

Abstract Submitted
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Transverse instability and viscous dissipation of forced 3-D gravity-capillary solitary waves on deep water¹ YEUNWOO CHO, Korea Advanced Institute of Science and Technology — The shedding phenomena of 3-D viscous gravity-capillary solitary waves generated by a moving air-forcing on the surface of deep water are investigated. Near the resonance where the forcing speed is close to 23 cm/s, two kinds of shedding modes are possible; Anti-symmetric and symmetric modes. A relevant theoretical model equation is numerically solved for the identification of shedding of solitary waves, and is analytically studied in terms of their linear stability to transverse perturbations. Furthermore, by tracing trajectories of shed solitary waves, the decay rate of a 3-D solitary wave due to viscous dissipation is estimated.

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Yeunwoo Cho
Korea Advanced Institute of Science and Technology

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