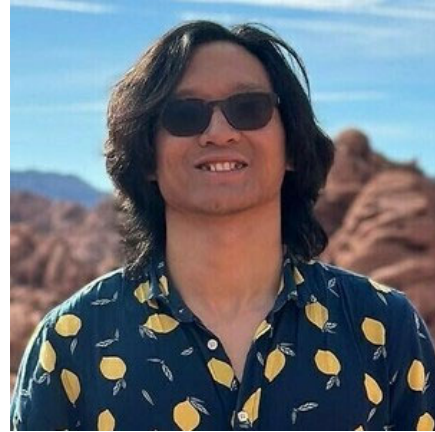


GRADUATE STUDENT GEOMETRY SEMINAR

Guest Speaker: Brandon Fu
University of Notre Dame



Date: Friday, April 19, 2024

Time: 2:00 PM

Location: 117 Hayes-Healy Hall

Lecture Title:
A Concentration Inequality

Abstract

In probability theory, the law of large number states that the empirical average of a large number of independent and identical random samples converges to the true underlying mean, almost surely. The question is how much this empirical average deviates from the true mean. Concentration inequality provides a solution. In this talk, we will go through Hoeffding's inequality based on the Chernoff method and discuss Poincare phenomenon, i.e. Under some conditions, certain random vectors are highly concentrated around the unit sphere in high dimensional space. Finally, we will discuss its applications in machine learning.