Department of Mathematics
University of Notre Dame

Christopher Shaw - Columbia College - Chicago

LOGIC SEMINAR

Guest Speaker: Christopher Shaw
Columbia College - Chicago

Date: Tuesday, October 25, 2016

Time: 2:00 PM

Location: 125 Hayes-Healy Hall

Lecture Title:

Skolem functions for a weakly o-minimal structure with a new convex predicate

Abstract

For an o-minimal structure $\mathcal{M}$ expanding a group and a new convex predicate U, we define T-*resistance* for the pair $(\mathcal{M}, U)$, a generalization of T-convexity. Using T-resistance and building on results of L. van den Dries and A. Lewenberg, we show that for a properly convex subset U, the theory of the expanded structure $\mathcal{M}' = (\mathcal{M}, U)$ has definable Skolem functions precisely when $\mathcal{M}'$ is valuational. In addition we present some insight about a particular algorithm for computing these functions when they are present.