

5th International Conference on

Big Data Analysis and Data Mining

June 20-21, 2018 | Rome, Italy

Bayesian network and surface response methodology for design of experiment

Amrane Meriem and Oukid Saliha
University of Blida, Algeria

Experimental design (ED) strategies are used to prove suggestions' veracity, they have been applied since 1935 with the same structures: hypothesis, experimentation, response, even though they are hindered by conditions and tests that cannot be always easy to maintain. Currently, ED represents a weak toll to monetization, it cannot handle a high dimensional data and a set of interactions between variables. The standard is, the values are predefined and for that reason, a great deal of effort is spent producing models that incorporate knowledge of the underlying physics and chemistry in order to understand the relationship between system inputs and responses. In this paper, we propose a novel approach called Bayesian network and response surface methodology for design of experiment it's based on three steps, first we have a set of variables, which need to be classified, secondly we determine the independencies then for each factor we attribute a random value, then we use response surface and Bayesian network to determine the best experimental points.

amrane.meriem@outlook.fr