A geometric inverse problems in a medical imaging technique

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Abstract

We will consider geometric inverse problem for some PDEs motivated by Elastography, a medical imaging technique that allows to identify the elastic properties of tissues and can serve, among other things, to detect a tumor from non-invasive (external) measurements. We present several recent results and open questions concerning the uniqueness and numerical reconstruction of the unknown domain where the equations evolve. In the numerical experiments, we solve an appropriate optimization problems. We present some numerical results in the 2D and 3D cases.

References

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