

CALL FOR PAPERS IEEE Sensors Journal Special issue on

Advanced Sensors and Sensing Technologies in Robotics

As the window for a robot to the environment, sensors allow robots to understand and measure the geometric and physical properties of objects in their surrounding environment, such as position, orientation, velocity, acceleration, distance, size, force, moment, temperature, luminance, weight, etc. Although sensing technologies are used in various robots to avoid uncertainty and achieve higher efficiency, the robotic systems demand requires more flexibility and even more reliable sensor solutions in the fields of robot vision, safe robotics, medical robotics, end-of-arm tooling, and position feedback, etc. Hence, advanced sensors and sensing technology will continue to be the foundation for data collection that will help transform robotics into the connected, safe, cost-effective, and reliable digital infrastructure of the future.

It is intended that this Special Issue of the IEEE Sensors Journal will show the state-of-the-art in sensors and sensing technologies in robotics. Original research contributions, tutorials and review papers are sought in sensors and sensing technologies in robotics related areas including (but not limited to):

- Novel robotic sensors assisted by artificial intelligence, cognitive computing, machine learning and other innovative approaches
- Position, range, heading, velocity and other sensors for enhancing robotic movements
- Force, proximity, accelerometers, gyroscopes, and other advanced sensors for improving the precision of robotics
- Tactile and other sensors for providing robotics with intelligence and interactive ability
- Reliable sensors for ensuring the safety of robotics
- Context-aware sensors and sensing technologies for robotics
- Collaborative sensors and sensing technologies for complex robotic tasks
- Networked sensors and sensing technologies for enabling the connectivity of robotics

Solicited and invited papers shall undergo the standard IEEE Sensors Journal peer review process. All manuscripts must be submitted on-line, via the *IEEE Manuscript Central™*, see <http://mc.manuscriptcentral.com/sensors>. When submitting, please indicate in the “Manuscript Type” roll down menu, and also by e-mail to Ms. Leigh Ann Testa, testa.l@ieee.org, that the paper is intended for the “Advanced Sensors and Sensing Technologies in Robotics” Special Issue. Authors are particularly encouraged to **suggest names of potential reviewers** for their manuscripts in the space provided for these recommendations in *Manuscript Central*. For manuscript preparation and submission, please follow the guidelines in the *Information for Authors* at the IEEE Sensors Journal web page, <http://www.ieee-sensors.org/journals>

Deadlines:

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| • Manuscript Submission: | December 1, 2020 |
| • Notification of Acceptance: | March 1, 2021 |
| • Final Manuscript published in IEEExplore: | July 2021 |

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