

On the non-homogeneous Navier-Stokes system with Navier friction boundary conditions

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Abstract

In this talk we address the issue of existence of weak solutions for the non-homogeneous Navier-Stokes system with Navier friction boundary conditions allowing the presence of vacuum zones and assuming rough conditions on the data. We also study the convergence, as the viscosity goes to zero, of weak solutions for the non-homogeneous Navier-Stokes system with Navier friction boundary conditions to the strong solution of the Euler equations with variable density, provided that the initial data converge in L^2 to a smooth enough limit. This is joint work with Lucas C.F. Ferreira and Elder Villamizar-Roa.