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Title:

”Resolvent estimates for elliptic operators and their applications”

Abstract:

More than 25 years ago, Kenig, Ruiz, and Sogge established uniform L^p resolvent estimates for the Laplacian in the Euclidean space. Taking their remarkable estimate as a starting point, we shall describe more recent developments concerned with the problem of controlling the resolvent of elliptic self-adjoint operators in L^p spaces in the context of a compact Riemannian manifold. Here some new interesting difficulties arise, related to the distribution of eigenvalues of such operators. Applications to inverse boundary problems and to the absolute continuity of spectra for periodic Schrödinger operators will be presented as well.