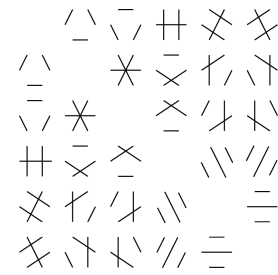# Mathematics Seminar

Rocky Mountain Algebraic Combinatorics Seminar

Connected quandles and ...

Petr Vojtěchovský
University of Denver

Quandles are an algebraic structure that models the Reidemeister transformations of a Knot, or the conjugation structure of a group. Building on ideas of Galkin, we establish a canonical representation of con- nected quandles as certain configurations in transitive groups, called quandle envelopes. This characterization allows us to efficiently enumerate connected quandles of small orders.

This is joint work with A. Hulpke (CSU) and D. Stanovský (DU)

... and Transitive Groups

Alexander Hulpke
Colorado State University

The question of classifying quandles of order $2p$ reduces to the question of classifying transitive groups of degree $2p$ such that

- G' is transitive on $\{1, \ldots, 2p\}$, and

- The center of a point stabilizer is not contained in a proper normal subgroup.

We classify these groups, using a reduction to the primitive case, the O'Nan-Scott theorem, and classifications by Guralnick, Liebeck and Saxl.

This is joint work with D. Stanovský and P. Vojtěchovský (DU)

Weber 223
4–6 pm
Friday, September 12, 2014
(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.

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