

## **Nathalie Ayi (Université Pierre et Marie Curie) - High-field limit of a stochastic BGK model**

*vendredi 20 octobre 2017 11:30 (40 minutes)*

After discussing the problematic of hydrodynamical limits in the context of gas dynamics for the Boltzmann equation, we took an interest in the more general context of BGK models which are some kinetic equations. More precisely, we study a stochastic BGK model with a high field scaling as an approximation of a hyperbolic conservation law with stochastic forcing. After establishing the existence of a solution for any fixed parameter  $\varepsilon$ , we prove the convergence to a kinetic equation where a modified Maxwellian appears under an additional assumption on these solutions. We deduce from it the existence of a weak solution to the studied scalar conservation law with stochastic forcing.