The 17th International Conference on Intelligent Robotics and Applications (ICIRA 2024)

AI & Robotics for Smart Society

July 31–August 2, 2024 in Xi'an, China

ICIRA 2024 Special Session Proposal

Title of the Proposal: Brain inspired intelligence for robotics

Technical Outline of the Session and Topics:

Outline of the Session:

In recent years, scientists and engineers have made great breakthroughs in the field of brain inspired intelligence, including spiking neural networks (SNNs), brain inspired models, neuromorphic chips (e.g. TrueNorth, Loihi, and Tianjic) and so on, which have been applied in a wide spectrum of different fields, i.e., intelligent robots, computer vision, machine learning, and unmanned systems. However, there are still many limitations and challenges in this field, such as requiring more powerful and efficient algorithms that can absorb the research findings in neuroscience, and how to design brain inspired computing architecture to advance intelligence application for robotics. In addition, more real-world applications that can demonstrate the advantages of brain inspired intelligence are urgently expected, especially for intelligent robots and unmanned systems. Thus, there is an urgent need to gather ideas from researchers and communities to accelerate the development of this field.

Topics of the Session:

- *Neuromorphic computing methods and applications*
- *Spiking neural networks for the robotics and unmanned systems*
- *Brain-inspired perception, decision-making and control algorithms*
- *Brain computer Interface and Human-robot bionic interaction*
- *New applications of Brain-inspired intelligence*

Contact details of the Session Organizers

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