

PDE, COMPLEX ANALYSIS AND DIFFERENTIAL GEOMETRY SEMINAR

Guest Speaker: Igor Kukavica
University of Southern California

Date: Tuesday, April 9, 2024

Time: 11:00 AM

Location: 258 Hurley Bldg

Zoom URL: <https://notredame.zoom.us/j/98530943143>



Lecture Title:

On the inviscid limit for the Navier-Stokes equations

Abstract

The question of whether the solution of the Navier-Stokes equation converges to the solution of the Euler equation as the viscosity vanishes is an important one in fluid dynamics. In the talk, we will review current results on this problem. We will also present a result, joint with V. Vicol and F. Wang, which shows that the inviscid limit holds for the initial data that is analytic only close to the boundary of the domain, and has Sobolev regularity in the interior. We will also discuss the Prandtl expansions of solutions of the Navier-Stokes equations.