

Special Issue on Humanoid Robotics

Guest -Editors: **Prof. Wataru Takano** (The University of Tokyo, Japan)

Prof. Tamim Asfour (Karlsruhe Institute of Technology, Germany)

Dr. Petar Kormushev (Italian Institute of Technology, Italy)

SUBMISSION DEADLINE: March 31, 2014

Publication in Vol. 29, No. 5 (March 2015)

Humans understand the world through their actions upon the environment and their perception. The so-called Anthropomorphism underlies this cognitive mechanism. Anthropomorphic robots, especially humanoid robots, can perform human-like actions, and enhance human viewers' understanding of the intended effects of these actions. Humanoid robotics is a research area to pursue this capability from multiple viewpoints, such as body motion generation, motor skill learning, semantic perception, and to develop artificial systems able to communicate with humans. This research field has received significant attention in the last decades and will continue to play a central role in the robotics and cognitive systems research. This special issue will present the theoretical and technical achievements related to humanoid robotics, ranging from the mechanical design to artificial intelligence. Papers on all aspects of humanoid robots are welcome, including but not limited to, the following topics:

- Humanoid Design
- Representation of humanoid robot motion
- Synthesizing human-like motions for humanoid robots
- Understanding intention of human actions
- Learning motor skills through imitation and reinforcement
- Control theory for humanoid behaviors
- Innovative sensing and actuation technologies applied to humanoid robots
- Modeling physical interaction between humans and humanoid robots
- Human-robot interfaces for skill transfer and communication

Submission: **PDF format file** of the full-length manuscript should be sent by **March 31, 2014** to the office of Advanced Robotics, the Robotics Society of Japan through the homepage of Advanced Robotics (http://www.rsj.or.jp/advanced_e/submission). Sample form of the manuscript is available at the homepage. Also, send another copy to **Prof. W. Takano** (takano@ynl.t.u-tokyo.ac.jp), **Prof. T. Asfour** (asfour@kit.edu), and **Dr. P. Kormushev** (Petar.Kormushev@iit.it) for submission confirmation.