

Séminaire Groupes Réductifs et Formes Automorphes

Le 25 novembre 2019 à 10h30 (PRG)

A geometric theory of central characters.

Exposé de Sam Gunningham
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Résumé :

Lusztig's classification divides the representation theory of $G(F_q)$ (G a reductive algebraic group) into its semisimple and unipotent parts in analogy to the Jordan decomposition. I will explain a refinement of this idea in the geometric setting. Namely, we will exhibit the collection of categorical representations of the reductive group G (over the complex numbers) as sheaf over the moduli of semisimple conjugacy classes in the dual group, whose fibers may be understood as unipotent representations for a smaller reductive group. One motivation is to study the cohomology of $G(\mathbb{C})$ -character varieties of surfaces and its relations with the representation theory of $G(F_q)$. This is joint work with David Ben-Zvi.