Eliade Stefanescu, J Electr Eng Electron Technol 2019, Volume:8
DOI: 10.4172/2325-9833-C1-013

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EuroSciCon Joint Event on Laser Optics, Quantum & Plasma Physics
May 09-10, 2019 | Stockholm, Sweden

QUANTUM MECHANICS AS THE THEORY OF RELATIVITY OF THE QUANTIZED MATTER

The necessity of a re-examination of the conventional quantum mechanics appeared when I discovered that the Schrödinger equation, standing at the basis of this theory, is contradictory to one of the fundamental Hamilton equations, i.e. to the concept of energy conservation - a minus was missing. This sign can be reobtained in these equations only if the Hamiltonian is replaced by the Lagrangian. If we consider the relativistic Lagrangian in the time dependent phase of the wave function of a quantum particle, the relativistic principle of the time-space invariance takes the form of a relativistic quantum principle of invariance of the time dependent phase of a quantum particle. In the framework of the general theory of relativity, from the invariance of the time-space interval, we obtain that any acceleration induced by an external field is perpendicular velocity. In this way, the motion of a distribution of matter takes a form describable by waves, as it is represented in this figure for a distribution of matter in a central field. We consider a quantum particle as a distribution of matter with a density equal to the product of the squared modulus of the particle wave function with the total mass of the Lagrangian in the time dependent phase of this wave function. When the Lagrangian is considered as a function of the particle Hamiltonian, a Schrödinger-Dirac type equation, with additional terms coming from the product of the momentum operator with the velocity, is obtained. Generally, we conceive the Universe, as a mixture of a distribution of intrinsic matter, characterized by a system of curvilinear coordinates with gravitational deformations and of other distributions of external matter, as quantum particles, described by wave functions. The time dependent phase of such a wave function contains a term proportional to mass, describing the inertia and the gravitational interaction and other terms proportional to charges, describing other interactions. The dynamics of the intrinsic matter includes a rotational component called gravitational spin, equal to 2, while the dynamics of the external matter includes a rotational component called spin, a semi-integer for Fermions and an integer for Bosons.

Biography

Eliade Stefanescu has graduated from the Faculty of Electronics, Section of Physicist Engineers, in 1970 and obtained a PhD in Theoretical Physics at Institute of Atomic Physics, Bucharest, Romania in 1990. He discovered a phenomenon of penetrability enhancement of a potential barrier by dissipative coupling. He has developed a microscopic theory of open quantum systems, discovered a physical principle and invented a device for heat conversion into usable energy and produced a unitary quantum relativistic theory. He is Member of American Chemical Society and of Academy of Romanian Scientists. He received the Prize of Romanian Academy for physics in 1983, and the Prize "Serban Titeica" in 2014 for the book "*Open Quantum Physic" and "Environmental Heat Conversion into Usable Energy*", Sharjah (UAE): Bentham Science Publishers.

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