
ADVANCED ROBOTICS **Call for Papers**

Special Issue on Online Motion Planning and Model Predictive Control

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Motion planning has been an active field of robotics research for decades. Moreover, thanks to the rapid improvement of computation power, model predictive control, which performs trajectory optimization inside the real-time control loop, has become a practical solution for robot control. Today, robots are requested to perform various complex tasks in dynamic environments, sometimes in cooperation with humans. This ever-growing demand has raised a number of new research topics such as multi-contact motion planning, failure detection and replanning. In this special issue, we are inviting readers to submit papers on motion planning, model predictive control, and their applications. The interest topic of this special issue include:

- Motion planning and trajectory generation of various types of robots (e.g., humanoids, mobile robots)
- Motion planning for robotic manipulation and assembly, multi-contact motion planning
- Linear, nonlinear, and stochastic model predictive control
- Optimization algorithms for motion planning and model predictive control
- Integration of motion planning with perception and control, failure detection and replanning

Submission: The full-length manuscript (either PDF file or MS word file) should be sent by **31st May, 2022** to the office of Advanced Robotics, the Robotics Society of Japan through the on-line submission system of the journal (<https://www.rsj.or.jp/AR/submission>). Sample manuscript templates and detailed instructions for authors are available at the website of the journal.