SEMINAR ON APPLIED AND NUMERICAL ANALYSIS

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Speaker: Huanyao Wen

Title: Compressible Navier-Stokes equations: breakdown mechanism and global well-posedness

Abstract: Compressible Navier-Stokes system is a well-known mathematical model arising in fluid dynamics. Some global existence theories have been established for arbitrarily large initial data in three dimensions. However, the solution space is large and thus the uniqueness is still open. One of the ways to ensure the uniqueness is to find the solutions within a smaller solution space, for example, the strong solution. In this talk, I will introduce our works on the possible breakdown mechnism for strong solution and the global existence and uniqueness result for small mass only. This talk is based on two works joint with Professor Changjiang Zhu.