SPECTRA FOR NON-SELF-ADJOINT OPERATORS IN THE PRESENCE OF SYMMETRIES

M. HITRIK

The proof of the reality of the exponentially small eigenvalues of the Kramers-Fokker-Planck type operators in [HHS11] depends on a reflection symmetry for such operators, and there are many natural non-self-adjoint situations where symmetries play a role, including PT-symmetric operators and operators with supersymmetric structures. See also [Shi02], [KS02].

References

[HHS11] F. Hérau, M. Hitrik, and J. Sjöstrand. Tunnel effect and symmetries for Kramers-Fokker-Planck type operators. *J. Inst. Math. Jussieu*, 10(3):567–634, 2011.

[KS02] M. Klaus and J. K. Shaw. Purely imaginary eigenvalues of Zakharov-Shabat systems. *Phys. Rev. E (3)*, 65(3):036607, 5, 2002.

[Shi02] K. C. Shin. On the Reality of the Eigenvalues for a Class of $\mathcal{PT}$-Symmetric Oscillators. *Comm. Math. Phys.*, 229:543–564, 2002.

Date: 2015 AIM.