Leibniz Universität Hannover

Oberseminar
Analysis und Theoretische Physik

Prof. Dr. Tomio Umeda

University of Hyogo

Schrödinger operators with *n* positive eigenvalues: an explicit construction of complexvalued potentials of von Neumann-Wigner type

I begin with a brief review of the research history on von Neumann-Wigner type potentials. The studies for the Schrödinger operators of this type have been made mainly for the real-valued potentials which give rise one embedded eigenvalue in the continuum of the spectra.

In this talk, we propose a simple and explicit construction for embedding n positive eigenvalues in the spectrum of a Schrödinger operator on the half-line with a Dirichlet boundary condition at the origin. The resulting potential V is of von Neumann-Wigner type, but can be real- as well as complex-valued. The obtained result leads to a similar result for the Schrödinger operator on $\mathbb{R}^3$ with the spherically symmetric potential $V(|\cdot|)$.

This talk is based on joint work with Serge Richard (University of Nagoya) and Jun Uchiyama (Kyoto Institute of Technology).

Dienstag, 17.5.2016, 15:00h, Raum c311
Hauptgebäude der Leibniz Universität

Dazu laden herzlich ein:
Prof. Dr. Wolfram Bauer
Prof. Dr. Joachim Escher
Prof. Dr. Olaf Lechtenfeld
Prof. Dr. Elmar Schrohe
Prof. Dr. Christoph Walker

Weitere Informationen finden Sie auch unter http://www.ifam.uni-hannover.de/os_analysis.html