Homework 2

- A so-called **Wigley hull-surface** is defined by the following equation:

$$\eta = \pm\left(2\zeta - \zeta^2\right)\cdot\left(1 - \xi^2\right)\cdot\left(1 + a_2\xi^2 + a_4\xi^4\right)$$

where $\xi = x/(L/2)$ with $-1 \le \xi \le +1,$ positive forwards.

$\eta = y/(B/2)$ with $-1 \le \eta \le +1,$ positive to starboard side.

$\zeta = z/(D)$ with $0 \le \zeta \le +1,$ positive upward.

- $L = 100$ m, $B = 16$ m, $D = 8$ m, $T = 6$ and $a_2 = a_4 = 1/2$.
- Calculate @ $T = 1, 2, 3, 4, 5, 6$ m with no trim.
- To do:
    1. Construct the hydrostatic data table. (Table. 4.2, p105)
    2. Plot the hydrostatic curves. (Fig. 4.2, p100)
    3. Plot the curves of the coefficients of form. (Fig. 4.3, p107)
    4. Plot the Bonjean curves. (Fig. 4.5, p110)