

CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, October 5

2:00 – 3:00 PM

Maria Sanford, Room 101

TESTS FOR HOMOGENEITY OF THE MEANS OF SEVERAL GROUPS OF COUNT DATA IN THE PRESENCE OF OVER DISPERSION

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ABSTRACT

There has been considerable interest in analyzing count data in the presence of over-dispersion for data occurring in ecology, toxicology, biology, and related fields. In this presentation, I will discuss procedures for testing the homogeneity of the means of several groups of count data with overdispersion. Limitations of the most commonly used testing procedures, such as ANOVA and LRT for testing the equality of the means will also be discussed. More importantly, I will present the recently developed score type tests obtained based on the parametric and semiparametric models of count data using likelihood, quasi-likelihood, extended quasi-likelihood, and double extended quasi-likelihood methods. Finally, applications to toxicological and biological data are given.

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