

ON A MULTI-DIMENSIONAL VARIANT OF THE JOST AND PAIS FORMULA

In this talk I will present a multi-dimensional variant of the celebrated formula due to Jost and Pais, which reduces the Fredholm perturbation determinant associated with the Schrödinger operator on a half-line to a simple Wronski determinant of appropriate distributional solutions of the underlying Schrödinger equation. Our variant involves ratios of perturbation determinants corresponding to Schrödinger operators on an open set of \mathbb{R}^n with Dirichlet and Neumann boundary conditions and invokes the corresponding Dirichlet-to-Neumann map.

This talk is based on joint work with Fritz Gesztesy and Marius Mitrea.