

Special Issue on Disaster Response Robotics

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Disaster response robotics is an important and growing application domain in robotics. Robotics researchers and the general public are increasingly aware of disaster response and rescue robotics due to the presence of disaster response robots at the Fukushima Daiichi Nuclear power plant.

Research in disaster response robotics focuses on core areas related to safety, security, and rescue applications toward disaster response, mitigation and recovery; rapid and secure inspection of critical infrastructure, detection of chemical, biological and radiological risks, and ongoing operation in dangerous and hazardous domains. Researchers have proposed various solutions toward these applications using robotics technologies including: mechatronics, sensing and recognition, SLAM, tele-robotics, human interface, and communication.

This special issue aims to provide a comprehensive overview of this active research area with the latest results on disaster response robotics systems and technologies. Therefore, we solicit technical papers on all aspects of disaster response robotics including, but not limited to, the following topics:

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| * Assessment, care and extraction | * Inspection of critical infrastructure | * Structural assessment |
| * Chemical, biological, or radiological events | * Manipulation | * Tele-robotics |
| * Computer vision | * Navigation and mapping | * Unmanned ground, aerial, and marine vehicles |
| * Humanitarian demining | * Nuclear decommissioning | * Urban search and rescue |
| * Humanoid robots | * Sensing and sensor fusion | * Wild-land fire fighting |
| * Human-robot interaction | * SLAM in extreme environments | |

We encourage submissions that present systems and technologies deployed in the field toward safety, security and rescue applications. Our emphasis is on systems and technologies that fulfill a specific real world task.

Submission: Your complete manuscript (either PDF file or MS word file) should be submitted by February 28 2014 to the office of Advanced Robotics, the Robotics Society of Japan through our homepage (http://www.rsj.or.jp/advanced_e/submission). Instruction to the authors and the sample formats of the manuscript are also available there. Please send the copy to Prof. Kazunori Ohno (kazunori@rm.is.tohoku.ac.jp) as well for the confirmation.