

1054-14-1

Christopher Hacon*, Department of Mathematics, University of Utah. *Classification of algebraic varieties.*

A complex projective variety is a subset of complex projective space defined by a set of homogeneous polynomials. In this talk I will discuss recent results that describe the geometry of these varieties. The case of varieties of dimension 1, also known as Riemann surfaces, is classical. The geometry of smooth varieties of dimension 2 was understood by the Italian school of Algebraic Geometry at the beginning of the 20-th century. The Minimal Model Program is an attempt to generalize these results to higher dimension. The 3 dimensional case was understood in the 1980's by celebrated work of Mori and others. In this talk I will describe recent results that extend many of the features of the Minimal Model Program to arbitrary dimension. In particular I will discuss the following theorem: The canonical ring of any smooth complex projective algebraic variety is finitely generated

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