Call for Papers

INTELLIGENT SERVICE ROBOTICS

Special Issue on

Experimental Robotic Grasping and Manipulation

The special issue will focus on promoting comparable researches in robotic grasping and manipulation. Recently, there is a worldwide trend on designing benchmarks for performance evaluation, establishing community consensus for tasks and rules in competitions, collecting and organizing grasping and manipulation datasets for learning, evaluations, and comparisons. In the last several years, a number of groups in the robotics society have produced high-quality grasping evaluation objects (such as YCB object set), benchmarking metrics (such as the NIST grasping and manipulation performance metrics and benchmarks), daily-living manipulation evaluation tasks (such as the IROS RGMC tasks), manufacturing evaluation tasks (such as the IROS RGMC tasks and WRC tasks), and grasping and manipulation datasets (such as the MIT pushing dataset, IIT robotic hand dataset, USF manipulation dataset, Upenn tactile dataset and Harvard tactile dataset). These are great assets and very valuable for the progression of research in robotic grasping and manipulation. The objectives of the special issue are to bring together research work from different domains for their common interests in experimental robotic grasping and manipulation, to consolidate their efforts, achievements, and resources, to address the state-of-art research, and to produce fair, easily-implementable, and widely-acceptable benchmarks and evaluation tasks. Topics to be covered include, but are not limited to:

- Gripper/end effector assessment
- Performance metrics and benchmarks
- Manipulation datasets
- Benchmark-oriented design and development
- Learning manipulation from datasets
- Benchmarking mobile manipulations
- Grasp planning based on manipulation datasets
- Force/tactile sensing datasets for manipulation
- Non-prehensile manipulation datasets and models
- Experience-based motion planning for manipulation
- Pick-and-place in logistics competition
- Daily-living manipulation competition
- Manufacturing manipulation competition

Important Dates

- October 30, 2018: Paper submission deadline.
- December 15, 2018: Completion of the first round paper review.
- January 15, 2019: Completion of the second round paper review.
- February 15, 2019: Final manuscripts due.
- April 1, 2019: Tentative publication date.

Guest Editors

Hyungpil Moon, SungKyunKwan University, South Korea, hyungpil@me.skku.ac.kr
Yu Sun, University of South Florida, USA, yusun@mail.usf.edu
Joe Falco, NIST, USA, falco@nist.gov
Berk Calli, Worcester Polytechnic Institute, USA, berk.calli@yale.edu

Paper Submission

All papers are to be submitted through the journal, Intelligent Service Robotics submission site at http://www.editorialmanager.com/jist. Please select as 'S.I.: Experimental Robotic Grasping and Manipulation' in the article type menu of your submission. All manuscripts must be prepared according to the JISR publication guidelines. Please address all inquiries via e-mail to hyungpil@me.skku.ac.kr.