



ICIRA 2024 Special Session Proposal

Title of the Proposal:

Design, perception, and control of exoskeleton robots

Technical Outline of the Session and Topics:

Outline of the Session:

This session will showcase the latest research and advancements in exoskeleton robots, with a focus on design, perception, and control technologies. Exoskeleton robots have the potential to revolutionize various industries, such as healthcare, rehabilitation, and industry, by augmenting human capabilities. This session will highlight the interdisciplinary nature of exoskeleton robotics and explore topics such as design methods, human-robot interaction, control algorithms, real-world applications, and future directions. The session aims to bring together researchers, practitioners, and industry experts to share their findings and insights, and discuss the significance and potential of exoskeleton robots in enhancing human-robot collaboration.

Topics of the Session:

- *Design of exoskeleton robots*
- *Human motion recognition and prediction on exoskeleton robots*
- *Human-robot interaction on exoskeleton robots*
- *Control of exoskeleton robots*
- *Upper limb exoskeleton*
- *Lower limb exoskeleton*
- *Exoskeleton application and testing*
- *Ergonomics*
- *Human behaviour and preference learning*

Contact details of the Session Organizers

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