The enclosed matlab-scripts have been used for analysing the measurements and PIV images produced in the experiments for my master thesis. They are very specifically tailored for my experiments and are perhaps not very user-friendly, but they may still be of some help for others planning to do similar tests. To understand how they work, reading my master thesis will probably help.

7th June 2013
Leiv Aspelund

Catman-results

selection.m reads ascII-files from catman and plots the time series specified by user. The user then has to select time intervals used in further analysis and store start and stop times in a text-file.

analysis.m produces wave elevation RAO's while analysis_force.m produces force transfer functions (analysis.m must have been run first).

PIV

piv_batch.m is a batch script designed to work with the parameter-files defined in *PIVview2C*

piv_import.m reads the results from the analysed piv-images and stores them in binary matlab-files which are much quicker to open later

piv_open.m opens the aforementioned binary files

piv_correctmotion.m makes the results ready for plotting and applies time-smoothing

piv_plot.m plots movies of piv velocity fields while piv_plotvelocity.m plots velocity lines

piv_phase.m applies phase-averaging to the results

piv_plotphase.m is similar to piv_plot.m but is made for the phase-averaged results

piv_snapplot.m plots snapshots of a cycle