Title: The adiabatic theorem of quantum mechanics

Abstract: The adiabatic theorem of quantum mechanics describes the long time behavior of the solutions of an initial value problem where the Hamiltonian generating the evolution depends slowly on time. This theorem relates these solutions to the spectral information of the instantaneous Hamiltonian. In this talk, we will review the panorama of known results and discuss a new one that relates adiabatic and localization behaviors. This is a joint work in progress with Wojciech De Roeck and Martin Fraas.