"Nature does not hurry, yet everything is accomplished. "

— Lao Tzu

The Trivial Notions Seminar
Proudly Announces

Large Deviations Theory — Theory for the rare events

A talk by

Yixiang Mao

Abstract

Around 200 years ago, people developed the law of large numbers and central limit theorem to understand the behavior of random variables, especially the normalized sum of independent identically distributed (i.i.d) random variables. During the late 19th century, because of the interest of ruin theory for insurance, Cramr started to investigate the probability of rare events, which was later formulated by Varadhan as large deviations principle (LDP). In this talk, I will introduce the idea of LDP, state the two classic theorems of LDP, namely Sanovs theorem and Cramrs theorem, and talk about the relationship between LDP and relative entropy. Applications will also be covered if time permits.

Wednesday, March 2nd, at 12:00 pm
Science Center 222