

# **Applications of Odds and Odds Ratios**

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## **Abstract**

The odds and odds ratios play important roles in many statistical areas. In this talk, we want to introduce two new applications. In the first application, we use the odds and odds ratios to derive necessary and sufficient conditions for compatibility of the conditionally specified multivariate discrete distributions. In the second application, odds and odds ratios provide a criterion for the convergence of Gibbs sampler. Generalization to continuous variables is also investigated.