

ARCAI 2024 Special Session “Modeling, Perception and Locomotion of Humanoid Robots”

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Call for Papers:

Humanoid robots, with their ability to perceive and interact with their environment in a human-like manner, hold tremendous potential to revolutionize various fields, including healthcare, manufacturing, and service industries. The design, modeling, perception, and locomotion aspects are crucial for enhancing the autonomy, adaptability, and effectiveness of humanoid robots in real-world scenarios.

This special session aims to provide a platform for researchers, engineers, and practitioners to exchange ideas, share recent advances, and discuss challenges in the modeling, perception, and locomotion of humanoid robots. We invite submissions of original research contributions, case studies, and review articles focusing on innovative methodologies, algorithms, and technologies in this area.

Authors are encouraged to submit their original contributions demonstrating the modeling, perception and locomotion of humanoid robots. Topics of interest include, but are not limited to:

- Kinematics and dynamic modeling of humanoid robots
- Sensor fusion and perception for humanoid robots
- Environment modeling and scene understanding
- Object recognition and manipulation
- locomotion and navigation of humanoid robots
- Human-robot interaction and collaboration

We invite authors to submit original research papers that contribute to advancing the state-of-the-art in modeling, perception, and planning of humanoid robots. Submissions should present novel methodologies, theoretical insights, experimental results, or practical applications relevant to the topic.

Accepted and presented papers will be submitted for inclusion into IEEE Xplore subject to meeting IEEE Xplore's scope and quality requirements and indexed by EI Compendex and Scopus. Selected papers will be invited to SCI Journal Special Issues.