ON THE PRINCIPLES OF MATTER MOTION IN SPACE AND TIME

Mircea Dimitrie CAZACU¹

Abstract. One reconsiders the well-known principles of matter motion in space and time, retaining for the inertia principle the name of motion conservation principle and introducing a new principle of the space treble entity, that explain the composition and decomposition theorem of the vectorial magnitudes and permit a good understanding of the equations transformation, necessary to the relative motions.

These considerations have a special importance in our recent studies after the years 1990, concerning the relative motions of the real fluids in mobile trihedrons being in a rotational or translation motion with respect to a fix trihedron, with outstanding results in the theory of turbo machines, of ocean currents and magnetic terrestrial poles, pipe vibration, tire hydroplaning, wave propagation, etc.

Keywords: Matter motion in space and time. Matter motion principles

1. The reason to write the present paper

For a better understanding of the undertaken research in the field of the relative motions [1-13], /1-4/ introduced by us after '90 years, I shall make a few clarifications concerning the motion principles of the material substance in our three-dimensional space, which question captivated the researchers: physicists, mathematicians and philosophers beginning from the Renaissance age, having in view the uncertainty of the truths, discovered previously or even by them.

The remedy was searched by René Descartes (1596-1650), proposing the doubt in the scientific rationalism [14], but the solution being given by Benjamin Franklin (1706-1790), physicist, economist and American politic man, the inventor of the lightning rod in 1776, renowned also by his Morale Law, whose first precept is "the thinking continuity on the same subject".

The importance of these clarifications has a special scientific interest, the more so because in the former period in our political space, when at the Union Congress of Mechanics held in Moscow in 1953, the Soviet materialist participants took Albert Einstein in arms and after his too simple and incorrect formula $E = m c^2$ have decided that the energy has mass and also weight, ignoring the corpuscular structure of the electro-magnetic radiation, proved already for the solar light by the radiometer of Sir William Crooks (1832-1919).

¹Prof. Dr. Eng, Honorary Scientific Research of Romanian Academy, and of Hydraulics and hydraulic Machines Department, University "Politehnica" of Bucharest, Romania.