ICTS Skype Seminar

Title : Universal velocity statistics in driven granular gases

Speaker : Prasad V.V, Weizmann Institute, Israel

Date : Thursday, January 10, 2019

Time : 2:00 PM

Venue : Nambu Discussion Room (Left), ICTS Campus, Bangalore

Abstract : A central result of the kinetic theory of driven inelastic gases is that the tail of the velocity distribution is a stretched exponential function with an exponent 3/2. However, a derivation of this result starting from a microscopic model is lacking. We consider a microscopic model for a driven inelastic gas where a noise is added during each dissipative collision with a wall. We show by exact analysis that, for physically relevant noise distributions, the tail of the velocity distribution is a Gaussian with additional logarithmic corrections, in contradiction to the kinetic theory result.