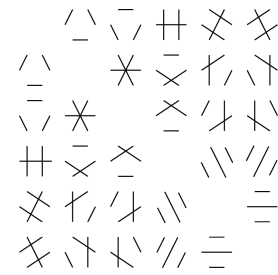# Mathematics Seminar

Rocky Mountain Algebraic Combinatorics Seminar

Classification and invariants for fusion categories

Henry Tucker
UCSD

The objects of fusion categories generalize the properties of complex representations of finite groups. The need for such a generalization is motivated by quantum physics: while symmetries in the classical setting can be encoded by group representations, quantum symmetries require a more general framework to be fully described. In this talk we will survey classification results for fusion categories and the tools used to obtain them. We will particularly focus on the categorical Frobenius-Schur indicators, which are invariants under equivalence of categories which generalize the classical Frobenius-Schur indicators for finite groups.

The classification of $a(2)$-finite Coxeter groups

Richard Green
University of Colorado, Boulder

Lusztig's a-function is an integer-valued function on the elements of a Coxeter group. The definition of the function is algebraic, but somewhat complicated. We call a Coxeter group "$a(k)$-finite" if it has finitely many elements with a-value equal to k. The classification of $a(1)$-finite Coxeter groups is known, and this talk will describe how combinatorial methods can be used to classify the $a(2)$-finite Coxeter groups.

Weber 223
4–6 pm
Friday, March 23, 2018
(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.