

## Sam Payne: Tropical methods in Brill-Noether theory

Riemann-Roch theory for graphs, as developed in the work of Baker-Norine, points to the existence of deep combinatorial structures related to the classical algebraic geometry of linear series on algebraic curves. In this talk I will present joint work with Cools-Draisma-Robeva, and with Jensen, pursuing this line of reasoning to give tropical proofs of the Brill-Noether and Gieseker-Petri theorems, which describe the dimension and local structure of the moduli spaces parametrizing linear series of given degree and rank on a general curve.