Special Issue

Advanced Control and Sensing Technologies for Intelligent Underwater Systems

Message from the Guest Editors

With the rapid advancement of intelligent underwater unmanned systems, achieving high autonomy, robustness, and adaptability in unstructured marine environments has become critical. Advanced control and perception technologies are central to enabling real-time sensing, intelligent decision-making, and autonomous operation. This Special Issue highlights cutting-edge research in control and perception for underwater systems, including:

- Sensor fusion and multi-modal perception
- Distributed/swarm control and autonomous navigation
- Model predictive control (MPC) and learning-based adaptive control
- Real-time signal processing and bionic perception methods
- New propulsion systems and motion planning

These technologies enhance underwater navigation, inspection, manipulation, and environmental interaction in complex conditions. We invite original research on theoretical advances, algorithms, simulations, and experimental validations, particularly studies involving field tests or sea trials. This issue aims to foster cross-disciplinary collaboration in control theory, robotics, AI, and ocean engineering, driving innovation in next-generation autonomous underwater systems.

Guest Editors

Dr. Yang Luo

Prof. Dr. Yong Cao

Prof. Dr. Feihu Zhang

Deadline for manuscript submissions

20 February 2026

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/248449

Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

mdpi.com/journal/applsci

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/journal/applsci

MDPI

About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)