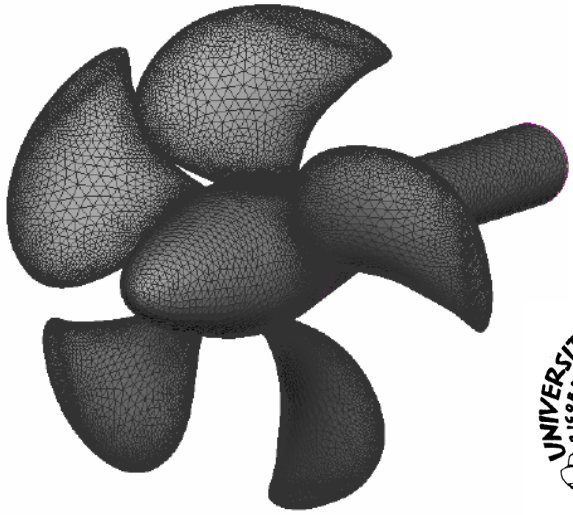
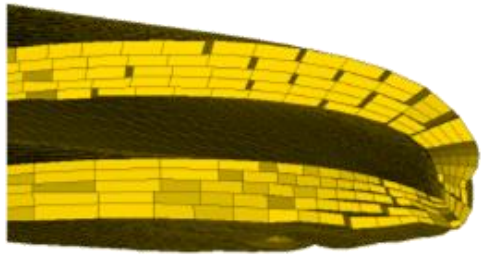
Numerical predictions of the PPTC propeller performance

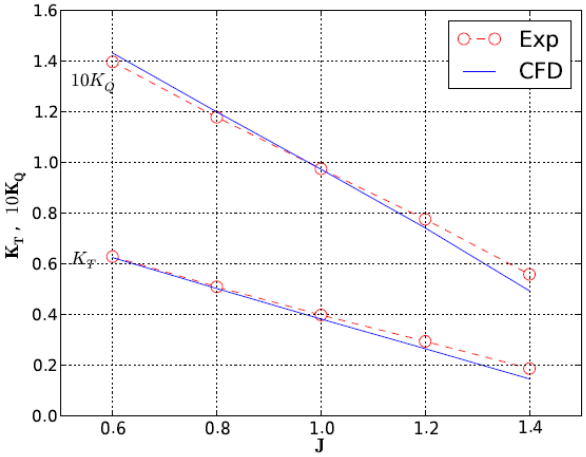
Challenge: To investigate the performance of a model scale marine propeller using OpenFOAM

Approach: ANSA was used to prepare and mesh the geometry of the propeller.
Stationary and MRF domains were created.
A curvature dependent mesh was generated using the CFD meshing algorithm. Prismatic layers and tetrahedral mesh were created, satisfying the quality criteria of OpenFOAM.
The case was setup and run using MRFSimpleFOAM

Results: A very good comparison between the experimental and CFD results with OpenFOAM was obtained







"After a short period of self-learning, we concluded that ANSA is a very powerful software through which it is possible to control in a very detailed way the generation of optimum quality surface and volume mesh"
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