

Jie Sun

Huazhong University of Science and Technology

On the failure of the general models of adiabatic evolutions for quantum search

The general class of models of adiabatic evolution was proposed to further speed up the usual adiabatic evolution. But it can totally fail when the initial state is orthogonal to the final state in the quantum system. Here, we study a special form of these generalized adiabatic evolution and will find some interesting properties of it, which may further strengthen our thinking about these models and be helpful for designing adiabatic algorithms for practical problems.

