

# On the vanishing ideal of an algebraic toric set and its parameterized linear codes

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Let  $K$  be a finite field and let  $X$  be a subset of a projective space, over the field  $K$ , which is parameterized by monomials arising from the edges of a clutter. We show some estimates for the degree-complexity, with respect to the revlex order, of the vanishing ideal  $I(X)$  of  $X$ . If the clutter is uniform, we classify the complete intersection property of  $I(X)$  using linear algebra. We show an upper bound for the minimum distance of certain parameterized linear codes along with certain estimates for the algebraic invariants of  $I(X)$ .

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