"Certainly the best times were when I was alone with mathematics, free of ambition and pretense, and indifferent to the world."

-Robert Langlands

#### The Trivial Notions Seminar Proudly Announces

## Local transfer and Langlands correspondence

### A talk by Cheng-Chiang Tsai

#### Abstract

The (conjectural) local Langlands correspondence is a finite-to-one map from the set of irreducible admissible representations of a (real or *p*adic) group *G* to the set of certain homomorphisms from the Weil group to the L-group  ${}^{L}G$ . The fibers of this map are called L-packets. Given a (L-)homomorphism  ${}^{L}H \rightarrow {}^{L}G$ , the L-packets of *G* and that of *H* should be somehow related, especially in the special case of *endoscopy transfer*. In this talk, after a brief introduction to the local Langlands correspondence, we investigate the case of representations of  $SL(2, \mathbb{R})$ and its endoscopic groups, and see how the prediction of local Langlands correspondence get translated into beautiful identities among characters of representations of  $SL(2, \mathbb{R})$  and its endoscopic groups. If time goes well, I shall talk about transfer as a statement on orbital integrals and how it is based on the fundamental lemma.

# Thursday Feburary 13<sup>th</sup>, at 12:00 pm Science Center 112