

LOGIC SEMINAR

Guest Speaker: Chieu Minh Tran

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Date: Tuesday, September 19, 2017

Time: 2:00 PM

Location: 125 Hayes-Healy Hall

Lecture Title:

Algebraically closed field with a multiplicatively coherent cyclic ordering

Abstract

We study the model theory of the structure $(\mathbb{F}; <)$ where \mathbb{F} is the algebraic closure of the field of p elements and $<$ is a cyclic ordering on \mathbb{F}^\times induced by an injective group homomorphism $\chi : \mathbb{F}^\times \rightarrow \mathbb{C}^\times$. Various model-theoretic properties of the structure turn out to be consequences of number-theoretic behaviors of the character map χ . The results obtained loosely answer a question by van den Dries, Hrushovski, and Kowalski and form parts of a program to investigate the model-theoretic properties of structures where there is a presence of randomness.