CALL FOR PAPERS
for a special issue on
Articulated Mobile Robots (AMR)

Introduction
Articulated mobile robots (AMR) are still of extended interest of researchers and engineers. This special concern comes from the fascination with the complicated nature of this special kind of multi-body mechanisms. They persistently inspire investigators with new challenges in the designing, modeling, motion planning, control, and diverse application areas. Although the topic of AMR is wide (with different kind of systems ranging from hyper-mobile, self-reconfigurable to highly underactuated ones), there are interesting common theoretical and technical problems characteristic to the field. Some problems still remain unsolved, other involve continued and more detailed investigation. Motion issues are considered much more difficult for AMR comparing to the single-body robots, especially when the number of bodies is large. On the other hand, a large number of joints of AMR becomes beneficial in case of very confined or unstructured task-spaces giving additional possibilities by the ‘articulation property’, which may improve maneuverability, allow adapting to changing motion conditions, help obstacle avoiding or crossing, allow dexterous grasping or climbing, or may enhance flexibility and efficiency of robotized transportation. Considering emerging as well as established directions of development, the purpose of this special issues is to address both theoretical and application-oriented problems and publish new scientific results in the field of AMR.

Thematic scope
Topics of interest include theoretical and/or experimental research on
- snake-like and hyper-mobile robots
- N-trailer robotic vehicles
- Load-Haul-Dump robotic vehicles
- self-reconfigurable articulated mobile robots
in the following (widely understood) areas: description of novel constructions or novel locomotion mechanisms, modeling and model analysis, design of control algorithms and control systems, motion planning, collision avoidance in cluttered environments, dedicated sensory systems, mission planning, autonomy, intelligent behavior, teleoperation and human-robot interfaces, applications and performance analysis, software engineering.

Manuscript submission
The manuscripts should describe the original and previously unpublished results which are currently not considered for publication in any other journal. All the manuscripts will undergo the peer review process with at least two independent reviewers selected by the guest editors. The manuscripts can be submitted by using the on-line submission system available at http://www.editorialmanager.com/jint/. During submission, please select in the pull-down menu ‘Choose Article Type’ that the manuscript is destined to the AMR special issue.

Additional information
In case of any doubts related with the special issue please, contact the guest editor(s).
The website of the journal: http://www.springer.com/engineering/robotics/journal/10846

Important dates
- Call for papers: October 2012
- Deadline for manuscript submission: January 31, 2013
- First review: April 2013
- Final paper submission: June 2013

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