

Shunji Matsuura

1Qbit

Non-stoquastic Hamiltonian in QAC and spin glass

The efficiency and the accuracy of the adiabatic quantum computation largely depend on energy gaps between energy levels. Recently it has been shown in some models that quantum error correction can increase an energy gap between the ground state and excited states, whereas non-stoquastic Hamiltonian can also allow to avoid strong phase transitions. In this talk I will present behaviour of non-stoquastic systems in quantum annealing correction as well as a spin glass model.