

February 21: Ben Harris, *Irreducible Characters and Semisimple Coadjoint Orbits*.

When G is a real, reductive group, work of Mackey and Vogan-Zuckerman associate irreducible, unitary representations of G to certain semisimple coadjoint orbits for G . In this talk, we present a geometric formula for the character of such an irreducible representation in terms of geometry closely related to the corresponding coadjoint orbit. Special cases of this formula were previously obtained by Harish-Chandra, Kirillov, Duflo, and Rossmann. In future work, we will give applications of this formula to abstract harmonic analysis. This is joint work with Yoshiki Oshima.