

In this talk we try to derive Schrodinger equation truly. We ask if there exists a more fundamental theory for which wave mechanics is only a good linearization? Our answer is affirmative. We claim that wave mechanics is nothing other than the linearization of a Hamiltonian mechanics over a suitable phase space. Thus in this view the wave function and the Schrodinger are not fundamental but the quantum phase space and the Hamilton's canonical equations are fundamental and the former is only a good approximation. However, it remains to answer many fundamental questions to answer in order to understand quantum mechanics completely which will be discussed here.