

Second-order approximation of large eigenvalues of the quantum Rabi model

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The QRM (Quantum Rabi Model) describes a two-level quantum system that interacts with a single-mode radiation. It is considered a particularly important model in quantum physics, quantum information, and condensed matter physics. Its Hamiltonian is a self-adjoint operator with a discrete spectrum, depending on two parameters: the spacing between the levels of the quantum system and the coupling constant. Moreover, an additional parameter, called bias, is necessary in circuit quantum dynamics. In this talk, the behavior of large eigenvalues is described by the asymptotic formula involving all parameters of the model.

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