

Abstract

The goal of this talk is to prove that given initial data $u_0 = (u_0^h, u_0^3) \in L^2$ with $\| \operatorname{pa}_3 u_0 \| \in L^2$, 3-D incompressible Navier-Stokes system has a unique global solution provided that $\| |D_h|^{-1} \operatorname{pa}_3 u_0 \|$ is sufficiently small in the scaling invariant space $\mathcal{CB}^{0, \frac{1}{2}}$.