

Tropical dual varieties

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I will introduce the tropical dual variety, which similarly to the algebraic case, classifies tangent hyperplanes to a given variety. The resulting object is indeed a tropical variety, and the construction commutes with tropicalization. Consequently, we obtain a combinatorial tool for counting multi-tangent hyperplanes to algebraic varieties, detecting dual defects, and for computing Newton polygons of dual varieties.

References

- [1] NATHAN ILTEN AND YOAV LEN , *Projective duals to algebraic and tropical hypersurfaces*, preprint arXiv:1803.08912.