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Restricting Howe Duality

Classical Howe duality provides a representation theoretical framework for classical invariant theory. In the classical Howe duality, the general linear group, $GL_n(\mathbb{C})$, is dual to $GL_k(\mathbb{C})$ when acting on the polynomial ring in the variables $x_{i,j}$ where $1 \leq i \leq n$ and $1 \leq j \leq k$. In this talk, I will introduce a multiset partition algebra, $MP_k(n)$, as the Howe dual to the action of the symmetric group S_n on the polynomial ring.

This is joint work with Mike Zabrocki