

QUANTUM METROLOGY, QUANTUM SPEED LIMIT, AND QUANTUM CONTROL

Luiz Davidovich
Instituto de Física
Universidade Federal do Rio de Janeiro
21941-972 Rio de Janeiro, RJ, BRAZIL

This talk will review recent work on the quantum speed limit, which leads to a generalization for open systems of the energy-time uncertainty relation, and will discuss the connection between that relation and quantum control. In particular, a specific example will be discussed, involving the minimization of the time spent by a spin $1/2$ between an initial and a final state, the dynamics being described by a time-dependent Landau-Zener Hamiltonian.