We want to understand spaces that parameterize projective subvarieties. One way to do this is to look at Algebraic Cycles. An Algebraic Cycle is a formal sum

$$\sum c_i X^i,$$

where $X^i \subset \mathbb{P}^{n-1}$ is an irreducible closed subvariety. If we take a family of irreducible subvarieties, its limit may have several irreducible components, i.e. the limit may be a general cycle.

We want to study this phenomenon and the Chow Varieties are a way of doing thins. Simply put, the points of a Chow variety are Algebraic Cycles. We will explain at the Chow - Van der Waerden Theorem that imbeds the variety into projective space.

Finally we move on to a specific example, 0-cycles. We can use symmetric polynomials to work with 0-cycles. Using this we will look at the tangent space, and derive a formula for the tangent space of a multiple of smooth point. (Received September 25, 2012)