Number Theory Seminar

Test Vectors and Central Values for GL(2) I

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ABSTRACT: I will give two lectures describing recent work with Kimball Martin and Ameya Pitale in which we compute the central value of the base change L-function for a cuspidal automorphic representation of GL(2).

In the first talk I will describe Waldspurger's formula relating twisted central L-values of automorphic representations on GL(2) to certain toric period integrals. I will explain how we use the relative trace formula to make this more precise. In order to do this, we must find certain distinguished vectors for p-adic representations. I'll conclude the first lecture by describing these vectors, and how the problem reduces to local representation theory.

In the second talk I will give a brief survey of the representation theory of GL(2) over a p-adic field with an emphasis on the construction of supercuspidal representations. Then I'll describe our determination of the local test vectors for Waldspurger functionals for supercuspidal representations of GL(2).

Wednesday, February 26, 2014
2:40 - 4:00 PM
Room 527 Wachman Hall
Department of Mathematics