



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

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 $t \rightarrow 0$, 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!