Seminar on Applied Mathematics

Hybrid parabolic-hyperbolic nature of heat equations with memory

By

Prof. Gengsheng WANG
Tianjin University

Abstract

In this talk, we reveal quantitatively the hybrid heat-wave nature of the flow generated by the heat equation with memory. This nature shows in more detail: First, the flow exhibits the propagation of singularities along the time-direction; Second, the flow exhibits a finite order smoothing effect; third, when \( t > 0 \), the flow is dominated by the wave-like nature, while when \( t \to 0 \), the heat-like nature plays an increasingly important role in the flow. The above-mentioned nature is given by an explicit decomposition of the flow.

Date : 5 July 2023 (Wednesday)
Time : 11:00am – 12:00nn
Venue : Room 3494 (Lifts 25/26)

All are Welcome!