On Spectral Properties of some Non-Local Operators through Stochastic Methods

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Fractional Schrödinger operators are increasingly used to model various physical, biological and financial phenomena. I will consider spatial decay properties of the first eigenfunction (ground state) of a class of operators by developing a probabilistic representation obtained via a Feynman-Kac-type formula. In particular, I will further discuss detailed asymptotic properties of the eigenvalues and eigenfunctions, as well as trace asymptotics and heat kernel estimates in a specific case.