# SIMULATIONS IN KINESIOLOGY

***Summary***

*A protocol of simulation in kinesiology has been suggested and realized and the realized example showed that the protocol was sustainable and credible. It has been tested in some ten cases and an example which perfectly illustrates the power of algorithm and protocol has been showed for the needs of this work. In all the situations, it has been showed that the results contained important, clear and interpretable pieces of information, which is quite sufficient reason to get the described procedure recommended as the obligatory procedure in the analysis of any kind of transformation processes, starting from selection, through supervision and control of training process, up to the programming of sport processes and the objective evaluation of the top-grade sport results. The protocol has been realized also thanks to the diferrences in the basic scientific thesis referring to the definition of terms: model and simulation. They are very often defined in a nice manner as "simulation models", which sounds very nice, but unfortunately, they often reflect only their external appearance but not their real function because simulation dos not have to lead necesarrily to a model and some models can be created without simulation. The mentioned terms and their already serial application : a) shaping of planned systems, b) doing experimenst on the system and c) evaluation, are in their origin neither shaping nor simulation but definition and evaluation of credibility of some system, which is in its origin something completely diferrent, in other words, it is a systematic analysis. However, simulation is a group of procedures which: a) in conditions of multi-meaning and acceptable solutions, b) and under presumption of knowledge about initial conditions for individual solutions find c) some optimal trajectories that desribe optimal conditions for the given initial conditions. In that way, some future initial conditions for defining simulation procedures have been defined and they offer a possibilityof choice among a few different trajectories with information on the resources being engaged and relations among the same, with a maximal objective procedure.*

***Key words****: simulation, initial conditions*