

Upper bounds on Betti numbers of tropical prevarieties

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We prove upper bounds on the sum of Betti numbers of tropical prevarieties in dense and sparse settings. In the dense setting the bound is in terms of the volume of Minkowski sum of Newton polytopes of defining tropical polynomials, or, alternatively, via the maximal degree of these polynomials. In sparse setting, the bound involves the number of the monomials.

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