

## **SPACE-TIME, THE THEORETICAL PHYSICS AND THE COMPUTER SCIENCE: FROM GEOMETRY TO CRITICISM OF THE GEOMETRIZATION PRINCIPLE**

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The analysis of the discussion in the scientific literature (in works of such scientists as H.Poincare, H.A.Lorentz, H. Minkowski, A.Einstein, H.Weyl, R.Feynman, V.P.Vizgin, S.Yau and others) on a question on relation of properties of space and time with a substance motion properties allows to identify the developed ideas. Now ideas of symmetry dominate at the description of space-time on the basis of a geometrization principle.

According to our hypothesis about hierarchical hypercontinual structure of world physical space-time, applicability of the geometrization principle and the ideas of symmetry which has triumphed in these publications is restricted by hierarchy of an space-time hypercontinuum. Different hierarchy levels are not related among themselves by symmetry, and higher level dominates over lower so the events which have been not related among themselves by relationship of cause and effect at lower level, can be related relationship of cause and effect at higher level. Appropriate synthesis of Plato idealistic philosophy with east philosophy could become a suitable philosophical bottom of the description of the hierarchical Universe. The hierarchy ideas which efficiency is already approved by us within the limits of computer science at making of the protected system standard model (PSSM) and mathematical apparatus of PSSM-networks could become suitable toolkit of the hierarchical Universe formalized description. Acknowledgement of a hypothesis about hierarchical hypercontinual structure of world physical space-time will unclose essentially new prospects of development of the scientific and technical progress, earlier seeming unat-tainable, having removed a separate continuum restrictions (boundedness of velocity of a motion light speed in vacuo, rigidity of cause and effect chains of events etc.).

The analysis of the discussion in the scientific literature (in works of such scientists as H.Harmuth, V.Boss, H.Poincare, A.Einstein, R.Feynman, W.Thirring, A.Logunov and others) on a question on properties of space and time not related to geometrization allows to identify the fact of presence of interesting ideas of application of an information theory in the physics and ideas of a breakaway from a geometrization principle.

According to developed by us hypercontinual representations about world physical space-time, by viewing of a right way select reference points in the physics it is necessary to add the information science force, which is based on hierarchical structurization ideas to mathematics beauty.

Following such reference points, it is possible to enter a hierarchy principle into physics. The hierarchy principle should essentially restrict a geometrization principle activity.

Interesting attempt to apply an information theory to representations about space-time has been undertaken H.Harmuth from The Catholic University of America in his book "Information Theory Applied to Space-Time Physics". About motives of these research he wrote that the information theory developed last decades within the telecommunication limits and is almost unknown in the physics, however it is necessary to mean that for many long years of applications of an information theory and computers began natural to think on language of finite number of discrete elements the same as the similar habit to operate with a continuum has grown out of the long-term use of differential calculus. Considering that has ripened necessity of revision of representation about space and time as about a continuum, proved in the Ancient Greece Aristotle, Harmuth consistently enters into these representations a discreteness principle.

However the Russian mathematician V.Boss has shown, what even within the limits of the classical mechanics representations about space and time the guess of a continuity of a fluctuating substance leads to a wave equation, invariant to Lorentz transformation laws, though the guess of discreteness of the fluctuating substance structured as finite set of the material points, leads to the equations of undular process, invariant to transformations of Galilei. Invariancy of undular processes in an electromagnetic field proves to be true observationally (this fact promoted making of a relativity special theory); therefore we consider a space-time discreteness principle untrue.

R.Feynman and W.Thirring have offered the field theory approach to the gravitation description within the relativity general theory interpretation limits. A.Logunov has offered this approach within the limits of the relativistic theory of gravitation created on its base. In general, we agree with Logunov's ideas, but we consider that some backgrounds of his theory are unacceptable.