



Contribution ID: 19

Type: **not specified**

Qubit-field interactions as singular Hamiltonian perturbations

Tuesday, 26 June 2018 15:30 (45 minutes)

We show that the single-excitation interaction of a family of n qubits with a structured boson field can be effectively modeled by a singular finite-rank perturbation Friedrichs-Lee model of a Hamiltonian with n eigenvalues; the resulting perturbation preserves the absolutely continuous spectrum but drastically modifies the singular spectrum. This structure is shown to be universal in the sense that, by fixing n independent states, any self-adjoint operator may be recast as a Friedrichs-Lee model. Some peculiar examples are presented and discussed.

Primary author: LONIGRO, Davide (BA)

Presenter: LONIGRO, Davide (BA)