

## **Decision Support System Based on Robust Design Methods**

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### **ABSTRACT**

Situations where a certain variability of the quality characteristics of a product is observed, require the detection of the causes generating this instability. These causes however, can be numerous, and an analysis of their effects can be cost and time consuming. The greater the number of causes influencing the quality of a product, the more compelling the application of swift and less costly methods of analysis.

The paper presents a computer-based intelligent decision support system designed to achieve the optimization of the lapping of plane surfaces, by the Taguchi's method of arrays of experiments. The steps to be followed for solving the issue of optimization are described, the most important ones concerning the defining of the targeted objective, establishing the factors influencing the process and their respective levels, selection of the optimum array of experiments, processing of the results and determining the optimum configuration of the levels of the considered factors.