



The University of Chicago

Department of Statistics

Seminar

SETH SULLIVANT

Department of Mathematics

Harvard University

“Algebraic Statistics”

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133 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

The emerging field of algebraic statistics advocates the use of polynomial algebra as a tool for statistical analysis. The underlying principle is that many natural families of probability distributions on discrete random variables are algebraic varieties (the zero sets of polynomials). Knowing the polynomials which define these sets of probability distributions can be useful for making statistical inferences and provides a different viewpoint for some problems in probability theory. I will try to illustrate this point with examples from graphical models, phylogeny reconstruction and conditionally specified models.