Abstract Submitted for the DFD13 Meeting of The American Physical Society

Capillary Gravity Waves over an Obstruction - Forced Generalized KdV equation JEONGWHAN CHOI, Korea University, S.I. WHANG, Ajou University, SHU-MING SUN, Virginia Tech — Capillary gravity surface waves of an ideal fluid flow over an obstruction is considered. When the Bond number is near the critical value 1/3, a forced generalized KdV equation of fifth order is derived. We study the equation analytically and numerically. Existence and stability of solutions are studied and new types of numerical solutions are found.

> Jeongwhan Choi Korea University

Date submitted: 01 Aug 2013

Electronic form version 1.4