

Nonuniqueness of weak solutions to the Navier-Stokes equation

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Abstract

For initial datum of finite kinetic energy Leray has proven in 1934 that there exists at least one global in time finite energy weak solution of the 3D Navier-Stokes equations. In this talk, I will discuss recent joint work with Vlad Vicol in which we prove that weak solutions of the 3D Navier-Stokes equations are not unique in the class of weak solutions with finite kinetic energy.