

Workshop on Mobile Manipulation: Generating Robot Motion for Contact with the World

Call for Papers

When: July, 2012
Where: RSS 2012, Sydney, Australia
Website: <http://mobilemanipulation.org/rss2012>

Workshop Goals

The aim of the workshop is to discuss current problems and future directions in contact motion generation. Recent years have seen significant progress toward enabling autonomous mobile robots to interact with unstructured, dynamic, and human-centered environments. Much of this progress, however, is concerned with collision-free motion. In contrast, the goal of mobile manipulation is to interact with objects, to create contact and to exploit it in order to change the state of the world. To achieve this goal, insights and advances from different parts of robotics research must be combined. This workshop will bring together researchers from control, motion planning, mobile manipulation, and mechanism design to discuss how the challenges associated with robot motion in contact can be met.

Submissions

We solicit paper submissions, optionally accompanied by a video, both of which will be reviewed by the program committee. An optional interactive poster session will be organized if there is a larger number of submissions. Accepted papers and videos will be archived at the Internet Archive. If there is sufficient interest, we will pursue publication of a special journal issue to include the best papers.

Topics of interest include (but are not limited to):

- Modeling contact in manipulation,
- Grasp planning,
- Mobile manipulation systems,
- Motion generation in partially known environments,
- Planning for sensing, under uncertainty, task and motion planning,
- Robust motion control,
- Force and torque control along contact surfaces,
- Compliant motion with contact,
- Compliant and underactuated mechanisms.

Papers should be in PDF format, conform to the RSS regular paper style guidelines, and be a maximum of 8 pages in length (shorter papers are welcome). Videos should be in the MPEG format, 3-5 minutes in length, and easily viewed with free video players (please try playing your video on several different machines before submitting).

Please email submissions to:

rss.mobile.manipulation.2012@gmail.com

Please do not attach video files to email; include a URL instead.

Important Dates

Paper submission: May 8, 2012;
Acceptance notification: June 15, 2012;
Final paper submission: June 29, 2012.

Program Committee

Kaijen Hsiao (Willow Garage)
Jeff Trinkle (Rensselaer Polytechnic Institute)
Robert Platt, Jr. (SUNY at Buffalo)
Mehmet Dogar (Carnegie Mellon University)
Dieter Fox (University of Washington)
Domenico Prattichizzo (Università di Siena)
Markus Rickert (Technische Universität München)

Organizers

Mihail Pivtoraiko (UPenn)
Dov Katz (CMU)
Oliver Brock (TU Berlin)