

RiTA 2012

The 1st International Conference on Robot Intelligence Technology and Applications 2012

Kimdaejung Convention Center, Gwangju, Korea

December 16 - 18, 2012

www.rita2012.org

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Organized by



International Robot Olympiad Committee

Technically co-sponsored by



Institute of Control, Robotics and Systems
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Welcome to RiTA 2012

The First International Conference on Robot Intelligence Technology and Applications (RiTA 2012) will be held at the Kimdaejung Convention Center, Gwangju, Korea on December 16 - 18, 2012. RiTA 2012 will be held in conjunction with the 14th 2012 International Robot Olympiad (IRO). IRO is an annual event for youths to build their dreams of being creative robotic scientists of the future. Kimdaejung Convention Center is located in the heart of southern west region in Korea, which is famous for its rich and diverse Korean cuisine.

Intelligence Technology (IT) is very important to implement robots and intelligent systems because they do not possess such knowledge and intelligence as humans to use the data and information properly. IT will play a key role in enhancing our life in the future. The conference topics focus on challenging aspects in the next generation of robot intelligence technology and applications. RiTA 2012 will provide informative time to students and professionals from academia, enterprise, and research institutes.

Conference Scope

Topics of the conference include, but are not limited to:

Cognitive intelligence: Multi-criteria decision making, Task scheduling, Memory management, Fuzzy reasoning, Neural network, Robot-learning system, Reasoning strategies, Brain models / cognitive science

Social intelligence: Human-robot interaction, Human-machine interface/integration, Teleoperation /telerobotics/haptics, Human biology and biomechanics, Markets and computational societies

Behavioral intelligence: Kinematics/dynamics/control, Task/motion/trajectory planning, Mobile/humanoid/micro/nano robotics, Neuroscience based control, Neurobotics, CPG-based control, Physiologic signals integrated robot control

Ambient intelligence: Sensor integration/fusion/perception, Multisensor data fusion, Navigation/SLAM/localization, Distributed intelligent algorithms and techniques

Collective intelligence: Multi-robot systems, Cellular/distributed/cooperating robotics, Learning and hybrid systems, Human knowledge discovery, Modelling and system, Swam intelligence

Genetic intelligence: Computational intelligence, Evolutionary algorithm, Evolutionary robotics, Mimetic algorithm, Immune algorithm

Applications: Intelligent agents, Computer vision, Virtual reality, Augmented reality, Signal processing, Military, Surveillance, Medicine, Pattern recognition, Face recognition, Finger print recognition, Finance and marketing, Stock market, Education, Emerging applications, etc.

Important Dates

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| • Invited Session Proposal | June 18, 2012 |
| • Contributed Paper Submission | June 30, 2012 |
| • Acceptance Notification | September 21, 2012 |
| • Final Paper Submission | October 22, 2012 |

Paper Submission and Publication

Papers should be submitted through the conference website. Paper length should be four pages with the possibility of extending by a maximum of two additional pages. The submitted papers are subject to a rigorous peer review by at least two referees for their technical and practical contributions. All of accepted and presented papers will be published in the series Advances in Intelligent and Soft Computing of Springer, which is indexed by ISI Proceedings, DBLP, Ulrich's, EI-Compendex, SCOPUS, Springerlink. At least one author of each paper must register for the conference in order for the paper to be included in the conference proceedings.

Call for Tutorials & Workshops

Tutorials and workshops provide short intensifying lectures to students. Proposals for tutorials and workshops that address topics related to the conference topics are welcome to be submitted by **June 30, 2012**. A proposal shall include the tutorial title, 500 words abstract, a brief statement of purpose, contact information with a photo.

About Gwangju

Gwangju is located in the western south region in Korea, as one of the most leading industrial cities, It is putting forth strength fostering high-tech industry with improving automobile and electronics industry; Kia Motors, Samsung Electronics, Kumho Tires. Gwangju has been recognized as a city of democracy, human rights, and peace. Gwangju, with its harmony among culture, nature, and industry, has tried to realize the dream of being a global city that attracts attention in the 21st Century.

Call for Papers

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Behavioral Intelligence • Ambient Intelligence
Collective Intelligence • Genetic Intelligence

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IEEE Computational Intelligence Society
Institute of Control, Robotics and Systems
Gwangju Technopark
National Robotics Research Center for Robot Intelligence Technology



Robot Intelligence Technology will build up your dream. Join us for RiTA 2012 and enjoy the local flavor of Gwangju.

For more information, contact RiTA2012 Secretariat
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