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# Sahakyan and the development of Quantum Mechanics in the Republic of Armenia

The talk is devoted to the activity by academician G.S. Sahakyan in the development of quantum physics in the Republic of Armenia. We discuss applied problems of quantum mechanics, namely, quantum informatics, the appearance of which was anticipated by G. Sahakyan half a century ago. We briefly analyze the logical aspect of quantum processes of macro- and microworlds and the possibilities for their use in computer science, in simulation and for an exponential increase in the efficiency of calculations. We introduce the notion of physical logical structure and the physical calculation on its base as a new nonmathematical calculation method. Examples are presented for deterministic and indeterministic physical logical systems, the corresponding algebras, as well as physical calculations based on them. We discuss the classical principles of neuroinformatics for the creation of artificial intelligence and suggest a principle for the combination of informatics and neuroinformatics. A quantum neuron algorithm is constructed and the corresponding quantum scheme is discussed.

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