

## DEGREE BOUNDS ON TREE MODELS

Tree models are families of probability distributions used in modelling the evolution of a number of extant species from a common ancestor. One method to describe these models is to view a family as a set in an algebraic variety of the form  $V^{\otimes m}$ , where  $m$  is the number of extant species, and to try to find polynomial equations that determine its Zariski closure. One important question in this area of research is the following: Can we bound the degree of the equations we need independently of the number of extant species? In this talk, I will tell a bit more about these models and will explain how to prove the existence a bound on the degree of the needed equations by constructing an infinite limit of models of a specific form.