

## STUDY OF THE INFLATION STAGES OF SOME GROWTH PROCESSES

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**Rezumat.** Pentru a înțelege rolul informației genetice pentru procesele de creștere ale diferitelor viețuitoare, identificarea etapelor care lansează aceste creșteri este extrem de importantă. Desigur, pentru a evita orice posibilă interpretare eronată a informațiilor căpătate, este necesară o examinare minuțioasă și sistematică a rezultatelor obținute. Lucrarea abordează această temă, evidențiind de asemenea unele asemănări cu unele etape ale evoluției Universului. Datorită generalității lor, acest studiu folosește în principal modelele de similitudine ale proceselor de creștere/adaptare.

**Abstract.** In order to understand the role of the genetic information for the growth processes of the living beings, the identification of the stages that launch this growth is very important. Of course, a thorough and systematic examination of the obtained results is necessary in order to avoid any possible wrong interpretations of the received information. This work deals with this topic, pointing out also some similarities with some stages of the Universe evolution. Due to their generality, this study uses basically the similitude models of the growth/adaptation processes.

**Key words:** similitude models, growth processes, Universe evolution, human being growth, inflation stages

### 1. Introduction

The growth processes have either: (i) a continuous character, or they present: (ii) frequent second type (fractal) discontinuities. Taking into account: a) the existing rather detailed theoretical examinations and descriptions of the fractal growth processes [1], [2], b) that the usual descriptions of the growth processes refer mainly to the growth stagnation and extinction [3]-[5], not to its launching, c) the important advantages of the similitude models of physical systems, we will examine mainly the main features of the similitude models of the launching (inflation) stages of the continuous growth processes. In this aim, the main stages of the physical systems modeling, as well as of the study of the compatibility of theoretical models relative to the existing experimental data, are studied.

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