

1131-35-364

Benjamin Pineau, Chuong V. Tran and **Xinwei Yu*** (xinwei2@ualberta.ca), 632 CAB,
University of Alberta, Edmonton, Alberta T6G2G1, Canada. *Some new Prodi-Serrin type
conditions for the 3D Navier-Stokes equations.*

In this talk I will present several new families of Prodi-Serrin type conditions which guarantee the smoothness of weak solutions for the 3D Navier-Stokes equations. These conditions involve either one of the quantities pressure, velocity, gradient of velocity, or their mixtures, and are in the form of space-time bounds on the Lebesgue, Lorentz, or Orlicz norms. This is joint work with Prof. Chuong V. Tran and Mr. Benjamin Pineau. (Received July 18, 2017)