



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON PDE

Nash inequalities and boundary behavior of kinetic equations

Prof. Christopher Henderson

University of Arizona

Abstract

Kinetic equations model systems, such as a gas, where particles move through space according to a velocity that is diffusing (due to, say, collisions with other particles). The presence of spatial boundaries in these models causes technical issues because they are first order in the spatial variable and therefore cannot be defined everywhere on the boundary. In this talk, I will present $L^1 - L^\infty$ estimates that yield sharp bounds on the behavior at the spatial boundary. The main estimate is a kinetic version of the Nash inequality. This is a joint work with Giacomo Lucertini and Weinan Wang.

Date: 11 April 2025 (Friday)

Time: 9:30am

Zoom Meeting: <https://hkust.zoom.us/j/96039685429> (Passcode: 096885)

All are Welcome!