

1125-20-875

Skip Garibaldi* (skip@member.ams.org) and **Robert M. Guralnick**. *Generically free representations and essential dimension.*

You might think of the essential dimension of an algebraic group G as the number of parameters needed to specify a G -torsor. (For example, when G is the orthogonal group in n variables, a G -torsor is an n -dimensional quadratic form, which can be diagonalized, so the essential dimension is n .) The essential dimension of G is at most the dimension of a generically free representation. This talk is about joint work with Bob Guralnick, where we prove new upper bounds on essential dimension by proving that certain representations are generically free over all fields. (Received September 12, 2016)