Software Lab

Main Objective:

Ship hull simulation allows for prediction and analysis of it's hydrodynamic performance and optimize design in order to, reduce drag, and enhance maneuverability, of vessels.
The JBC (Japanese Bulk Carrier) is a notable ship hull that has undergone numerous productions and thorough analyses.

* Please use K-Omega SST turbulence model.
* Please use interfoam solver with steady state time discretization

Task	Estimated duration
Familiarization and Execution of Tutorials DTChall (https://develop.openfoam.com/Development/openfoam/-/tree/master/tutorials/multiphase/interFoam/RAS/DTCHull)	2 Week
Familiarization and Configuration of Sampling Post-process in OpenFOAM (residuals, pressure distribution, forces, velocity field)	
Developing 3D mesh and preparing the JBC hull case for simpleFoam solver	2 Week
Running the Case with simpleFoam U=14.5(knots) and Reporting Results	3 Week
Running the Case with interfoam U=14.5(knots) and Reporting Results	3 Week
Preparing Materials (Contours, Diagrams, Graphs, Tables) and Writing Final Report	4 Weeks
Summation:	14 Weeks

Meeting Schedule:
Weekly Meeting with Mehrdad Kazemi:
Day: Every Wednesday, Time: 16:30, Location: Room 104
Progress Report Meetings with Prof. Kornev:
Frequency: Twice every month, Starting: 06/2024

Contact information:

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