The 16th International Conference on Intelligent Robotics and Applications (ICIRA 2023)

July 5-7, 2023 in Hangzhou, China

ICIRA 2023 Special Session Proposal

Title of the Proposal:

Technical Outline of the Session and Topics: Visual and Visual-tactile Perception for Robotics

Outline of the Session:

Visual perception, planning and grasping technology are the cornerstones of intelligent robotics, which are widely used in manufacturing, logistics, service and medical applications. To further explore the adaptability of intelligent robots in complex and dynamic environments, multimodal sensing fusion is receiving increasing attention from the community. In particular, compared with resistive tactile sensation, visual-tactile sensation is an emerging tactile sensation perception method, which improves the precision of grasping and manipulation through high spatial resolution. This session focuses on visual and visual-tactile perception, SLAM, sensor fusion, and visual-tactile grasping.

Topics of the Session:

- *Topic 1 Deep learning for Robot Visual and Visual-tactile perception*
- *Topic 2 Object Detection, Segmentation and Categorization*
- *Topic 3 RGB-D Perception*
- *Topic 4 Simultaneous Localization and Mapping*
- *Topic 5 Sensor Fusion*
- *Topic 6 Vision-based Navigation*
- *Topic 7 Visual-tactile Perception for Grasping and Manipulation*

Contact details of the Session Organizers

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