ANDY FRY, Pacific University

Moduli Spaces of Rational Graphically Stable Curves

In this talk, we use a graph to define a new stability condition for the algebraic and tropical moduli spaces of rational curves. We will also discuss characterization results in both settings: Tropically, we characterize when the moduli spaces have the structure of a balanced fan by proving a combinatorial bijection between rational graphically stable tropical curves and chains of flats of a graphic matroid. Algebraically, we characterize when the tropical compactification of the moduli space agrees with the theory of geometric tropicalization. Both results occur only when the graph is complete multipartite.