



The University of Chicago
Department of Statistics
Mini-Seminar for First Year Students

DALE ROSENTHAL

Department of Statistics
The University of Chicago

“A New Statistic for Influence in Linear Regression”

TUESDAY May 24, 2005 at 4:45 pm
110 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

In 1977, Dennis Cook proposed a measure of influence for observations in a linear model. Unfortunately, Cook’s distances have a complicated limiting distribution; thus testing for undue influence is done according to ad-hoc rules instead of a statistical hypothesis test. Daniel Pena (2005) has introduced a new measure that has many advantages over Cook’s distances. The new metric is asymptotically normal, can find groups of observations which are influential, and is also computationally efficient. I will review this new metric and show where it is and is not useful.