

October 9: Charlotte Chan (MIT), *Flag varieties and representations of p -adic groups*

Deligne-Lusztig varieties are subvarieties of flag varieties whose cohomology encodes the representations of reductive groups over finite fields. In this talk, we discuss recent progress towards geometric realizations of representations of p -adic groups via an analogue of Deligne-Lusztig theory for parahoric subgroups. In the special case of GL_n and its inner forms, we also explain the connection to affine Deligne-Lusztig varieties, a 1979 conjecture of Lusztig, and the local Langlands and Jacquet-Langlands correspondences. Most of this is joint work with Alexander Ivanov.