MARKUS SCHMIDMEIER, Florida Atlantic University
Box moves on Littlewood-Richardson tableaux

Let α, β, γ be partitions. The representation space $\mathbb{V}^{\beta}_{\alpha,\gamma}$ of short exact sequences $0 \rightarrow N_\alpha \rightarrow N_\beta \rightarrow N_\gamma \rightarrow 0$ of nilpotent linear operators of Jordan types α, β, γ, respectively, is partitioned by the LR-tableaux of shape (α, β, γ).

For LR-tableaux Γ, $\tilde{\Gamma}$, define $\Gamma \leq_{\mathsf{closure}} \tilde{\Gamma}$ if the corresponding varieties in $\mathbb{V}^{\beta}_{\alpha,\gamma}$ satisfy $\mathbb{V}_{\tilde{\Gamma}} \cap \overline{\mathbb{V}}_\Gamma \neq \emptyset$. It turns out that the closure relation is a preorder (i.e. reflexive and anti-symmetric).

We present a combinatorial conjecture regarding box moves on LR-tableaux which are horizontal stripes. If the conjecture holds, then the transitive closure of the closure relation is easily determined by the combinatorics of LR-tableaux.

This is a report about joint work with Justyna Kosakowska from Torun.