Ypatia 2022 - June 8-10, 2022

mercredi 8 juin 2022

Abstract: We will review recent progresses in the derivation of effective evolution equations for the dynamics of many weakly interacting fermions. We will focus on the mean-field regime and couple it with a semiclassical limit to obtain the Hartree-Fock and the Vlasov equations. We will compare the different methods used in this context and draw a comparison with results and methods employed in the case of classical particles. A particular emphasis will be given on the class of interactions and quantum states that we are able to treat. (11:35 - 11:55)