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Asymptotically distribution free test for parameter change in a diffusion process model

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Abstract A test procedure to detect a change in the value of the parameter in the drift of a diffusion process is proposed. The test statistic is asymptotically distribution free under the null hypothesis that the true parameter does not change. Also, the test is shown to be consistent under the alternative that there exists a change point.

Keywords Asymptotically distribution free test · Consistent test · Change point problem · Martingale