Seminar/Talk

Two-Particle Bound States at Interfaces and Corners

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Host: Robert Seiringer

We study two interacting quantum particles forming a bound state in d-dimensional free space, and constrain the particles to half-space in k directions, with Neumann boundary conditions. First, we show that the particles stick to the corner where all boundary planes intersect. Second, we prove that the resulting Hamiltonian, after removing the free part of the kinetic energy, has only finitely many eigenvalues below the essential spectrum. This generalizes the work of Egger, Kerner and Pankrashkin (J. Spectr. Theory 10(4):1413--1444, 2020) to dimensions d>1 and was obtained in collaboration with Robert Seiringer.

Thursday, May 27, 2021 04:15pm - 05:15pm
Online via Zoom

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