ID de Contribution: **23**   Type: **Plenary talk**

Hydrodynamic limit for the inelastic Boltzmann equation

mercredi 17 novembre 2021 14:00 (45 minutes)

In this talk, we are interested in the problem of rigorously deriving hydrodynamic equations from the Boltzmann equation for inelastic hard spheres with small inelasticity. One of the main difficulty is to identify the relation between the restitution coefficient (which quantifies the energy loss at the microscopic level) and the Knudsen number that allows us capture nontrivial hydrodynamic behavior. In this (nearly elastic) regime, we prove a result of convergence of the inelastic Boltzmann equation towards some hydrodynamic system which is an incompressible Navier-Stokes-Fourier system with self-consistent forcing terms. This is a joint work with Ricardo Alonso and Bertrand Lods.

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