1003-62-536   **Kagba Nkrumah Suaray*** (`ksuaray@math.ucsd.edu`), 4051 Miramar Dr., Apt. F, La Jolla, CA 92037. *On Kernel Density Estimation for Censored Data.*

We study kernel density and survival function estimation for censored data. A brief overview of the history and methodology of the technique are given. A mean squared error derivation, based on elementary principles, of the well studied convolution density estimator is provided. Two procedures for generating smooth survival function estimates are developed and explored, and are compared with the popular estimators. We then proceed to introduce a new density estimator, based on the Kaplan-Meier estimator, and using Abramson's variable bandwidth principle. We give its mean squared error expansion, and investigate the improved bias properties. Finally, we run simulations illustrating the favorable large sample characteristics of the new estimators. (Received September 20, 2004)