

***PDE, COMPLEX ANALYSIS AND
DIFFERENTIAL GEOMETRY SEMINAR***

Guest Speaker: Jiahong Wu
University of Notre Dame

Date: Tuesday, September 12, 2023

Time: 11:00 AM

Location: 258 Hurley Hall

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



Lecture Title:

The Boussinesq equations with vertical dissipation near the Couette flow

Abstract

The Boussinesq equations concerned here model buoyancy-driven fluids such as various atmospheric and oceanographic flows, and the Rayleigh-Benard convection. This talk presents recent stability results on the Boussinesq equations with partial dissipation near the Couette flow. We are able to prove the nonlinear stability and large-time behavior results by exploiting the enhanced dissipation created by a linear non-self-adjoint operator. This is a joint work with Wen Deng and Ping Zhang. If time permits, we will briefly mention stability results concerning the hydrostatic balance.