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**Special Session on  
“Robot Behavior Control and Environmental Sensing”**

**organized by**

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Abstract of proposed special session:

Robotic system is necessary for exploration of disaster sites and unmanned construction. To effectively achieve teleoperation tasks, human operators of robots need information of surrounding environment and robot itself. Moreover, in recent years, importance of autonomy and intelligence of robot are also increased in disaster response situation. Autonomous robot and intelligent technology also need environmental information. In this session, researches on robot behavior control and environmental sensing are introduced from the aspect of autonomous system, machine learning and sensing technologies to support for disaster response and unmanned construction.

Brief description of the area of interest with special focus on why we should believe this is an interesting and significant topic?

Recently, demand for robotic system is rising rapidly due to large number of calls for disaster responses such as decommissioning of nuclear power plants and unmanned construction for recovery after natural disaster. To achieve these

missions, wide variety of specialities are required. Potential authors of this special session are chosen from several kinds of fields on robotic teleoperation such as nuclear professional, autonomous robot and environmental sensing. Furthermore, the topics for the disaster response are gathering social attention. We believe the topics of this session will interest not only researchers of robotics but also ones of other fields.

Topics of interest include, but are not limited to:

- Environmental sensing
- Robotic teleoperation
- Robotic control
- Autonomous robots
- Surveying in disaster site
- Decommissioning
- Unmanned construction

**Submissions Procedure:** All the instructions for paper submission are included in the conference website <https://sice-si.org/conf/SII2020/papersubmission.html>.