

STANFORD UNIVERSITY
DEPARTMENT OF STATISTICS
DEPARTMENTAL SEMINAR

3:30 p.m., Wednesday, March 12, 2003
Sequoia Hall Room 200
(Cookies at 4:30 in 1st Floor Lounge)

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Mixture Problems and Biased Sampling

In the first part of this talk, I'll describe a new test for testing the homogeneity in a mixture distribution. Our new test, D-test, with a weighting function, is competitive to the recent modified likelihood ratio test which is distribution-free and locally most powerful, asymptotically. In addition, the D-test is more in agreement with human visual perception and has closed form expressions in terms of parameter estimates, while the likelihood ratio type tests do not. The convergence rate of the D-test is established. Its application will be illustrated via an analysis of a financial data set and a medical data set. Some new visualization tools will be suggested for choosing the optimal weighting function and its potential in data mining will be discussed.

In the second part of the talk, if time permits, I'll talk about new procedures for estimation when survival data come with both censored information and selection biases.

The first part of talk is based on the joint work with R. Charnigo and the second part is with B. Wang.