

Speaker: Rachel Ollivier

Title: Mod p representations of a p -adic group and the pro- p -Iwahori Hecke Ext-algebra

Abstract: Given a p -adic reductive group G and its (pro- p) Iwahori-Hecke algebra H , we are interested in the link between the category of smooth representations of G and the category of H -modules. When the field of coefficients has characteristic zero this link is well understood by work of Bernstein and Borel.

In characteristic p things are still poorly understood and the role of the pro- p Iwahori-Hecke algebra H is played by a different graded Hecke algebra. In particular, by work of Peter Schneider, the module category over the d.g. Hecke algebra is equivalent to the derived category of smooth representations of G . Unlike in the case of H , we know little about the structure of this d.g. Hecke algebra. In an ongoing work with Peter Schneider we study the cohomology of the d.g. Hecke algebra. I will describe some results and questions that arise naturally.