"Contrariwise, if it was so, it might be; and if it were so, it would be; but as it isn't, it ain't. That's logic."

— Lewis Carroll

The Trivial Notions Seminar
Proudly Announces

The Siegel Zero

A talk by

Carl Erickson

Abstract

The zeros of L-functions encode the distribution of various arithmetic objects. Restrictions on these zeros, such as the Riemann Hypothesis, have pleasant consequences for these distributions. In particular, number theorists are concerned with "Siegel zeros" which are real zeros between 0 and 1. These are so named because C. L. Siegel proved in 1935 a beautiful result on L-functions, restricting such zeros. However, his method of proof is to allow the existence of one zero in order to show that there cannot be any "even worse" zeros.
We will not assume familiarity with L-functions, but will build up enough facts to outline Siegel's proof. We will also show how Siegel's result gives a strong result on Gauss' class number problem, but is"ineffective" because of the quasi-circularity of the proof.

Thursday March 1st, at 2:00 pm
Science Center 310