

On Wigner and Bohmian measures in semi-classical quantum dynamics

<prezentare>

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Abstract:

We consider the time-evolution of quantum particles described by the linear Schrödinger equation in a semi-classical scaling. We will report on recent results on so-called Bohmian measures and their classical limit. Bohmian measures describe the time-evolution of the quantum mechanical position and velocity densities and are given by the push-forward under the Bohmian flow on phase space. The latter can be seen as a perturbation of the classical Hamiltonian flow. Connections to the, by now, classical theory of Wigner measures are also discussed.

Miercuri, 9 Ianuarie 2013, ora 10:00 la sediul IMAR, sala 309 – 310 “Gh. Vranceanu”