

## عنوان مقاله:

Linear Profile Monitoring in the Presence of Non-Normality and Autocorrelation

## محل انتشار:

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## خلاصه مقاله:

In an increasing number of practical situations, the quality of a process or product can be effectively characterized and summarized by a profile. A profile is usually a functional relationship between a response variable and one or more explanatory variables which can be modeled frequently using linear or nonlinear regression models. In this paper, we study the effect of non-normality on profile monitoring in Phase II when within or between autocorrelation is present. Different levels of autocorrelation and skewed and heavy-tailed symmetric nonnormal distributions are used in our study to evaluate the performance of three existing monitoring schemes numerically. Simulation results indicate that the non-normality and autocorrelation can have a significant effect on the in-control performances of the considered schemes. Results also indicate that the out-of-control performances of the schemes are not very sensitive to low and moderate levels of autocorrelation in moderate and large shifts.

## کلمات کلیدی:

Linear profile; Non-normality; Autocorrelation; Average run length; Exponentially weighted moving average control chart

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/281343>

