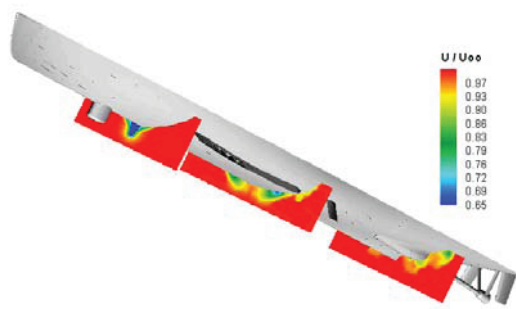


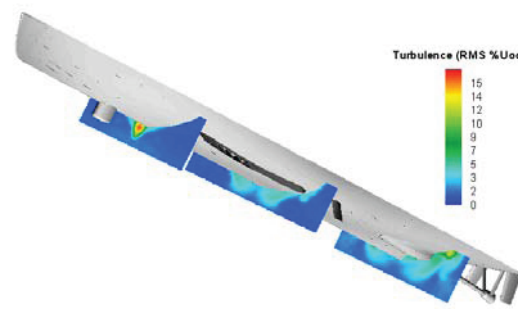
Mean and Turbulent Flow Field in the Wake of a Ship Model by LDV

Felli, M.¹⁾ and Di Felice, F.¹⁾

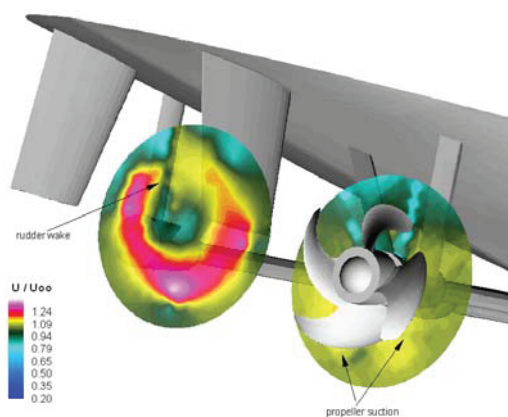
1) INSEAN, Italian Ship Model Basin, Via di Vallerano, 139, 00128, Rome, Italy



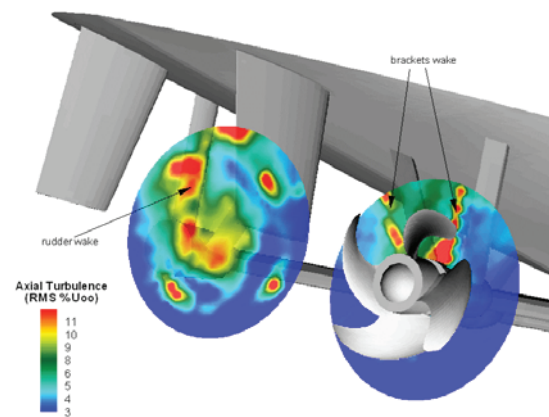
Axial velocity evolution
(bow and midship frames)



Axial turbulence evolution
(bow and midship frames)



Axial velocity evolution (stern frames)



Axial turbulence evolution (stern frames)

The above figures show some of the results of a wake survey performed along a ship model in a large tow tank. Wake analysis was carried out along five transversal sections of the hull using an LDV system. Measurements included a standard analysis of the average and turbulent velocity field and phase analysis with the propeller angular position (which was limited to the stern sections). The analysis emphasizes some significant features of the ship wake, such as bulbous bow and the ship appendage vortices evolution. The adoption of phase sampling techniques indicated a complex interaction between the propeller and the hull wake downstream from the rudder and the shaft brackets.