Seminar Talk

Control and Filtering Theory for Navier-Stokes Equation and Partial Differential Equations in Infinite Dimensions

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In this talk we will describe the connection between feedback control theory of Navier-Stokes equations and Hamilton-Jacobi theory in infinite dimensions. Solvability of these first and second order (for stochastic Navier-Stokes) Hamilton-Jacobi equations in terms of viscosity solutions has been established. We will also describe estimation theory for turbulence and resultant measure-valued differential equation on Hilbert spaces.