

The Shi arrangement and pointed partitions

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Based on joint work with Alex Abrams

The Shi arrangement and pointed partitions arise from different areas of combinatorics. Nevertheless, it is known that the intersection poset of the Shi arrangement and the poset of pointed partitions have the same characteristic polynomial. In this talk, we give an explanation for this fact by using the notion of homogeneous quotient posets that Bruce and I had previously developed. More specifically, we show that there is a natural way to quotient the intersection poset of the Shi arrangement to get the poset of pointed partitions. Along the way, we give a new way to describe the intersection poset of the Shi arrangement in terms of a special type of shuffle.