

The International Journal of Robotics Research

Call for papers

International Journal of Robotics Research

Special issue

Semantic Perception for Robots in Indoor Environments

Abstract

As autonomous robotics operating in indoor environments will soon move away from individually set up experiments and begin to tackle real-world everyday tasks, such as setting the table or finding the place where a particular object *usually* resides, the perception capabilities of the robots must become much more powerful. For example, if the robot is asked to bring a glass it must not bring a dirty one or one that is intended for the use of somebody else. More generally, semantic perception must become a resource for the robot, which informs the robot with respect to what the object is, where is it usually located, what can be done with that object and in which way. This is the main issue of semantic perception for robots acting in indoor environments.

In an effort to disseminate the current advances in perception for manipulation, and to stimulate a discussion on the future research directions in this field, the *International Journal of Robotics Research* invites papers for a special issue in this area. It is our expectation and goal that this special issue will succeed in invigorating research interests towards the development and applications of perception for manipulation systems.

The list of topics of interest includes, but are not necessary limited to:

- 3D object recognition
- semantic scene interpretation based on point clouds
- object modelling
- accurate 3D collision models
- surface reconstruction
- vision for manipulation
- deformable objects
- object classification based on manipulation experience/capabilities

Papers must contain high-quality original contributions and be prepared in accordance with the International Journal of Robotics Research standards. Excellent quality review papers will also be considered. Submitted manuscripts must not have been published or be under review for possible publication. All papers will be reviewed following the regular reviewing procedure of IJRR.

Manuscript Submission

Please submit papers to: <http://mc.manuscriptcentral.com/ijrr>. Under "Manuscript Type" select "*Semantic Perception*". Instructions for authors, with information for multimedia extensions, are available online at: <http://www.sagepub.com/journalsProdManSub.nav?prodId=Journal201324>

Important dates:

15 July 2010	Submission Deadline
15 October 2010	Completion of First Review
15 November 2010	Submission of Revised Versions
15 December 2010	Completion of Final Review
15 January 2011	Submission of Final Manuscripts.
15 April 2011	Online publication.

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