INTERACTION BETWEEN ELASTIC BODY AND ACOUSTIC WAVE

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ABSTRACT. Fluid-structure interactions(FSI) become recently one of the most challenging multiphysics problems, with respect to computational mathematics. In this presentation, we consider interaction between elastic body and acoustic wave field as follows: An elastic body is to be defined in a bounded inner domain, while a acoustic wave field is to be defined in the unbounded exterior domain, which is filled up by an homogemous medium. The elastic body is coupled to the fluid via the smooth or nonsmooth interface. An incident acoustic waves are transmitted in the form of elastic displacements. And then the displacements cause the wave scattering to the acoustic wave field, so that the problem can be investigated with the absorbing boundary problem, which are coupled with the interface problem. key words: FSI, absorbing boundary, interface, elastic body, acoustic wave

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