

*Call for Papers:*

# ICMI 2014 Workshop on Multimodal, Multi-Party, Real-World Human-Robot Interaction

Istanbul, Turkey, 16 November 2014

<http://www.macs.hw.ac.uk/~mef3/icmi-2014-workshop-hri/>

## Abstract

The development of robots capable of interacting with humans has made tremendous progress in the last decade, leading to an expectation that in the near future, robots will be increasingly deployed in public spaces, for example as receptionists, shop assistants, waiters, or bartenders. In these scenarios, robots must necessarily deal with situations that require human-robot interactions that are short and dynamic, and where the robot has to be able to deal with multiple persons at once.

To support this form of interaction, robots typically require specific skills, including robust video and audio processing, fast reasoning and decision making mechanisms, and natural and safe output path planning algorithms. This physically embodied, dynamic, real-world context is the most challenging possible domain for multimodal interaction: for example, the state of the physical environment may change at any time; the input sensors must deal with noisy and uncertain input; while the robot platform must combine interactive social behaviour with physical task-based action such as moving and grasping.

This workshop aims to bring together researchers from a range of relevant disciplines in order to explore the challenges and solutions for multimodal interaction in this area from different perspectives. The workshop will feature two invited speakers, along with oral presentations of long papers and a *Pecha Kucha*-style session with short overviews of ongoing research in this area.

## Invited speakers

- **Daniel Gatica-Perez** (*confirmed*), Idiap Research Institute, Martigny, Switzerland, <http://www.idiap.ch/~gatica/>
- *Another speaker to be announced shortly*

## Topics

Contributions to the workshop are sought in all areas relevant to the overall goal of the workshop, including—but not limited to—the following topics:

- intention recognition
- activity recognition
- person tracking
- speech recognition in noisy environments
- robust spoken language processing
- audiovisual signal processing
- planning and decision making under uncertainty
- knowledge representation and reasoning
- multimodal fusion
- multimodal interaction management
- cognitive robotics
- natural language generation
- design of service robots / interaction systems in public spaces
- evaluation of robots in real-world contexts

These topics cover a wide range of research communities including multimodal interaction, dialogue systems, human-robot interaction, robotics, automated planning, computer vision, and signal processing. Due to the interdisciplinary nature of the workshop topic, relevant contributions from other fields will also be welcome.

## Submission formats

We welcome two categories of paper submissions:

- Long papers: (max 6 pages) These papers should report work in progress or completed work. Authors of long papers that are accepted by the Programme Committee will be invited to give a talk on the paper.
- Late breaking reports: (2 pages) These papers should describe work in progress, preliminary results, or highlights of recently completed work. Authors of accepted late-breaking reports will be invited to present a Pecha Kucha talk and/or a poster.

Formatting instructions and detailed submission instructions are available through the workshop web site at <http://www.macs.hw.ac.uk/~mef3/icmi-2014-workshop-hri/>.

## Important dates

**15 July 2014** Long paper submission deadline

**15 August 2014** Long paper notification

**5 September 2014** Camera-ready deadline

**16 November 2014** Workshop in Istanbul, Turkey as part of ICMI 2014 (<http://icmi.acm.org/2014/>).

## Organisers

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