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ROBERTO QUEZADA: Dynamics of quantum states in an energy transport model

Friday, 21 February 2020 11:30 (1 hour)

We will discuss the dynamics of quantum states in an energy transport model (photosynthesis) with a generator defined in terms of operators performing transitions between two mutually orthogonal subspaces, similar to birth and death transitions in classical stochastic processes or creation and annihilation operators in the quantum setting. It turns out that any stationary state has a portion supported on the first subspace and the remaining is supported on the orthogonal. Moreover, any state supported on the first subspace is transported to a state whose probability mass is concentrated on the orthogonal and there is an energy gain in the process.

Session Classification: PLENARY TALKS

Track Classification: SYMPOSIUM ON SCATTERING, QUANTUM AND CLASSICAL TRANSPORT