

March 15: Yuanqing Cai (Boston College), *Doubling constructions for covering groups and tensor product L -functions*.

In the 1980s, Piatetski-Shapiro and Rallis discovered a family of Rankin-Selberg integrals for the classical groups that did not rely on Whittaker models. This is the so-called doubling method. In this work, we give a generalization of the doubling method. We present a family of integrals representing tensor product L -functions of classical groups with general linear groups. Our construction is uniform over all classical groups and their non-linear coverings, and is applicable to all cuspidal representations. These integrals remove the main obstruction to proving the existence of endoscopic lifts for all automorphic representations without using the trace formula. This is joint work with Friedberg, Ginzburg and Kaplan.