ICIRA 2024 Special Session Proposal

Title of the Proposal: Natural Interaction and Coordinated Collaboration of Robots in Dynamic Unstructured Environments

Technical Outline of the Session and Topics:

In this special session, we delve into the latest advancements in enabling robots to interact naturally and collaborate effectively in dynamic, unstructured environments. As robots are increasingly utilized across diverse fields like healthcare, disaster response, exploration, and beyond, their versatility in adapting to unpredictable conditions and seamlessly engaging with humans and other agents becomes increasingly crucial. This session aims to explore the cutting-edge technologies and strategies that facilitate such interactions, paving the way for more efficient and intuitive human-robot collaborations in a wide range of real-world scenarios.

Topics of the Session:

- *Human-robot interaction in dynamic environments*
- *Sensor fusion and perception in unstructured environments*
- *Adaptive control and decision-making*
- *Learning and adaptation in dynamic scenarios*
- *Autonomous navigation and exploration in complex terrains*
- *Case studies and real-world applications showcasing successful deployments*
- *Intent Recognition in Human-Robot Interaction*
- *Swarm Intelligence in Robotic Collaboration*
- *Natural Language Processing in Robot Interaction*
- *Other related topics.*

Contact details of the Session Organizers

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