

# Subspace arrangements and the polynomial representation of the rational Cherednik algebra

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Representation theory may sometimes be used to study the ideals of varieties with large symmetry groups: for instance, this happens with determinantal varieties. I will discuss the extent to which the representation theory of Cherednik algebras may be applied in this fashion to the ideals of arrangements of linear subspaces, and advertise some related conjectures on the submodule structure of the polynomial representation of the Cherednik algebra of a cyclotomic reflection group.