

LOGIC SEMINAR

Guest Speaker: Patrick Lutz

UCLA

Date: Tuesday, April 18, 2023

Time: 2:00 PM

Location: 125 Hayes-Healy Hall

Zoom URL: NA



Lecture Title:

Encoding information into all infinite subsets of a dense set

Abstract

Suppose you have a noncomputable set X and you want to find a set A of natural numbers, all of whose infinite subsets compute X . There are several ways to do this, but all of them seem to end up producing a set A which is fairly sparse. We will prove this is necessary in the following technical sense: if X is noncomputable and A is a set of natural numbers of positive lower density then A has an infinite subset which does not compute X . I will discuss the proof of this theorem, limitations on extending it and its connection to work on the reverse math of Ramsey's theorem. This is joint work with Matthew Harrison-Trainer.