

**Number theory and Representation
Theory seminar, Fall 2007
East Hall 4096
September 24, 3:10-5:00pm
(tea break at 4pm)**

On the special values of L-functions

A. Raghuram (OK State)

Abstract

An L-function is a function of one complex variable that is attached to some interesting arithmetic or geometric data. The values of an L-function at certain special points give structural information about these data. In the study of special values of L-functions, one needs to identify their (possibly) transcendental parts. This information is contained in certain periods attached to the data. In this talk I will explore the idea of proving relations amongst these periods, which in turn gives relations between the corresponding special values. I will begin by looking at some classical formulae that one might encounter in an advanced course in calculus, and proceed from there to describe some recent results, obtained in collaboration with Freydoon Shahidi, on relations between certain periods attached to automorphic forms on $GL(n)$.