

MATEMATISKA INSTITUTIONEN
STOCKHOLMS UNIVERSITET
Avd. Matematik

SJÄLVSTÄNDIGT ARBETE I MATEMATIK

Torsdagen den 20 oktober kl. 10:00-11:00 presenterar Daniel Zavala-Svensson sitt arbete “Quantifier elimination and decidability of infinitary theories of the real line” (15 högskolepoäng, grundnivå).

Handledare: Erik Palmgren

Plats: Sal 32, hus 5, Kräftriket

Sammanfattning: In this thesis, we extend logic language to infinitary languages, where we allow for con- and disjunctions of infinite sets of formulas, and quantifiers can bind infinite sets of variables. The cardinalities of those sets are bounded however, and based on those bounds we investigate the existence of quantifier elimination and decision methods for infinitary theories on the ordered field of reals. With analytic sets from descriptive set theory as a counterexample we prove the main result: The countably infinite theory of the ordered field of reals does not have quantifier elimination.

Alla intresserade är välkomna!