Nonparametric Detection of a Change

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ABSTRACT

Suppose one observes a sequence of independent variables, X1, X2, X3, ... whose distribution may change from an initial F0 to F1. One's goal is to detect that a change has taken place "as soon as possible" after its occurrence, subject to a constraint on the rate of false alarms. If nothing is known about both F0 and F1 (other than that they are continuous) and information regarding a change can be gleaned only from the sequence of observations, how can one proceed?

In this talk, a review of published procedures will be presented, and an idea for improvement will be explored. The talk is about ongoing work.