Department of Mathematics University of Notre Dame

GRADUATE STUDENT SEMINAR

Guest Speaker: Martin Beers University of Notre Dame

Date: Monday, November 7, 2016 Time: 4:00 PM Location: 129 Hayes-Healy Hall

Lecture Title: Imagination and Geometric Truth

Abstract

This talk will explore – from a Thomistic perspective – the question of what it means to ascribe truth to mathematical propositions. In particular, I will focus on Aquinas' claim that the truth of geometrical judgments is grounded in the faculty of imagination. The central question motivating the talk is this: What does it mean to say that non-Euclidean geometries are true? I will look at two (mid)modern attempts to answer this question, one by an appeal to the imagination (Helmholtz) and the other by an appeal to empirical measurement (Einstein). Finally, I will explore how Aquinas himself might have answered the question, and whether he could have accepted Euclidean and non-Euclidean geometries as mathematics in the same sense.