

abstract

MATHEMATICAL PHYSICS SEMINAR

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

We study the integrability properties of the gain part of the Boltzmann collision operator using radial symmetrization techniques from harmonic analysis to show Young's inequality for the case of hard potentials and the Hardy-Littlewood-Sobolev inequality for soft potentials. By applying these estimates we can improve the existent theory of classical solutions for soft potentials with initial data near vacuum and near a local Maxwellian. The technical improvement is that only Grad cut-off is assumed to present the existence of such solutions. This work was done in collaboration with E. Carneiro and I. Gamba.