

**LIMITING PROPERTIES OF A DENSITY NONPARAMETRIC ESTIMATOR AND  
CONSISTENT DEMIXING FOR A KEILSON-WISHART CLASS OF CONDITIONALLY  
INDEPENDENT OBSERVATIONS**

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This work discusses the sequence  $\{Y_n\}_{n \geq 1}$  of the conditionally independent random variables, controlled by the sequence  $\{\xi_n\}_{n \geq 1}$ , when in the cases  $P(\xi_n = 1) = p$  and  $P(\xi_n = 0) = 1 - p$ , distributions  $P_{Y_n/\xi_n=1}$  and  $P_{Y_n/\xi_n=0}$  have the densities  $f_1(x)$  and  $f_0(x)$  from the class  $L_2(-\infty, \infty)$ .

Under certain conditions, the proximity accuracy between the density  $\overline{f(x)} = pf_1(x) + (1-p)f_0(x)$  and the nonparametric kernel estimation, based on the  $\{Y_n\}_{n \geq 1}$  observations, is estimated.