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STUDY OF THE VARIATIONS FOR ANTHROPOMETRIC LAWS OF ATHLETES USING MATHEMATICAL REGRESSIONS

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Abstract

This paper proposes to determine the laws of variations for anthropometric measurements in athletics by using mathematical regressions. Polynomial regressions, linear, logarithmical and exponentially regressions are used in order to establish mathematical models for determination of physical potential in athletes. The visual graphics of these mathematical models offers the possibility to establish the physical potential, both to the sports technician and sportsman, in terms of maximum, minimum and constant value and even the trend of it./1/

There will be studied many types and grades of regressions, in order to determine the laws of variation for each parameter.

For the polynomial type of regression it will be studied a polynomial regression from the 2^{nd} grade to the 6^{th} grade./2/

The 2^{nd} grade regression indicates quite well the trend of minimum or maximum for the quested parameter. If we study and correlate many parameters we shall have the full image of the sportsman potential and the trend of it.

Using many types of mathematical regressions we shall be able to select the most reliable method for the study. More of the subject will be detailed in a future paper because the need for larger space to elaborate. This kind of study gives the opportunity of high fidelity in processing, viewing and interpretation of the potential trend in sport practice and sportsman evaluation.

Key words: anthropometric parameter, polynomial regressions, sportsman potential, athletes

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