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Learning Kriging by an instructive program.

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There are three types of problem classification: the deterministic, the approximated and the stochastic problems. First, in the deterministic problems the law of the phenomenon and the data are known in the entire domain and for each instant of time. In the approximated problems, the law of the phenomenon behavior is unknown but the data can be known in the entire domain and for each instant of time. In the stochastic problems much of the law and the data are unknown in the domain, so in this case the spatial behavior of the data can only be explained with probabilistic laws. This is the most important reason why the students of geo-sciences careers and others related careers need to take courses in advance estimation methods.
A good example of this situation is the estimation grades in ore mineral deposit for which the Geostatistics was formalized by G. Matheron in 1962 [6]. Geostatistics is defined as the application of the theory of Random Function to the recognition and estimation of natural phenomenon [4]. Nowadays, Geostatistics is widely used in several fields of earth sciences, for example: Mining, Oil exploration, Environment, Agricultural, Forest and others [3]. It provides a wide variety of tools for spatial data analysis and allows analysing models which are subjected to degrees of uncertainty with the rigor of mathematics and formal statistical analysis [9]. Adequate models for the Kriging interpolator has been developed according to the data behavior; however there are two key steps in applying this interpolator properly: the semivariogram determination and the Kriging neighborhood selection. The main objective of this paper is to present these two elements using an instructive program.