

IJRCS 2009

2nd International Joint Robotics Competition and Symposium

20-24 May 2009

Suleyman Demirel University, Isparta, Turkey.

In Technical Co-Sponsorship of IEEE Turkey Section IES/RAS Joint Chapter

Call for Papers

The aim of the three-day single-track symposium on Robotics @IJRCS 2009 is to bring together leading roboticists from academia and industry with backgrounds in various sub-fields of robotics to foster an intensive exchange of information and know-how. The conference language will be English. Paper submissions on all aspects of robotics but especially on new methodologies, algorithms, system architectures and novel applications are solicited. A selective review process will be carried out through a large international program committee to ensure academic quality. All presented papers will be published in the post-conference proceedings book by an international publisher. Authors are invited to participate in the activities of the competition as well.

In addition to oral and poster presentations of refereed papers, invited talks by the following internationally renowned researchers will complete the conference program:

Prof.Dr. Okyay Kaynak	Boğaziçi University, and UNESCO, Turkey. "Quo Vadis, Mechatronics?"
Dr. Francesco Mondada	Ecole Polytechnique Federale de Lausanne, Switzerland.
Prof.Dr. Abdülkadir Erden	Atılım University, Turkey. "Bio-inspired Robots for Mechatronics Engineering Education"
Prof.Dr. Vladimir Pavlovsky	Moscow State University, Russia.
Prof.Dr. Ümit Özgüner	Ohio State University, USA "Driving in Istanbul in an Autonomous Car"
Assoc.Prof.Dr. Ferat Şahin	Rochester Institute of Technology, USA "System of Systems Simulation Framework for Testing Swarm Robots using DEVS"
Dr. Haldun Komsuoğlu	University of Pennsylvania, USA "Dynamic Legged Mobility Systems"
Microsoft	MS Robotics Studio Developers

Topics

Symposium on Robotics @IJRCS 2009 is for robotics technology and its practical applications. Specifically, papers on original and unpublished research, development and innovative use cases in the following topics are of special interest (but are not limited to):

Mechanisms: Design of new kinematic structures, parallel kinematic machines, humanoid robots, hands, legged systems, reconfigurable robots.

Manipulation: Kinematics, dynamics, control, trajectory generation, contact modeling, dexterous manipulation, grasp synthesis, assembly, programming, sensor integration.

Mobile systems: Mobile robot controls, motion planning, mapping, localization, collision avoidance, navigation, exploration, task/mission planning, sensor integration.

Field robotics: Localization, mapping, perception, situational awareness, outdoor applications

Intelligent robotics and multi-robot systems: Distributed systems of sensor networks, multi-robot systems, and networked robots.

Robotic perception: Tactile perception, range, vision, intelligent perception action systems.

Human-robot interaction: Safe robotics, haptics, tactile interfaces, tele-operated systems.

Smart materials for robotics: Sensors, actuators and control mechanisms as smart materials for use in robotics.

Estimation, learning, and programming: Bayesian techniques, modeling, imitation learning, programming by demonstration.

Robot Learning: Learning models, plans and control policies, inference, integration with architectures.

Evolutionary robotics: Evolution of robots, neural controllers, communication, cooperation and competition, co-evolution, novel / improved algorithms for the evolution of robot systems.

Anthropomorphic robotics: Prosthetic/robotic hands, exoskeletons, walking robots, social robots.

Robotics and automation: Development and programming, automation engineering, automated methods in the milieu.

Semantic robotics: Semantically intelligent robotics, cognitive robotics, semantic robotic agent system, semantic Web, ontology engineering.

Standards and common platforms for robotics: Development software, middleware, evaluation-comparison

Submission

One-page extended abstract of a proposal is required initially. Selected abstracts will be allocated time in the symposium program and included in the abstracts booklet on CD. At least one of the authors of each accepted abstract must register as a full participant of the symposium. Following the symposium days, authors will submit the properly formatted full-length paper for inclusion in the post-conference proceedings. Proceedings book of the symposium will be published under an ISBN number by Trafford Publishing, Canada. The proceedings book will be available Worldwide from Trafford and through book stores. A copy of the proceedings book will be airmailed to the registrants of the symposium free of charge. Extended abstract and full paper may be submitted through IJRCS 2009 submission site: <https://cmt.research.microsoft.com/IJRCS09/>.

<u>Extended abstract submission due date:</u> 15 May 2009	<u>Acceptance notification:</u> 17 May 2009
<u>Author registration:</u> Starting 15 May 2009	<u>Full-paper submission:</u> 5 June 2009
<u>Review and revision requests:</u> 19 June 2009	<u>Camera-ready paper submission:</u> 26 June 2009

Paper Format

Extended abstract must contain paper title, author names, affiliation, e-mail address, telephone number, and five keywords as well. Final manuscripts will be limited to 10 pages for regular/invited papers, 6 pages for short papers, 4 pages for fast abstract and position statements including all figures, tables, and references. Acceptance and final category depend on reviewer feedback. Extra page charges apply. The format of submitted papers must follow the IEEE conference proceedings guidelines (i.e., 8.5" x 11", Two-Column Format: PDF: instruct.pdf; DOC: instruct.doc); and Layout Guide (PDF: format.pdf; DOC: format.doc; all under <ftp://pubftp.computer.org/press/outgoing/proceedings/>).

Further Info

Additional information on "Call for Papers", "Call for Competition", and paper submissions may be obtained at the IJRCS 2009 web site at <http://www.ijrcs.org>. The previous event in this series was the International Joint Robotics Competition (IJRC 2008) organized by and held in the hosting of Eastern Mediterranean University (www.ijrc2008.org).

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