

1135-20-1248

Robert M Guralnick* (guralnic@usc.edu), 3620 S. Vermont Ave, Department of Mathematics, University of Southern California, Los Angeles, CA 90089-2532. *Quivers, Modules and Group Theory*. Preliminary report.

We will discuss several problems in group theory in which module theory from noncommutative rings and quiver theory play a crucial role. We will particularly discuss the problem of classifying closed irreducible subgroups of $GL_n(k)$, k algebraically closed which have only finitely many orbits and obtaining an analogue of the singular value decomposition for matrices over finite fields. (Received September 20, 2017)