ICIRA 2024 Special Session Proposal

Title of the Proposal: Optimization and Intelligent Control of Underactuated Robotic Systems

Technical Outline of the Session and Topics:

Outline of the Session: In robotic systems, underactuation, which means that there are fewer control inputs than degrees of freedom, commonly exists, which makes robots more flexible. But it also brings about many challenges to the control problem due to the lack of enough control inputs. So, extensive studies have been carried out to address the motion control problem for underactuated systems. There are still many open problems remaining unsolved. Therefore, the aim of this special session is to provide a forum for scholars and practitioners in the field of vibration and underactuated systems control, where they can share their most recent research results to promote the development of this direction.

Topics of the Session:

- *Underactuated robots*
- *Cranes*
- *Intelligent control*
- *Motion planning*
- *Adaptive control*

Contact details of the Session Organizers

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