

1049-43-131

Marius Beceanu and **Michael Goldberg*** (mikeg@math.jhu.edu), Department of Mathematics, Johns Hopkins University, 3400 N. Charles St, Baltimore, MD 21218. *An operator-valued Wiener inversion theorem leading to Schrödinger dispersive estimates.*

We prove an extension of the Wiener inversion theorem for the $\ell^1(\mathbb{Z})$ convolution algebra, allowing functions to take values in the space of bounded linear operators over any Banach space. One direct application is a dispersive estimate for Schrödinger operators $-\Delta + V(x)$ in \mathbb{R}^3 , using a class of potentials that is invariant under the natural inverse-square scaling law. (Received March 01, 2009)