

Monday November 10, 2003

Speaker: Anish Ghosh (Brandeis)

Title: Orbits of Group Actions

Abstract:

Let G be a Lie group and let Γ be a discrete subgroup of G such that $X = G/\Gamma$ is compact (or more generally, has finite volume). Let g_t be a one-parameter subgroup of G . The study of the action of g_t on X has a long and illustrious history. In certain cases, the action is nice and the orbits have rich geometric structure. The tools used to study orbit structures include ergodic theory, topological dynamics and the geometry of homogeneous spaces. I will start with the abelian case to motivate theory and build up towards representative low-dimensional examples. This talk will be self contained and will assume very little. In particular, it could be treated as an introduction (in retrospect) to those by Margulis, Tomanov, Weiss and Lindenstrauss.