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Lingyun Qiu* (qiu@purdue.edu), **Elena Beretta** and **Maarten de Hoop**. *Lipschitz stability of an inverse problem for a Schrödinger type equation.*

Consider the inverse problem of determining the potential q from the Neumann-to-Dirichlet map Λ_q of a Schrödinger type equation

$$\begin{cases} -(\Delta + q)u = 0, & \text{in } \Omega \\ u = g, & \text{on } \partial\Omega. \end{cases}$$

A relevant question, specially in applications, is the stability of the inversion. In this work, a Lipschitz type stability is established assuming a priori that q is piecewise constant with a bounded know number of unknown values. (Received September 15, 2011)