The kinetic Fokker-Planck equation with mean-field interaction

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This talk concerns convergence to equilibrium for the kinetic Fokker-Planck equation with mean field interation. I will present Villani's hypocoercivity approach in this particular case. Then I will explain how we can obtain a rate of convergence independent of the number of interacting particles.

Références

[1] F. Bolley, A. Guillin, and F. Malrieu, *Trend to equilibrium and particle approximation for a weakly selfconsistent Vlasov-Fokker-Planck equation.*, ESAIM: Mathematical Modelling and Numerical Analysis 44, no. 5 (2010): 867-884.

[2] A. Guillin, W. Liu, L.Wu, and C. Zhang. *Poincaré and logarithmic Sobolev inequality for particles in mean field interactions. In preparation.*

[3] C. Villani, *Hypocoercivity*, Mem. Amer. Math. Soc.202 . AMS, 2009.

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