

## ***LOGIC SEMINAR***

**Guest Speaker: Joel Nagloo**  
**University of Illinois at Chicago**



**Date:** Tuesday, February 28, 2023

**Time:** 2:00 PM

**Location:** 125 Hayes-Healy Hall

**Zoom URL:** NA

***Lecture Title:***

**Geometric triviality in differentially closed fields**

***Abstract***

In this talk, we revisit the problem of describing the 'finer' structure of geometrically trivial strongly minimal sets in DCF<sub>0</sub>. In particular, I will explain how recent work joint with D. Blázquez-Sanz, G. Casale and J. Freitag on Fuchsian groups (discrete subgroups of  $SL_2(\mathbb{R})$ ) and automorphic functions has lead to intriguing questions around the  $\omega$ -categoricity conjecture of D. Lascar. This conjecture was disproved in its full generality by J. Freitag and T. Scanlon using the modular group  $SL_2(\mathbb{Z})$  and its automorphic uniformizer (the  $j$ -function). I will explain how their counter-example fits into the larger context of arithmetic Fuchsian groups and has allowed us to 'propose' refinements to the original conjecture. I will also describe how our work generalizes to the context of covering maps in the sense of Scanlon.