



Beijing-Saint Petersburg Mathematics Colloquium

Thursday December 17 at 16:00

zoom ID 647 7292 0417

Prof. Yi Wang

« Vanishing dissipation limit of planar wave patterns to the multi-dimensional compressible Navier-Stokes equations »

Abstract: The talk is concerned with our recent results on the vanishing viscosities limit of planar rarefaction wave to both 2D compressible isentropic Navier-Stokes equations and 3D full compressible Navier-Stokes equations and the vanishing dissipation limit of planar contact discontinuity to 3D full compressible Navier-Stokes equations. Remark that the planar shock wave is non-unique and the planar rarefaction wave is unique in the class of entropic solutions to 3D compressible Euler equations and whether the planar contact discontinuity is unique or not for entropic weak solutions is still open to 3D compressible Euler equations. And our vanishing dissipation limit for planar contact discontinuity, in particular, implies the positive answer to the uniqueness of a planar contact discontinuity for 3D compressible Euler equations in the class of zero dissipation limit of full compressible Navier-Stokes equations.

Bio: Prof. Yi Wang won the National Science Fund for Excellent Young Scholars in 2013 and the national youth talent support program in 2015.

PDEs of fluid mechanics and from other applied sciences, including the compressible Navier-Stokes and Euler equations, the mathematical theory of viscous/inviscid systems of conservation laws, kinetic equations, and other related fluid mechanic equations.

Everyone is welcome!