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APPLICATIONS OF CFD IN SHIP RESISTANCE AND SEAKEEPING

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ABSTRACT

The use of Computational Fluid Dynamics (CFD) has matured into a useful tool for the design and analysis of marine structures. Continued technological advancements have meant that the Navier-Stokes equations can now be used to model the flow around structures routinely with high accuracy. It is important to harness the power of CFD, especially the advantages it offers in some particular cases over alternatives, such as experimentation and potential flow methods.

This session aims to provide a forum for researchers and engineers from academia and industry working in the field of ship hydrodynamics to share their results and latest findings. Participants are invited to submit their novel papers concerning ship resistance, including studies on resistance prediction and extrapolation, shallow water simulations, ship-bank and ship-ship interactions. Researchers and engineers studying the seakeeping behaviour of ships using CFD are also invited to submit their work, including behaviour in regular and irregular waves and behaviour in extreme seas. Alongside these, papers on the added resistance of ships due to waves and hull roughness using CFD are also invited.