



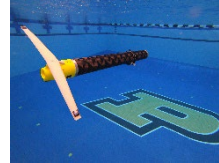
OCTOBER 1 - 5, 2023

IEEE/RSJ International Conference on
Intelligent Robots and Systems

2nd Advanced Marine Robotics TC Workshop

Towards Long-term Marine Robotics

Huntington Place, Detroit, Michigan, USA.
October 1, 2023



For the development of the human society, there are extensive opportunities for robots to work long-term in the vast marine environment, e.g. for observation, transportation, environment protection, etc. Significant challenges exist as well, e.g. in autonomy, energy, communication, robustness, and so forth.

To advocate the research for long-term marine robotics, this workshop will gather scholars in areas of robot design, perception, control, energy, planning, human-robot interaction, etc., to share their insights on how to enable marine robots to arrive at remote locations, explore for a longer time, become more autonomous, overcome faults, perceive and so forth. Young researchers will also present their latest discoveries in workshop papers. In the final discussions, speakers and audiences will interact and brainstorm how to enable marine robots for long-term functionalities.

This workshop will provide a platform for marine robotic researchers at various career stages to exchange ideas so as to enable robots for long-term marine applications. It will also elaborate on opportunities and challenges in marine robotics so as to inspire and attract researchers in other robotic fields to join the collaboration.

ORGANIZERS

- Prof. Francesco Maurelli, Constructor University, Germany (Co-Chair of TC in Marine Robotics)
- Prof. Huihuan Qian (Alex), The Chinese University of Hong Kong - Shenzhen, China
- Prof. Nina Mahmoudian, Purdue University, USA
- Dr. Hyun-Taek Choi, Korea Research Institute of Ships and Ocean Engineering, Korea (Co-Chair of TC in Marine Robotics)

LIST OF INVITED SPEAKERS

Invited speakers include:

- Prof. Fumin Zhang, Georgia Institute of Technology, USA (Co-Chair of TC in Marine Robotics)
- Prof. John Leonard, Massachusetts Institute of Technology, USA
- Prof. João Sousa, University of Porto, Portugal
- Prof. Ralf Bachmayer, University of Bremen, Germany
- Prof. Erdal Kayacan, Aarhus University, Denmark
- Prof. Lantao Liu, Indiana University, USA
- Prof. Corina Barbalata, Louisiana State University, USA
- Dr. Gabriele Ferri, NATO STO-CMRE - Centre for Maritime Research and Experimentation, Italy

LIST OF TOPICS

The topics of interest include, but are not limited to:

- Robot design and control for long-term functionalities
- Robotic perception of various marine signals
- Cognition to enable robotic autonomy in the ocean for various tasks
- Human-robot interaction to cope with complex tasks
- Energy harvesting, recharging and management for robot sustainability

SHORT PAPER SUBMISSION

We encourage 3(min)-4 pages extended abstract of relevant work on the topics, in the format of IEEE conference paper template:

<https://www.ieee.org/conferences/publishing/templates.html>.

New ideas, concepts, discoveries, etc. will be prioritized.

The authors can submit via email to:

iros2023-marinerobotics@googlegroups.com. The organizers will review them according to their relevance, technical quality, and ethics. All the accepted papers will appear in the poster session and will be documented on the workshop website (not the official IEEE proceedings). To promote the interaction, we allocate an extra 4-5 minutes introductory time slot for the selected papers.

IMPORTANT DATES

- Paper submission deadline: **August 10, 2023**
- Notification of acceptance: **August 20, 2023**
- Final submission: **August 31, 2023**

JOURNAL SPECIAL ISSUE

Selected contributions will be invited to submit an extended version for consideration for a Special Issue for a Journal - currently under arrangement.



Website: <https://crai.cuhk.edu.cn/event/MarineRoboticsWorkshop>
Enquiry: iros2023-marinerobotics@googlegroups.com