

Texas Tech University. Analysis Seminars.

Large-time asymptotic expansions for solutions of Navier-Stokes equations

DAT CAO

Texas Tech University

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Room: MATH 108. Time: 4:00 pm.

ABSTRACT. We study the long-time behavior of solutions to the three-dimensional Navier-Stokes equations with periodic boundary conditions. The asymptotic expansions for all Leray-Hopf weak solutions are obtained. We show that if the force has an asymptotic expansion, as time goes to infinity, in terms of negative-power functions in Sobolev-Gevrey space, then any weak solution admits an asymptotic expansion of the same type. This is a joint work with Luan Hoang (Texas Tech University).