Department of Mathematics
University of Notre Dame

GRADUATE STUDENT SEMINAR

Guest Speaker: Matt Scalamandre
University of Notre Dame

Date: Monday, September 4, 2023
Time: 5:00 PM
Location: 258 Hurley Hall
Zoom URL: NA

Lecture Title:
A Solomon-Tits Theorem for Rings

Abstract

The classical Solomon–Tits theorem states that a spherical Tits building over a field is homotopy equivalent to a wedge of spheres of the appropriate dimension. In this talk, we'll define a Tits complex that makes sense for an arbitrary ring, and prove a Solomon-Tits theorem when R either satisfies a stable range condition, or is the ring of S-integers of a number field. We will discuss applications to the cohomology of principal congruence subgroups of $SL_n(Z)$, and some results about the top homology of this complex (an analogue of the classical Steinberg representation).

Matt Scalamandre - University of Notre Dame