

Analysis and Applied Mathematics Seminar

Applications of the Shear-flow Induced Enhanced Dissipation

Siming He (Duke University)

Abstract: In this talk, we consider the enhanced dissipation phenomena induced by shear flows. In the first part of the talk, I will introduce the idea of shear flow-induced enhanced dissipation and the recent developments on this topic. Then I will exhibit the applications of this phenomenon in various settings, ranging from suppression of chemotactic blow-ups to enhancement of chemical reactions.

Monday, November 1 at 4:00 PM in Zoom