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Marine Dynamic Positioning System

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Message from the Guest Editors

Marine dynamic positioning system (DPS) has been widely employed in many floating vessels/platforms in the sea and is an important support technology for exploration and exploitation of oceanic resources. A DPS mainly consists of a position measurement system, control system, thrust allocation (TA) system and propulsion system. It is known that vessels/platforms equipped with a DPS use thrusters and main propellers to produce a desired thrust via azimuth/tunnel thrusters, as well as to control maneuvering. Thrust can compensate for environmental forces acting on the vessel/platform to maintain position and head as closely as required to some desired position in the horizontal plane. DPS has also become one of key technologies for Marine Autonomous Surface System.

This Special Issue will focus on recent developments in marine dynamic positioning system. Topics of interest include, but are not limited to:

- Advanced control strategy for DPS;
- Thrust allocation method for DPS;
- Low-level thruster controller for DPS;
- Hydrodynamic performance analysis method for DPS;
- Cooperative control for DPS;
- Hybrid control for DPS;
- Decision making strategy for DP vessels;
- Case studies.

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Message from the Editor-in-Chief

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