

## CFD METHODS FOR SELF-PROPULSION AND MANOEUVRING

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### ABSTRACT

In this session, authors specializing in CFD methods for self-propulsion and maneuvering in ship hydrodynamics are encouraged to present their works and achievements.

Regarding self-propulsion, the focus should be on assessing the complex flow phenomena resulting from hull-propeller interaction. This includes accurately modeling Energy Saving Devices (ESDs) such as pre-swirl devices and PBCF to enhance overall ship performance and predict power requirements more accurately.

Additionally, research topics addressing aerodynamic and hydrodynamic interactions for ship motion, such as Wind Assisted Ship Propulsion (WASP) and similar propulsion systems, are welcome in this session.

Furthermore, ship maneuvering CFD methodologies for both free-running and forced motion tests should be covered. This includes directly and explicitly modeling rudder and propeller components, as well as employing other methods such as data-driven and regression models to derive hydrodynamic forces acting on the hull.