

WAVE-STRUCTURE INTERACTION USING FREE SURFACE LATTICE BOLTZMANN METHOD(FSLBM)

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Abstract: *In the present study, we have developed the free surface LBM (FSLBM) algorithm for wave-structure interaction flow problem. Standard Single Relaxation Time (SRT) approximation with the Bhatnagar-Gross-Krook (BGK) collision model were used. In addition, a Smagorinsky Large Eddy Simulation (LES) Model was implemented in order to capture turbulent structure in the flow. From the results, a good agreement was yielded with the published results and it provided a validation benchmark to qualitatively verify the proposed approach.*