

**EIGENVALUE STATISTICS FOR A MODEL
NON-SELF-ADJOINT SEMICLASSICAL DIFFERENTIAL
OPERATOR WITH A SMALL RANDOM PERTURBATION**

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In this talk we discuss open problems concerning the asymptotic eigenvalue statistics of non-self-adjoint semiclassical elliptic partial differential operators, motivated by recent results. Here, as opposed to the self-adjoint case, the eigenvalues in general no longer follow the Weyl asymptotics as can be seen for example with the spectrum of the non-self-adjoint semiclassical harmonic oscillator.

However, in a series of papers by Hager and Sjostrand it was shown that by adding a small random perturbation to certain h -pseudodifferential operators we have again Weyl asymptotics with a probability close to 1. Little has been done for higher statistical momenta of the eigenvalue distribution. The purpose of this talk is to show how techniques similar to those of Schiffman and Zelditch for zeros of random polynomials might be used to obtain the correlation function of the eigenvalues for a toy operator.