

The Calderón Problem for Variable Coefficients Nonlocal Elliptic Operator

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In this talk, the speaker and his collaborators introduce an inverse problem of a variable anisotropic fractional Schrödinger operator. They determine the unknown bounded potential from the exterior partial measurements associated with the nonlocal Dirichlet-to-Neumann map for any dimension greater or equal to 2. Their results generalize the recent result from Ghosh-Salo-Uhlmann of introducing and solving inverse problem for fractional Schrödinger equation. They also prove some regularity results of the direct problem corresponding to the variable coefficients fractional differential operator and the associated degenerate elliptic operator. This is a joint work with Tuhin Ghosh and Jingni Xiao.