

Geometry, Groups and Dynamics/GEAR Seminar  
(held at the Illinois hub of GEAR )

**Thursday, October 9, 2014, 1:00 pm, 243 Altgeld Hall**

Justin Malestein (Universitat Bonn)

Arithmetic quotients of the mapping class group from covers

Abstract: In this talk, I will discuss a procedure using the action on homology of covers for obtaining infinitely many “virtual” arithmetic quotients of mapping class groups of closed surfaces, (surjective maps up to finite index). Specifically, for any irreducible rational representation of a finite group of rank less than  $g$ , we produce a corresponding virtual arithmetic quotient of the genus  $g$  mapping class group. Particular choices of irreducible representations of finite groups yield arithmetic quotients of type  $Sp(2m)$ ,  $SO(2m, 2m)$ , and  $SU(m, m)$  for arbitrarily large  $m$  in every genus. Joint with F. Grunewald, M. Larsen, and A. Lubotzky.

[Video](#)