

Navier Stokes equation

Abstract: In fluid mechanics, Navier Stokes equations are partial differential equations that describe how the velocity, pressure, temperature, and density of a moving fluid are related. In 2000, whether smooth, reasonable solutions to the Navier-Stokes equation in three dimensions exist was designated a Millennium Problem, one of seven mathematical problems selected by the Clay Mathematics Institute of Cambridge, Massachusetts, U.S., for a special award.

In this talk, we will see the derivation of governing PDFs with the physical meaning of each term. Also, we will explore some suitable numerical techniques to solve those equations.