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Kinetic Seminar

Global Dynamics of Non-cutoff Boltzmann Equation with Soft Potentials

by

Professor Lingbing HE
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Abstract :

In this talk, we will focus on global dynamics of non-cutoff Boltzmann equation with soft potentials. We proved that that the behavior of the solution (including the production of regularity and the longtime behavior) can be characterized quantitatively by the initial data at the large velocities, i.e.(i). initially polynomial decay at the large velocities will induce the finite smoothing estimates in weighted Sobolev spaces and the polynomial convergence rate (including the lower and upper bounds) to the equilibrium; (ii). initially the exponential decay at the large velocities will induce C^∞ regularization effect and the exponential convergence rate. The new ingredients of the proof lie in the development of the localized techniques in phase and frequency spaces , the propagation of the exponential momentum and the semi-group method. The talks is based on the collaboration work with Cao Chuqi and Ji Jie.

Date :	September 27, 2021 (Monday)
Time :	10:30am – 11:30am (Hong Kong SAR)
ZOOM Meeting ID :	702 854 0983
Passcode :	202122

All are Welcome