

Front Range Algebra, Geometry and Number Theory Seminar

Tropical Algebra and Geometry

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Abstract: The tropical numbers consist of the reals and $-\infty$, with tropical multiplication = ordinary addition and tropical addition = ordinary max (our convention), so that, in particular, $a + a = a$ for all tropical numbers a . Tropical arithmetic is, frankly, bizarre. Nevertheless, algebraic geometry over the tropical numbers seems to be viable, and many of the features of Riemann surfaces, at least, carry over to the tropics, in which curves are metric graphs. In these talks, I want to do some simple stuff....discuss whether the tropical numbers are algebraically closed, what the tropical Nullstellensatz ought to look like, and compare low genus Riemann surfaces with low genus graphs. There will be more questions than answers.

Thursday March 24th 2011

3:00-5:00 p.m.

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