journal's [For Authors](#) carefully before submission. Prospective authors should submit an electronic copy of their complete manuscript through the journal's [Paper Submission System](#).

Please kindly specify the “**Special Issue**” under your manuscript title. The research field “**Special Issue – 3D Imaging and Computer Vision**” should be selected during your submission.

Special Issue timetable:

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Guest Editors:

Dr. Hongbo Zhang, Virginia Military Institute, USA

Dr. Wenjing Zhou, Shanghai University, China

Dr. Wentao Zhu, Kwai Inc., USA

For further questions or inquiries
Please contact Editorial Assistant at
wjet@scirp.org