

Research

Multivariate Statistical Process Control Charts: An Overview

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In this paper we discuss the basic procedures for the implementation of multivariate statistical process control via control charting. Furthermore, we review multivariate extensions for all kinds of univariate control charts, such as multivariate Shewhart-type control charts, multivariate CUSUM control charts and multivariate EWMA control charts. In addition, we review unique procedures for the construction of multivariate control charts, based on multivariate statistical techniques such as principal components analysis (PCA) and partial least squares (PLS). Finally, we describe the most significant methods for the interpretation of an out-of-control signal. Copyright © 2006 John Wiley & Sons, Ltd.

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