UCSC MATHEMATICS DEPARTMENT

Spring 2023 Algebra & Number Theory

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Reductive subgroup schemes of a parahoric group scheme

Let G be a reductive algebraic group over K where K is the field of fractions of a complete discrete valuation ring A. The parahoric group schemes attached to G are certain smooth group schemes P over A for which the group P_K obtained by base-change coincides with G.

Write k for the residue field of A. In general, the special fiber P_k of a parahoric group scheme is not reductive. When G splits over an unramified extension of K, we proved in a relatively recent paper that for any parahoric group scheme P attached to G that there is a closed A-subgroup scheme M of P for which the special fiber M_k is a Levi factor of the group P_k, and the generic fiber M_K is a maximal rank reductive subgroup of P_K = G.

The talk will aim to describe this result and some background material: among other things, it will describe the notion of a Levi factor, of a parahoric group scheme, and of a maximal rank reductive subgroup.

Come join us!

"Tea" (informal meet-and-greet) before talk

FRIDAY
May 5

11 am PST

IN PERSON !
McHenry 4130

Refreshments
in the tea room (McH 4161)
~30m beforehand

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