Evolution of Modulated Gravity Waves in Water of Finite Depth

DAVID ROLLINS, BHIMSEN SHIVAMOGGI, University of Central Florida — Evolution of a gravity wavetrain in water of finite depth is considered. It is shown that the dynamics can be distinguished as pseudo-infinite depth like and finite-depth like in the weakly-nonlinear limit. Two specific aspects of the weakly-nonlinear dynamics, namely, the linear instability and the long-time evolution of the linearly-unstable modulation of a gravity wavetrain are considered.