

1061-35-201

Michael Hitrik* (hitrik@math.ucla.edu), Department of Mathematics, UCLA, Los Angeles, CA 90095-1555. *Spectra and resolvent bounds for non-self-adjoint operators with double characteristics.*

In this talk, we would like to report on an ongoing work together with Karel Pravda-Starov. For a class of non-selfadjoint pseudodifferential operators with double characteristics, we study semiclassical resolvent bounds and asymptotics for the low lying eigenvalues. Specifically, assuming that the quadratic approximations along the characteristics enjoy a suitable dynamical averaging property, we establish semiclassical hypoelliptic and subelliptic estimates for the operators in question. We also obtain the more precise asymptotic description of the low lying eigenvalues in the semiclassical limit. (Received April 14, 2010)