

## **Algebraic Biology with Macaulay2**

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In this talk, we will discuss how packages for biological applications in Macaulay2, e.g. `PhylogeneticTrees.m2` and `ReactionNetworks.m2`, have lead to new theoretical results in phylogenetic algebraic geometry and algebraic systems biology. After reviewing recent results on phylogenetic ideals and steady-state ideals, both highly structured polynomial ideals, we will discuss current implementation needs and challenges in algebraic biology.