Department of Mathematics
University of Notre Dame

GRADUATE STUDENT GEOMETRY SEMINAR

Guest Speaker: Jui-Yun Hung
University of Notre Dame

Date: Wednesday, October 25, 2023
Time: 12:00 PM
Location: 258 Hurley Bldg
Zoom URL: NA

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Mathematics

Lecture Title:

L^p-Estimates for the Newtonian Potential

Abstract

A priori estimate is an important part of the PDE theory, and L^p- theory for second order elliptic equations is one of the useful estimation which controls the $W^{2,p}$-norm of u by the L^p-norm of u and f if $Lu = f$ and L is a second order elliptic linear operator. In this talk, we will discuss the Calderon - Zygmund Inequality which gives the $W^{2,p}$ bound for the Newtonian potential. Once this is established, we can use the method of continuity to prove the interior $W^{2,p}$-estimate for general elliptic equations of second order.

Jui-Yun Hung - University of Notre Dame