CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, March 13
2:00 – 3:00 PM
Maria Sanford, Room 101

BOOTSTRAP CONFIDENCE INTERVAL FOR THE OVER-DISPERSION PARAMETER WITH APPLICATIONS TO TUMOR DATA

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(Joint work with Debaraj Sen and Roger Bilisoly)

Abstract

The over-dispersion parameter in count data is one of the most widely applied and versatile measures in toxicology, biology, clinical medicine, epidemiology and other similar fields. For example, it is commonly used as an inverse measure of aggregation in biological count data. Its estimation from finite data sets is a recognized challenge. Extensive work has been done on its point estimation in terms of bias and efficiency, and testing for over-dispersion. However, little has been done on the construction of confidence intervals of the over-dispersion parameter. The purpose of this talk is to explore some procedures for the construction of confidence limits for the over-dispersion parameter using the estimators obtained based on parametric and semi-parametric models. An illustrative application to tumor data is also presented.

For further information:
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