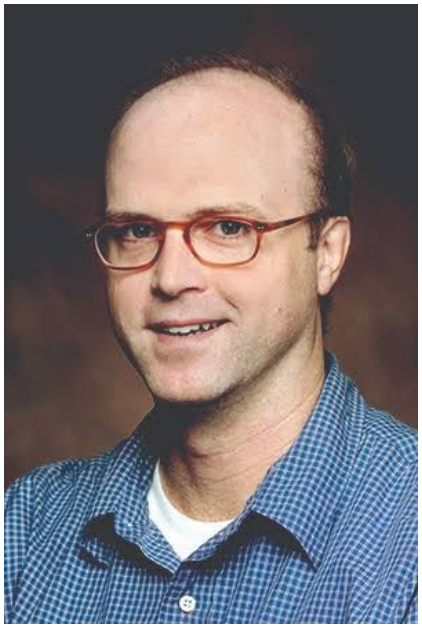
UNIVERSITY OF NOTRE DAME

Logic Seminar

Department of Mathematics



Guest Speaker: Paul Larson

Miami University

Lecture Title:

The everywhere failure of square

Date: Tuesday, November 10, 2026

Time: 2:00 PM

Location: 125 Hayes-Healy Center

Abstract:

Nairian models are a new class of models of determinacy extending the classical Chang model. Forcing over a Nairian model with Woodin's Pmax forcing, we produce a model in which Jensen's square principle fails at every ordinal of cofinality greater than omega_1. This construction reduces the known upper bound for the consistency strength of this statement from a supercompact cardinal to less than a Woodin limit of Woodin cardinals. Moreover, every regular uncountable cardinal of the resulting extension is omega-strongly measurable in the HOD of the extension, giving the first known model of ZFC in which Woodin's HOD Hypothesis fails. This is joint work with Douglas Blue and Grigor Sargsyan.