



MAFIA - the seminar you can't refuse

Spectral properties of Robin-Laplacians acting on non-smooth domains and Schrödinger operators with δ' -potentials

Marco Vogel

Carl von Ossietzky Universität Oldenburg

January 10, 2024

14:00–15:00

T212

Fakulta jaderná a fyzikálně inženýrská ČVUT
Trojanova 13, 12000 Praha

Abstract: We discuss the spectral properties of Robin Laplacians acting on a large class of infinite cones. Most importantly, we will see how the eigenvalues behave as the cones collapse to a half-line. Following this, we delve into the strong coupling asymptotics of Robin Laplacians acting on domains with anisotropic peaks. Finally, we explore various spectral properties of two-dimensional Schrödinger operators with δ' -potentials supported on star graphs. In particular, we review some proof ideas and demonstrate how Robin Laplacians can assist in determining the spectral properties of Schrödinger operators with δ' -potentials.