

Humanoids 2010



Sponsored by:

IEEE Robotics and Automation Society

10th IEEE-RAS International Conference on Humanoid Robots

Workshop

Humanoids: What's Next?

Applications, challenges and Perspectives

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Tamim Asfour, Aleš Ude, Katuhito Yokoi, Rüdiger Dillmann

Why Humanoids?

Building Humanoids = Building Human-Centered Technologies



- Assistants/companions for people in different ages, situations, activities and environments in order to improve the quality of life
- Key technologies for future robotic systems
- Experimental platforms to study theories from other disciplines

Ultimate goals

- **24/7 integrated complete** humanoid robot systems able to **act and interact** in human-centered environments and to perform a variety of tasks
- Humanoid robots rich with sensorimotor capabilities as an indispensable requirement to implement **cognitive capabilities in technical systems**
- **Reproducible** complete humanoid systems in terms of mechanical design, mechatronics, hardware and software architecture
- **Interoperability:** Common/shared complex platforms with standard/common/open-software

ARMAR meets Angelika Merkel in Karlsruhe



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Obama meets HRP-4 and Katzuhiro



Humanoids program today

9:00-10:30 Tutorial/Workshop AM

10:30-11:00 Coffee Break

11:00-12:00 Plenary Talk

12:00-13:30 Lunch

13:30-18:20 Tutorial/Workshop PM
(Organizers set their PM
start and end time)

Panel discussion: Co-X

3:30 – 15:30

Henrik Christensen, Georgia Institute of Technology

Elena Messina, National Institute of Standards & Technology

Rodney Brooks, Heartland Robotics

James Wells, General Motors

Marc Raibert, Boston Dynamics

Speakers

- Ron Arkin, Georgia Tech, USA
- Yoshi Nakamura, University of Tokyo, Japan
- Stefan Schaal, USC, USA
- Jean-Paul Laumond, LAAS, France
- Kazuhito Yokoi, AIST, Japan
- Rod Grupen, UMass, USA
- Aude Billard and Dan Grollmann, EPFL, Switzerland
- Giulio Sandini, IIT, Italy
- Rüdiger Dillmann, KIT, Germany
- Eiichi Yoshida, AIST, Japan
- James Kuffner, Google & CMU, USA