Three and two dimensional nonlinear free surface flows

Jean-Marc Vanden-Broeck
University of East Anglia, Norwich

Nonlinear free surface flows are considered. The fluids are assumed to be inviscid and incompressible. Boundary integral methods are used to compute three dimensional gravity capillary free surface flows and two dimensional flows at the interface between two fluids of different densities. Numerical evidence of the existence of three dimensional gravity capillary solitary waves is presented. In addition new types of interfacial flows are discussed.