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Aleksandra B Slavkovic* (sesa@stat.psu.edu), 326 Thomas Building, Department of Statistics, University Park, PA 16802. *Application of Algebraic Statistics for Statistical Disclosure Limitation.*

Statistical disclosure limitation applies statistical tools to the problem of limiting releases of sensitive information about individuals and groups that are part of statistical databases while allowing for proper statistical inference. These limiting releases can be in a form of arbitrary collections of marginal and conditional distributions, and odds ratios for contingency tables. Given this information, tools from algebraic geometry can be used to characterize discrete distributions for contingency tables, and to determine a disclosure risk. We demonstrate how the tools from algebraic geometry are used to represent the tables of counts and describe the locus (T) of all possible tables under the given constraints. We discuss some practical implication of using algebraic statistics for data privacy and confidentiality problems. (Received September 28, 2005)