# Applied Programming I

**Project #3** **Jan. 17, 2013**

**Ver. 4.0**

**Program:**

Upgrade the VFortran computer program that your group prepared in project 2 (including dialog boxes) to produce plots of the $K_T$, $K_Q$ and $\eta_o$ coefficients, and, the geometry of a Wageningen B-Series propeller. The source code of the subroutine to generate the graphs must be included as an appendix of the report.

**Competition:**

Since all groups are developing the same program, it is established a competition between them. So, try to improve your program the best you can:

- Present plots in an elegant way.
- Include calculations of Bollard pull and required Torque.
- Include calculation of required *N* to overcome the Resistance *R* at a certain ship velocity *v*, given wake and Thrust deduction factors, *w* and *t*.
- Produce dxf files of your plots.
- Include security/password for program.
- Change the icon of your program.
- … You may talk to other faculty for more ideas.

**Grading:**

The grade will be assigned according to:

- Written report (Aestethics, table of content, numbering, organization of material, references). (36%)
- Oral presentation (15 minutes). (24%)
- Quality of program (Quality of plots and calculations, research and new ideas, etc.). (40%)

**Do not forget: you must report # of hours employed to complete the project.**

**Deadline:** PPoints files with presentations: Thursday 24th at noon; first version of reports: Friday 25th of January, before oral presentations. This first version will be reviewed by the instructor and returned by Monday afternoon. Final report (it cannot be longer than 10 pages plus the source codes): 9h30 am Thursday 31th of January.

jrml/2013