XINWEI YU, University of Alberta
Some new regularity criterions for the 3D incompressible Navier-Stokes equations

In this talk we discuss several regularity criterions for the 3D incompressible Navier-Stokes equations, including several new classes of Prodi-Serrin type criterions, as well as a new type of geometrical conditions on the super level set of the velocity magnitude that guarantees regularity. This is a summary of joint work in recent years with Prof. Chuong V. Tran of the University of St. Andrews, Scotland, and Mr. Benjamin Pineau of the University of Alberta (Now at UC Berkeley).