

## Algebraic Topology Seminar

*Homotopy groups of spheres and the strong Kervaire invariant problem in dimension 62.*

Zhouli Xu (University of Chicago)

**Abstract:** Computing and understanding the homotopy groups of spheres is one of the most important and interesting questions in algebraic topology. In this talk, I will first review the known stemwise computations at the prime 2. In particular, I will briefly discuss recent work of Isaksen using motivic methods. Then I will discuss joint work with Beaudry that relates stemwise and chromatic computations. Finally, I will talk about the current status of the strong Kervaire invariant problem in dimension 62, including a sketch of the proof that twice theta five is zero.

Friday, October 31 at 1:00 PM in SEO 1227