



IEEE-RAS HUMANOIDS 2023

AUSTIN, USA

DECEMBER 12-14, 2023

2023 HUMANOIDS CALL FOR PAPERS

We are very pleased to invite you to contribute to the **2023 IEEE-RAS International Conference on Humanoid Robots** to be held in Austin, Texas, USA, **December 12-14**.

Humanoids 2023 aims at bringing together top researchers from humanoid robotics and related disciplines with leading companies in the field. In light of a year of rapidly evolving humanoid technologies with several new platforms coming onto the market and bringing us closer to a wider real-world deployment, the topic of the conference is **“Research Outcomes for a Growing Application Landscape”**. Our community envisions innovative areas in humanoid robotics that lie at the intersection of general-purpose physical, cognitive, and motor capabilities, while also considering the scientific understanding of interactions with humanoid and anthropomorphic systems.

The conference will be organized as a 3-day event with workshops and tutorials on the first day, followed by 2 days for the main conference with plenaries, keynotes, oral and interactive sessions, and an industry forum. A centrally located exhibition will feature the latest humanoid technology from both industry and academia.

Scope

We invite papers in all areas related to humanoid robotics, including, but not limited to:

- Human biomechanics and motor control, human body and behavior modeling
- Bionic / human-inspired design principles for humanoids
- Human-inspired robot control
- Whole-body dynamics and control
- Optimization, optimal control, and model predictive control methods
- Learning methods for humanoid robots
- Robot modeling for locomotion and/or manipulation
- Exoskeleton / wearable robot design and control
- Prosthesis design and control
- Physical and social human-humanoid interaction
- Dynamic legged locomotion (bipeds, quadrupeds, etc.)
- Loco-manipulation, legged manipulation
- Dual arm dexterous manipulation
- Design, control, and application of multifinger hands
- Stability and robustness of humanoid and legged robots and humans
- Simulation and physics-based animations from computer graphics
- Humanoid heads and faces, geminoids
- Novel materials, mechanisms, and actuators for humanoids
- Perception for humanoids
- Human-centered robotic studies and applications
- Neuro-robotics and brain-robot interfaces for humanoids and humans
- Real-world applications for humanoid robots (industry, healthcare, home, space, disaster response)
- Benchmarks, performance indicators for humanoid robots
- Ethical and social challenges of humanoid robot deployment
- Long-term deployment of humanoid, bipedal, or dual arm manipulation robots

Accepted papers will be presented either in single-track oral sessions or in interactive sessions. All accepted papers will appear in the proceedings of the conference and on IEEE Xplore without distinction.

The deadline for submissions is July 15, 2023, end of the day Pacific Daylight Saving Time.

Submission Link: <https://ras.papercept.net/conferences/scripts/start.pl>