

Abel maps for tropical curves via tropical geometry

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In this talk I will talk about the problem studied in my thesis: Is it possible to find an explicit resolution of the Abel map (a rational map) for a nodal curve? We start with a family of curves, that is a regular smoothing of a nodal curve with smooth components. We take a polarization, an invertible sheaf, and a section through the smooth locus of the family. The Abel map is the rational map taking a tuple of points on a curve of the family to the associated sheaf in the Esteves compactified Jacobian. We translate this problem into an explicit combinatorial problem by means of tropical and toric geometry. The solution of the combinatorial problem gives rise to an explicit resolution of the Abel map.