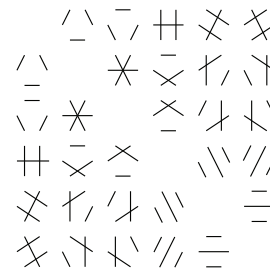


Mathematics Seminar



Rocky Mountain Algebraic Combinatorics Seminar

Higher Specht bases for generalizations of the coinvariant ring

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Consider the action of the symmetric group S_n on the polynomial ring $\mathbb{C}[x_1, \dots, x_n]$ by permuting the variables. While this is an infinite dimensional S_n -module, we can understand the action completely by considering the finite-dimensional “coinvariant ring” R_n formed by quotienting out by the non-constant invariants (symmetric functions).

The module R_n is known to have dimension $n!$ as a \mathbb{C} -vector space. In 2005, Ariki, Terasoma, and Yamada discovered an explicit, combinatorially-defined basis of $n!$ polynomials that respects its decomposition into irreducible S_n -modules. They called their basis elements “higher Specht polynomials” since they generalize the classical Specht module construction of irreducible representations of S_n .

We present new “higher Specht bases” for several generalizations of the coinvariant ring that arise naturally in many areas of algebraic geometry and combinatorics.

Online via Zoom

<https://zoom.us/j/99764124299?pwd=YXZXdkcvQjB2RnFHhWtjUXRyUTFOUT09>

4 pm, Friday, June 12, 2020

Get together online starting at 3:30 pm

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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