

2011 IEEE International Conference on Robotics and Automation

May 9-13, 2011
Shanghai International Convention Center
Shanghai, China



Fourth Workshop on Roboethics

May 13, 2011
Shanghai, China

CALL FOR PAPERS

Important Dates

- February 28, 2011: Paper submission deadline
- March 7, 2011: Notification of Acceptance/Rejection
- March 14, 2011: Camera-Ready Submission Deadline

Organizers

IEEE RAS Technical Committee on Roboethics:

- Gianmarco Veruggio, CNR-IEIIT, Italy (corresponding co-chair)
- Jorge Solis, Waseda University, Japan (co-chair)
- Matthias Scheutz, Indiana University, USA (co-chair)

Scope

The proposed Full Day Workshop on Roboethics is the fourth biennial event, organized by the Technical Committee on Roboethics as part of the ICRA conference (previous workshops took place in 2005, 2007 and 2009).

Roboethics is ethics applied to robotics, i.e., the human-centered ethics guiding the design, construction and use of robots. It deals with the study of the ethical, legal and social aspects of the introduction and use of robots in our daily lives. Progress in the field of computer science and tele-communications allows us to endow machines with enough intelligence so that they already can act autonomously (to some degree). However, as the application domains for robots are increasing and robots are coming out of the factory halls, robotics research is increasingly raising ethical implications, related to the emerging interactions between robots and human beings.

Roboethics shares many "sensitive areas" with computer ethics, information ethics, bioethics and not only roboticists, but also sociologists, psychologists and philosophers are discussing the potentialities and limits of robotics to help building a better human society.

Goal

The theme of the ICRA 2011 conference is "Better Robots, Better Life", an expectation that robot technology will help build a better human society. But achieving this goal is not only a technical problem. Robotics applications raise ethical questions, related to emerging interactions between robots and humans. The application of ethics to machines, including robots and computer programs, has been typically limited the questions of whether designers and operators should take full responsibility of machines' actions. However, in the near future, the robotics is already developing machines with more open-ended behaviors and the ability to acquire new behaviors as a results of online learning during task execution. This kind of adaptation will likely limit the predictability of robot behaviors. Moreover, the types of interactions and the physical integrations of humans and robots are increasing rapidly. The social, economic, psychological, philosophical, and emotional impacts of this research are still unclear, however, and require careful analysis and attention by the research community. Among the objectives of the workshop is the opportunity of developing rules for roboethical quality insurance, aimed at preventing unethical uses of robots. Long-term objectives include the increase of robotics researchers' ethical awareness, in the context of the ever growing interdisciplinarity that will characterize the new generation of robotics research.

Topics

Contributions are welcome on the ethical, legal and societal aspects of the following topics (but not limited to):

- Recent developments in HRI
- Robot Ethics (Decision procedures/algorithms for moral behavior)
- Technical Dependability (Availability; Reliability; Safety; Security)
- Military application of robotics (Acceptability, Advantages and Risks, Codes)
- Health (Robotics in surgery, health care, assistance, prosthetics and therapy)
- Service (Social robotics, Personal assistants, Companions)
- Economy (Replacing humans in the workplace; Robotics and the job market)
- Psychology (Position of humans in the control hierarchy; Robots and children)
- Law (Robots and liability; Deployment of autonomously acting robots)
- Environment (Sustainable exploitation of resources; Cleaning nuclear and toxic waste)

Info

Extended abstracts (of two pages) or full papers of up to 6 pages (using the ICRA conference publication format) are welcome. Interested authors are encouraged to send their original contributions in the above or related areas to the organizers at:

info@roboethics.org

For more information, please see the web page at:

<http://www.roboethics.org/icra2011/>

Registration and travel information available on the conference website:

<http://www.icra2011.org/>