

Detection of unknown boundaries and inclusions in elastic plates

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In this talk I review some recent results concerning inverse problems for thin elastic plates. The plate is assumed to be made by nonhomogeneous linearly elastic material belonging to a general class of anisotropy.

A first group of results concerns uniqueness and stability for the determination of unknown boundaries, including the cases of cavities and rigid inclusions, from overdetermined boundary measurements taken on an accessible part of the boundary of the plate.

In the second group of results, we consider upper and lower estimates of the area of unknown inclusions given in terms of the work exerted by a couple field applied at the boundary of the plate.