

Simple Modules for Algebraic Groups

mardi 12 décembre 2023 15:00 (50 minutes)

I will speak about joint work with David Stewart, giving a classification by highest weight of simple modules for smooth connected algebraic groups over a field, and also describe some of the properties of those modules. Much of the work here shows the fundamental influence of Tits: our work relies on work of Conrad-Gabber-Prasad classifying pseudo-reductive groups, which in turn (pseudo-)completed a program initiated by Tits in the 1990s. Further, in moving from the split to the non-split case, and in calculating the endomorphisms of the simple modules, we also mimic work of Tits from the 1970s for reductive groups.

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