



Numerical modeling of interaction between long surface waves and floating elastic body.

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The method of numerical modeling of interaction of long surface waves with a very large floating structure is developed. As mathematical model the Boussinesq class equations together with a linear beam theory for floating body are considered. The numerical algorithms based on a method of finite differences are considered. Merits and demerits of explicit and implicit finite difference schemes are analyzed. Numerical experiments in a wide range of the parameters describing physical and geometrical properties of a body are carried out. The method developed is applicable for studying interaction between tsunami and artificial island and other manmade structures.