

Joint Math–School SCMS Seminar

Speaker: Lin, Fang–Hua (Courant Institute)

Monday, Nov. 4, 2:00–3:00, Room 2201

The Structure of Helicity and Global Existence of Smooth Solutions of the Navier-Stokes Equations

Abstract: Part of the 3-D incompressible Navier-Stokes equations may be lie in the physical quantity: helicity which is rather mysterious in itself. It is well-known that for 3-D incompressible Euler equations, the global integral of helicity is conserved. However, the helicity density does not have a fixed sign, and hence hard to use in analysis. In a recent joint work with Zhen Lei and Yi Zhou, we explored a structure of helicity,