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Using descent algebras to compute cohomology.

The cohomology of the complement of a type A hyperplane arrangement affords a representation of the symmetric group. In this talk, I will discuss how that representation can be computed using the descent algebra of the symmetric group. Moreover, I will mention progress toward computing the cohomology of the complement of a type B hyperplane arrangement using a generalization of the descent algebra for the hyperoctahedral group. (Received July 17, 2017)