Special Issue

3D Reconstruction with RGB-D Cameras and Multi-sensors

Message from the Guest Editors

Multi-sensor systems are widely used in 3D reconstruction tasks, such as 3D shape reconstruction, 4D body scanning, and human activity monitoring, to name a few. Compared to single-sensor systems, multi-sensor systems can simultaneously capture data from different viewports, which enables real-time complete shape capture. However, multi-sensor systems are usually expensive and require professional knowledge for operation. With the advancement of commodity RGB-D cameras, there have been countless attempts to build low-cost 3D reconstruction systems. During these attempts, additional challenges were encountered (e.g., calibration of multiple RGB-D sensors, human joint detection from point clouds, low-resolution of the scanned images, and compression of large-scale point clouds), which have encouraged researchers to explore more advanced algorithms. In this context, the objective of this Special Issue is to connect researchers in the field of camera calibration of multiple sensors, RGB-D sensors, machine learning, 3D scanning, 4D capture, and other related fields.

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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