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Internal zonotopal algebras and monomial reflection groups

The *internal zonotopal algebra* of an arrangement $\mathcal{A} \subset V$ is a zero (Krull) dimensional algebra that arises in the study of multivariate box splines. Its vector space dimension is the number of bases of the associated matroid with zero internal activity. When \mathcal{A} is fixed by the action of a group $G \subset GL(V)$ the internal zonotopal algebra of the Gale dual \mathcal{A}^\perp is a representation of W . In this talk I will present some results on this representation in the case when W is one of the monomial reflection groups $G(m, 1, n)$.