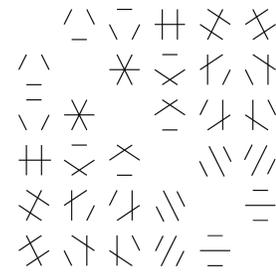


Mathematics Seminar



Rocky Mountain Algebraic Combinatorics Seminar

On Galois Automorphisms Acting on Characters and Navarro's Sylow 2-Normalizer Conjectures

Amanda Schaeffer Fry
Metropolitan State

Navarro has conjectured a necessary and sufficient condition for a finite group G to have a self-normalizing Sylow 2-subgroup, which is given in terms of the behavior of the ordinary irreducible characters of G under a specific Galois automorphism. Navarro-Tiep-Vallejo have conjectured a similar statement regarding groups whose Sylow 2-normalizers contain a single irreducible 2-Brauer character. Thanks to reduction theorems proved by myself and Navarro-Vallejo, respectively, a large part of the proofs of these conjectures is to understand the action of this Galois automorphism on characters of groups of Lie type. I will discuss the recent proof of these conjectures, including a description of the action of Galois automorphisms on characters of groups of Lie type. (Some portions of these results are joint work with J. Taylor.)

Khovanov's Heisenberg category, moments in free probability, and shifted symmetric functions

Henry Kvinge
Colorado State University

Khovanov introduced a remarkable monoidal category \mathcal{H} , known as the Heisenberg category. \mathcal{H} is defined via a calculus of planar diagrams and conjecturally categorifies the Heisenberg algebra. In this talk we will explore some of the combinatorics associated with \mathcal{H} , showing in particular how the graphical calculus for closed diagrams in \mathcal{H} encodes both the algebra of shifted symmetric functions of Okounkov-Olshanski and moments of Kerov's transition measure on Young diagrams.

Weber 223
4-6 pm
Friday, September 22, 2017
(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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