

Special Session on: Navigation, Guidance and Control Technology for Unmanned Marine Vehicle

With the development of science and the expansion of oceanic applications, unmanned marine vehicle (includes unmanned surface water vehicle, UUV and unmanned underwater vehicle, USV) has been widely used in the field of ocean observation, maritime rescue, mine countermeasures, and intelligence reconnaissance, etc. Nevertheless, the existing technology cannot satisfy the requirements when completing efficient and large-scale task. Some key challenges and unresolved problems still remain, which limit the unmanned marine vehicle applications. In recent years, new technologies such as autonomous navigation and cooperative positioning have provided new solutions for complex ocean missions due to their characteristic of high efficiency and reliability.

In this scenario, this special session is timely to show the up-to-date improvement of navigation, guidance and control for unmanned marine vehicle. Topics of interest include, but are not limited to, trends, design, technology and applications in the following sectors:

- Topic A: New technology of unmanned marine vehicle navigation
- Topic B: Unmanned marine vehicle guidance and control
- Topic C: Cooperative search and positioning of unmanned marine vehicle system
- Topic D: Formation control of unmanned marine vehicle system
- Topic E: Trajectory planning and task assignment for unmanned marine vehicle
- Topic F: Control method of ultra-high-speed marine vehicle

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特邀专题: 无人海洋航行器导航、制导与控制技术

随着科技的发展以及海洋探索的深入,无人海洋航行器在海洋观测、海上救援、雷区搜索、敌情侦测等领域得到广泛应用。然而当面对高时效、大范围的任务需求时,现有无人海洋航行器自主控制技术将面临新的挑战,并且还有很多技术亟待解决。近年来,自主导航、协同定位等新技术凭借其高效性和可靠性为复杂的海洋任务提供了新的解决思路。

本专题征集无人海洋航行器导航、制导与控制技术的相关领域的研究成果,投稿范围包括但不限于以下几个方面研究进展、技术以及应用:

- A: 无人海洋航行器导航新技术
- B: 无人海洋航行器制导与控制方法
- C: 无人海洋航行器系统协同搜索与定位
- D: 无人海洋航行器系统编队控制技术
- E: 无人海洋航行器轨迹规划与任务分配
- F: 超高速水下航行器控制方法

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