1053-62-67      **Arthur Berg\*** (`berg@ufl.edu`), Division of Biostatistics, Cancer Institute, H069, 500 University Drive, P.O. Box 850, Hershey, PA 17033-0850, and **Dimitris Politis**. *Improving the Kaplan-Meier Estimator.*

The Kaplan-Meier (KM) estimator is improved through smoothing with infinite-order kernels. Asymptotic relative deficiency provides a measure of comparison of the proposed estimator to the original KM estimator. Improvements even in terms of asymptotic relative efficiency (ARE) are present under specified assumptions on the data. The deficiency analysis introduces a deficiency rate that provides a continuum between classical deficiency analysis and efficiency analysis. An automatic bandwidth selection algorithm, specially tailored to the infinite-order kernels, is incorporated into the estimators. In small sample sizes these estimators can significantly improve the estimation of the CDF and survival function as is illustrated through the deficiency analysis and computer simulations.

Additionally, I will remark on the use of infinite-order kernels in nonparametric censored density estimation with comparisons in terms of mean square error (MSE) improvement.

This talk will be exciting and accessible to undergraduates with interest in statistics. It is based on two manuscripts that will appear in print in the coming months. Arxiv preprints are accessible that provide more details of this talk: 0903.3014 and 0704.3281. (Received August 10, 2009)