



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: Intelligent robot perception in unknown environments

Technical Outline of the Session and Topics:

Outline of the Session:

Applications AI, Robotics, Unknown Environments Robots can not only take over the dull, dirty or dangerous works but also offer help in areas such as disability assistance, elderly care and human-computer collaboration. However, existing robots often have limited perception ability, especially in unknown environments, which hinders their broad application. Recent developments in the area such as human behaviour recognition, object detection/tracking and *multi-modality and multi-task* for robot controlling have great potential in improving the intelligent computation of the robots. This special session aims to overcome this challenge by inviting experts from academia and industry to present their recent developments. It also provides researchers with an excellent opportunity to share works and discuss the recent advances and emerging issues in this field.

Topics of the Session:

- *Multi-modality and multi-task application for robots*
- *Human-computer interaction*
- *Cross-modal perception*
- *Intelligent computation for robot perception*
- *Object detection/tracking*

Short bio and contact details of the Session Organizers

- *Organizer 1: Dr. Sixian Chan, Zhejiang university of Technology (sxchan@zjut.edu.cn)*
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- *Organizer 3: Dr. Haibin Cai, Loughborough University (h.cai@lboro.ac.uk)*