On Hilbert's irreducibility theorem for linear algebraic groups

Fei Liu

Abstract. We complete the proof of a version of Hilbert's irreducibility theorem for linear algebraic groups over a finitely generated field of characteristic 0, originally announced in [5]. We also give a sample application to the existence of generic elements in Zariski dense subgroup of linear groups [25].

Mathematics Subject Classification (2020): 12E25 (primary); 11G35 (secondary).