"Was DLC invented even before the Internet age?"

Anonymous Gamer

# The Trivial Notions Seminar
Proudly Announces

# Deligne-Lusztig Curves

A talk by

Chao Li

**Abstract**

Drinfeld, at the age of 20, discovered that the discrete series representations of the finite group $SL_2(\mathbb{F}_q)$ can be realized in the $\ell$-adic cohomology of the curve defined over $\mathbb{F}_q$,

$$xy^q - x^q y = 1.$$

Deligne and Lusztig were inspired by this result to associate algebraic varieties to any finite group of Lie type and were extremely successful in using them to construct all representations of such a finite group. We will explain their beautiful ideas and supply concrete examples of Deligne-Lusztig curves. These curves themselves also enjoy extremal geometric and arithmetic properties, which, among others, lead us to contemplate on the answer to life, the universe and everything.

## Thursday October 31st, at 1:00 pm
## Science Center 507