Algebra Seminar

Tropical dual varieties

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Abstract: My talk will revolve around combinatorial aspects of dual varieties. I will introduce the tropical dual variety, which similarly to the algebraic case, classifies tangent hyperplanes to a given variety. The construction commutes with tropicalization, and the resulting object is indeed a tropical variety. 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.

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