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"Methods of Computer Algebra in Tropical Geometry"

ABSTRACT:

In the talk we will introduce two different ways to define tropical varieties, one more geometric, one more algebraic. We will explain why these two definitions coincide and deduce from this an algorithm for lifting points from the tropical variety of an ideal to its algebraic variety. Moreover, we will discuss methods to compute the tropical variety of an ideal. In the case of surfaces and of plane curves this allows to visualise the tropical varieties.