

"What is tropical geometry?"

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Abstract: The basic idea of tropical geometry is to replace the ground field, for example complex numbers, by the tropical semiring. That is considering the real numbers with infinity and replacing usual multiplication by addition and usual addition by taking the minimum. In this process polynomials are replaced by piecewise linear functions and algebraic varieties by objects in polyhedral geometry. These objects can be seen as a combinatorial shadow of their algebro-geometric counterparts and they share surprisingly many properties. I will introduce the basic notions of tropical geometry and elaborate many examples.