

1145-20-886

Clément Jacques Etienne Guérin* (clement.guerin@uni.lu), Mathematics Research Unit, Maison du nombre, 6 avenue de la Fonte, 2449 Esch-Sur-Alzette, Luxembourg. *Bad subgroups in complex reductive groups.*

Schur's lemma states that the centralizers of irreducible linear subgroups (or linear representations) is the group of invertible scalar matrices. Depending on the way we extend the notion of irreducibility in complex reductive groups, Schur's lemma may or may not be true anymore. Conjugacy classes of irreducible representations commuting with non-central elements generally appear to be singular points of character varieties. After discussing the different notions of irreducibility in complex reductive groups, we shall see how to construct counter-examples to Schur's lemma in complex reductive groups. We will end up by explaining some consequences for the study of the bad locus in character varieties. (Received September 17, 2018)