

On a Fluid-Elastic Isotropic Cusped Plate Interaction Problem

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For the last decades the direct and inverse problems connected with the interaction between difference vector fields have received much attention in the mathematical and engineering scientific literature and have been intensively investigated. They arise in many physical and mechanical models describing the interaction of two different media. A lot of authors have considered and studied in details the direct problems of interaction between an elastic isotropic body occupying a bounded region $\bar{\Omega}$ with a smooth boundary and some isotropic medium occupying the unbounded exterior region, namely the compliment of Ω with respect to the whole space. Our aim is to determine transmission conditions for thin elastic cusped plate-incompressible fluid interaction problems and to investigate the corresponding problem of vibration of a plate caused by the flow of the fluid.

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