Abstract

Modeling the tsunami simulation is very important as a result of the phenomenon that needs to be anticipated. The most important of tsunami modeling is the process of tsunami wave runup. The numerical simulation of wave runup is not easy to do, because there is a discontinuity solution from the wet domain to the dry domain. In this final project, the mathematical model used to simulate wave runup is Variational Boussinesq Model(VBM). VBM will be implemented numerically by using Finite Volume with Staggered Grid scheme and upwind scheme. Implementation with Staggered Grid is used because more easier to model wave runup. The result of numerical simulation will be compared with experimental data from hydrodynamics laboratory.

Keywords: Runup, Variational Boussinesq Model, Finite Volume.