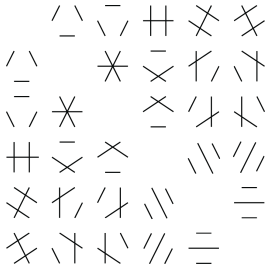
Mathematics Seminar



Rocky Mountain Algebraic Combinatorics Seminar

Maximal Subgroups and Irreducible Restrictions of Representations of Finite Groups

Amanda Schaeffer Fry
Metropolitan State University of Denver

The question of determining maximal subgroups of a finite group has been of interest for quite some time. A theorem of Michael Aschbacher provides a link between studying maximal subgroups of the finite classical groups and studying the behavior under restriction of irreducible representations of its subgroups. I will explain this link and give some insight into some recent developments in the area.

Polytopes of high rank for PSL(d,q)

Peter Brooksbank
Bucknell University

This talk concerns combinatorial abstractions of polytopes, the familiar geometric objects whose most famous examples are the Platonic solids. Rather than work directly with such abstract regular polytopes, one can instead consider a certain group-theoretic property possessed by these group of automorphisms of any such object. It turns out that a finite group G being a *string C-group* is equivalent to the existence of an abstract polytope upon which G acts nicely as automorphisms. Via this equivalence, the question of whether there exists an abstract regular polytope with a prescribed automorphism group G is reduced to finding certain highly-constrained generating sequences of involutions for G. I will survey recent work in this area and report on some new results for the groups $\mathrm{PSL}(d, q)$ for small values of d.

Weber 223
4–6 pm
Friday, May 8, 2015
(Refreshments in Weber 117, 3:30–4 pm)
Colorado State University

This is a joint Denver U / UC Boulder / UC Denver / U of Wyoming / CSU seminar that meets biweekly.
Anyone interested is welcome to join us at a local restaurant for dinner after the talks.

Colorado State University

Department of Mathematics
Fort Collins, Colorado 80523