

Violent fluid motions, high speed marine vehicles and Computational Fluid Dynamics (CFD) are selected as main topics. Violent fluid motions deal with green water on deck, sloshing and slamming. Slamming involves many physical effects. When analyzing slamming, one must always have the structural reaction in mind. This necessitates that hydroelastic effects are considered. Many hydrodynamic phenomena matter for the three main categories of highspeed vessels, i.e., vessels supported by the hull, foils and air cushions. Dynamic instabilities, cavitation and ventilation are limiting factors for their performance. The coupling with automatic control is discussed. A brief overview of the many different CFD methods is given and advantages and disadvantages are discussed.