1 Название работы

Alternative to Lagrange Multiplier Method

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5 Аннотация работы

In particle physics data analysis the so-called Lagrange Multiplier Method has been used for many years. It has been implemented in the 1960s by the famous Alvarez group for processing experimental data. Since then it is widely used in physical community. It is named after Lagrange who proposed the method for finding the minimum of functions of many variables under the requirement that they satisfy to some additional conditions (equalities, inequalities).

The method uses some artificial variables called Lagrange multipliers having no physical meaning.

Another approach is described here, to find the minimum of a function (in our case it is either χ^2 or logarithm of Likelihood Function) with the constraints. The proposed method is based on the linearization of the constraints during a suitable iteration procedure for the search for the minimum.

We propose a new method for selecting submatrices of partial derivatives Jacobi matrix in this paper.

6 Публикация

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