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Torus invariant curves

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The definition of a T-varety is the same as that of a toric variety, except that the dimension of the torus may be less than the dimension of the variety. Motivated by the correspondences between the geometry of a toric variety and the combinatorics of its fan, we wish to translate properties of a T-variety into properties of the gadgets that classify them, called divisorial fans.

We will begin this talk by reviewing this language of divisorial fans, then we will give a combinatorial description of the torus invariant curves on a T-variety. Time permitting, we show how this description leads to a combinatorial intersection formula between invariant curves and invariant divisors in a T-variety, as well as a generalization of the classic toric cone theorem.