

1145-VL-2049 **Kaitlyn A Perry*** (k.perry@wingate.edu), 220 N Camden Rd, Wingate, NC 28174. *The Polydegree Conjecture.*

The group of polynomial automorphisms has two structures in which the interaction is not well understood: an amalgamated free product of the triangular and affine subgroups and an infinite dimensional algebraic variety. When looking at the amalgamated free product structure, we are able to define the polydegree: the unique sequence of degrees of the triangular automorphisms in the amalgamated free product decomposition of the automorphism. We will discuss the Polydegree Conjecture and new results that follow. (Received September 24, 2018)