

STANFORD UNIVERSITY  
DEPARTMENT OF STATISTICS  
DEPARTMENTAL SEMINAR

4:15 p.m., Tuesday, October 1, 2002  
Sequoia Hall Room 200  
(Cookies at 3:45 in 1st Floor Lounge)

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**Prediction error: covariance corrections and cross-validation**

Suppose you have constructed a data-based estimation rule, for example a logistic regression model, and would like to know its performance as a predictor of future cases. There are two main theories concerning prediction error: (1) methods like Cp, AIC, and SURE (Stein's Unbiased Risk Estimator) that relate to the covariance between data points and the corresponding predictions, and (2) Cross-validation, and related techniques such as the nonparametric bootstrap. This talk concerns the relationship between the two theories. Which method is preferable depends on the situation, but at least a rough usage guide will be given.