TEMPLE
MATH CLUB

Getting our feet wet with Navier-Stokes and a nice integral bound –
Patrick Phelps

WHEN
October 26, 2023
5-6 PM

WHERE
Wachman Hall 617

In this talk, we investigate an integral bound lemma used to prove decay rates for solutions to the Navier-Stokes partial differential equation system with rough data. The Navier-Stokes system is a 3D momentum equation which governs the movement of viscous incompressible fluids. After some introduction to the system, and giving some important results and properties, we will dive into proving a necessary integral bound, utilizing only basic calculus. We will then discuss how this lemma is central to the decay rates proof and an interesting result on uniqueness for the system.