

Luigi Barletti: "Functional calculus in phase-space and application to electron hydrodynamics in graphene"

Friday, January 20, 2023 10:30 AM (55 minutes)

We present a systematic method to compute the formal semiclassical expansion of functional calculus in the framework of the phase-space representation of quantum mechanics. This is particularly useful to compute subleading corrections to the classical Maxwell-Boltzmann, Fermi-Dirac or other local equilibrium distributions. We also show how these results can be applied to derive quantum corrections to electron hydrodynamics in graphene.