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A global stability estimate for the Gel'fand-Calderon problem in two dimensions.

Abstract: The aim of this talk is to present a global logarithmic stability estimate for the Gel'fand-Calderon inverse problem on a planar domain or, more precisely, the inverse boundary value problem for the Schrodinger equation on a bounded two-dimensional domain. This is a well-known subject thanks to its applications to Electrical Impedance Tomography (Calderon problem) and to Ultrasonic Tomography. Stability estimates for this problem, in the twodimensional case, were only known for potential with several restrictions; we explain how we removed these assumptions by developing recent techniques introduced by Bukhgeim. We will also review the history of this inverse problem and speak about future developments. This talk is based on the work [R. Novikov, M. Santacesaria, 2010].