If you ain't cheating, you ain't trying...

—Joe Montana

# THE TRIVIAL NOTIONS SEMINAR

# Cheating in Analytic Number Theory

a talk by

**Michael Kural**

ABSTRACT

In this talk, we will discuss why:

- The abc conjecture is true.
- The Riemann Hypothesis is true.
- The twin prime conjecture is (sort of) true.

Along the way, we may also discuss: short character sums, moments of $L$-functions, and the Chowla conjecture.

This only requires a small bit of "cheating": replacing the integers $\mathbb{Z}$ with $\mathbb{F}_q[T]$. The geometric nature of this setting grants us extra power; how far can we push it?

## Friday, February 10, 2022

## 1:50pm

## Science Center, Room 507