On the dynamics of the spin-boson model: variational principle versus adiabatic approximation TITUS SANDU, RADU IFTIMIE — The time-dependent variational principle is applied to the spin-boson model. We use two different trial functions that exhibit various degrees of separation between the bosonic dynamics and the electronic dynamics. The equations of motion obtained for these two trial functions are shown to be equivalent with the equations of motions obtained with two different adiabatic approximations of the dynamics.

Titus Sandu

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