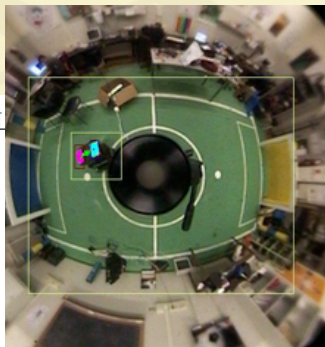


Special Issue on Omnidirectional Robot Vision



Guest Editors:

- Emanuele Menegatti
(University of Padua, Italy)
- Tomas Pajdla
(Czech Technical University in
Prague, Czech Republic)

Call for paper

This special issue will be edited after the [First Workshop on Omnidirectional Robot Vision](#) co-located with [SIMPACT 2008 \(International Conference on Simulation, Modeling, and Programming for Autonomous Robots\)](#). However, the special issue is open also to new contributions not previously published at the workshop.

Omnidirectional vision research has always been greatly stimulated by mobile robotics and it has been finding its major applications there. Significant progresses have been made since the pioneer works which used shielded light bulbs or steel spheres as mirrors. Recently, a broader community has started working with omnidirectional sensors and commercial applications appeared also in surveillance and automotive industry. The increase of resolution of modern cameras overcome one of the major limitations of omnidirectional vision, the low resolution of omnidirectional images. The increase of computational power on board of nowadays robots and vehicles enables the use of more complex robot vision algorithms. Therefore, more computer vision algorithms are now applicable to omnidirectional images and the new approaches show their effectiveness in moving robots or autonomous or semi-autonomous vehicles.

In this special issue, we wish to collect examples of active collaboration of computer vision and robotic researchers to develop more robust, practical and applicable systems in robotics and elsewhere.

Topics of interest:

- Omnidirectional sensors for robotics
- Omnidirectional vision for mobile robots, flying robots and manipulators
- Omnidirectional vision for robot navigation and safety
- Omnidirectional vision for multi-robot teams (including RoboCup leagues)
- Omnidirectional visual odometry & SLAM (Simultaneous Localization and Mapping)
- Omnidirectional vision in industrial robotics and automotive industry

Important Dates:

Paper Submission:	January 30, 2009
Notification of acceptance:	March 25, 2009
Submission of final camera ready papers:	April 25, 2009

Submission:

Please send your contribution by email directly to the Guest Editors at the following addresses: emg@dei.unipd.it, pajdla@cmp.felk.cvut.cz in PDF format following the template you can find at the web page of Robotics and Autonomous Systems Journal (Elsevier): <http://ees.elsevier.com/robot/>
The number of pages of the single paper can range between 12 and 20.