

## Special Issue on Multimodal Human – Robot Interfaces

**Scope:** Haptic interfaces, natural language and gestures have traditionally been used to interact with robots. However, in last years, new modalities of interaction have emerged, like EMG and EEG interfaces. The current scenario is one of transition from the industrial workplace towards increasing interaction with the human operator in other scenarios. This means that interaction with humans is expanding from a mere exchange of information (in teleoperation tasks and service robotics) to a close interaction involving physical and cognitive modalities. It is in this context where multimodal interfaces combining different kind of interaction modalities play a crucial role. Multimodal interfaces increase usability (the weaknesses of one modality are offset by the strengths of another) and they have implications for accessibility (a well-designed multimodal application can be used by people with a wide variety of impairments).

This special issue focuses on the most recent advances about multimodal human-robot interfaces. Of particular interest in this special issue are the applications of multimodal human-robot interfaces that combine several cognitive and physical interaction modalities. In addition, one of the aims of this special issue is to show the new developments related to multimodal interfaces for disabled people.

Topics considered within this special issue include, but are not limited to the following ones:

- Haptic-based Multimodal Interfaces
- Gestures-based Human-Robot Interfaces
- Ocular-based Multimodal Interfaces
- New Technologies in Multimodal Human-Robot Interfaces
- Integration of Brain-Computer Interfaces in Human-Robot Interfaces
- Multimodal Human-Robot Interfaces for Disabled People
- Applications of Multimodal Human-Robot Interfaces

### Schedule:

Deadline for submissions:	September 30, 2011
Notification of first review:	December 15, 2011
Revised submissions due:	February 15, 2012
Notification of final review:	April 30, 2012
Final manuscript due:	May 31, 2012
Expected publication:	Late 2012/Early 2013

### Submission Details:

All manuscripts should be submitted electronically to the IEEE SMCC Submission System at <http://mc.manuscriptcentral.com/smcc-ieee>. The authors should put the following text in the Cover Letter to Editor-in-Chief section: "This manuscript is submitted for the Special Issue on Multimodal Human – Robot Interfaces (editors: Jose M. Azorin, Jose L. Pons)". For detailed submission information, please refer to Information for Authors at <http://www.ieee-smc.org/publications/index.html>

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