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Title: A numerical reconstruction method for the inverse Calderon problem based on linearization.

Abstract: We present recent results on the numerical reconstruction of conductivities from boundary data in two dimensions. The main idea is to combine the linearization of the functional that relates conductivities to the so-called Dirichlet-to-Neumann map with an appropriate regularization of the resulting linearized problem. In this way, the problem is decomposed into a linear ill-posed component and a stable nonlinear one. Numerical examples illustrate the effectiveness of the method even for noisy data.