

Some recent progress on spectral asymptotics for non-self-adjoint operators

JOHANNES SJOESTRAND

Centre de Mathematiques, Ecole Polytechnique, F-91128 Palaiseau cedex, France

We start with a short review of recent results by many people about estimates and asymptotics for the distribution of eigenvalues for non-self-adjoint differential operators (with resonances as an important special case), and also about the notion of pseudo-spectrum.

Then we discuss the two-dimensional case (starting with joint work with A. Melin) where one often can obtain quite detailed spectral asymptotics by means of Bohr-Sommerfeld quantization conditions, very much as for self-adjoint operators in dimension 1.