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Journal of Robotics and Mechatronics

Special Issue on "Autonomous Robotics Challenge"
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Focus: The Tsukuba Challenge, launched in 2007, has seen an increasing number of robots accomplish their assigned tasks as the performance of their autonomous navigation systems has improved. This improved performance has mainly stemmed from 3D Lidar systems that have been realized using high-performance electronic devices, and advanced control technologies that take advantage of these systems. To further promote the coexistence of robots with human beings, additional tasks, such as searching, crossing a crosswalk, etc., have been assigned to robots over time, but it has been found that they still have some difficulty operating securely when the seasons or weather conditions change. While autonomous control technologies using self-localization by means of obstacle maps have become more or less established, what is now needed is the human resource training for technological succession to be made compatible with the research progress. Also, the Nakanoshima Robot Challenge has encouraged the research and development of autonomous trash collection robots that are intended for use at the Osaka-Kansai Japan Expo 2025. As both Challenges' final runs were completed in 2022, it is now time to collate the data collected during these experiments.

This special issue on "Autonomous Robotics Challenge" aims to help improve autonomous robotics by analyzing and sharing the essence of successes and/or failures experienced in controlling autonomous mobile robots. In the above-mentioned context, you, whether a Challenge participant or an autonomous mobile robot researcher, are cordially invited to contribute your papers to this special issue.

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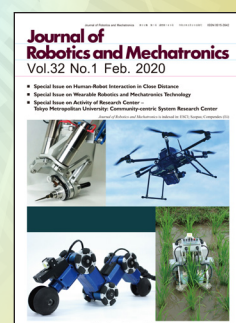|	
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Submission/Contact to:

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♦ Papers should be submitted in Microsoft Word or PDF format. Details on submission and the journal are available at the following link: **https://www.fujipress.jp/jrm/rb/**

♦ Submissions can be either Japanese or English. Submissions in Japanese will be translated by the publisher and used after being proofread by the author.

♦ Papers submitted to this special issue will undergo our usual review process. Paper may be published in general issues based on review results.