

1125-20-1599

Spencer J Gerhardt* (sgerhard@usc.edu). *Generation problems for classical algebraic groups.*

Let G be a classical algebraic group over an uncountable algebraically closed field of characteristic $p \geq 0$. Let C_1, \dots, C_e be conjugacy classes of G . In this talk we consider the following question: when do there exist elements x_1, \dots, x_e in C_1, \dots, C_e such that $\langle x_1, \dots, x_e \rangle$ is Zariski dense in G ? Results for different types of classes C_1, \dots, C_e of G are given, depending on the group G . Applications to random generation of finite groups of Lie type, and the representation theory of simple algebraic groups are then discussed. (Received September 18, 2016)