Stanford University
Department of Statistics

DEPARTMENTAL SEMINAR

4:15pm, Tuesday, December 7, 2010
Sequoia Hall Room 200
Cookies served at 3:45pm, 1st Floor Lounge.

Speaker: Bradley Efron, Stanford University

Title: Tweedie’s formula and selection bias

Abstract:
Suppose the statistician observes some large number of estimates $z_i$, each of which is unbiased for its unobserved true mean $\mu_i$. The largest say 10 of the $z_i$’s are likely to substantially overestimate their corresponding $\mu_i$’s, this being “selection bias,” or “regression to the mean.” Tweedie’s formula, first reported by Robbins in 1956, offers a simple empirical Bayes approach for correcting selection bias. I will discuss its merits and limitations, in terms of some examples and a little bit of theory relating to the James–Stein estimator.