



*The 16th International Conference on Intelligent  
Robotics and Applications (ICIRA 2023)*

*July 5-7, 2023 in Hangzhou, China*

**ICIRA 2023 Special Session Proposal**

**Title of the Proposal: Marine Robotics and Applications**

**Technical Outline of the Session and Topics:**

Outline of the Session: Ocean exploration and protection rely heavily on robotic systems. These robots are widely used for data collection and surveys, offering scientists improved access to the ocean and a better understanding of the marine environment. This session focuses on innovative research related to, but not limited to, robot design and analysis, modeling and simulation, communication, perception, dynamics and control, and mobile manipulation of marine robotic systems (e.g., autonomous underwater vehicles, underwater gliders, surface vehicles, and intelligent floats), as well as their applications.

**Topics of the Session:**

- *Biomimetic and bioinspired marine robots*
- *Marine robot designs and analysis*
- *Dynamics and controls of marine robots*
- *Underwater communication and perception*
- *Guidance, navigation, and control technologies*
- *Collaborative operations of marine robots*
- *Applications of marine robots*

**Contact details of the Session Organizers**

- *Organizer 1: He Shen, Northwestern Polytechnical University, shenhe@nwpu.edu.cn*
- *Organizer 2: Jian Gao, Northwestern Polytechnical University, jiangao@nwpu.edu.cn*
- *Organizer 3: Zhengxing Wu, University of Chinese Academy of Sciences, zhengxing.wu@ia.ac.cn*
- *Organizer 4: Gang Wang, Harbin Engineering University, wanggang@hrbeu.edu.cn*