Bandwidth Selection for Kernel Density Estimates Based on Data Sharpening

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Abstract

A new general method for reducing bias in density estimation has been proposed by Hall and Minnotte (2002, JRSSB). The method is known as data-sharpening since it involves moving the data away from regions where they were sparse towards regions where the density is higher. Once the data have been "sharpened" they are used in a kernel estimator to produce a less biased estimator. In this talk, we shall consider the problem of choosing the bandwidth for sharpened density estimates.