was a past trustee of the Academy of Sciences of St. Louis, and served as an adviser to several Department of Energy and National Institutes of Health committees.

Michel Ter-Pogossian was widely traveled. As both a gourmet and an outstanding chef, he was known in and had dined at most of the world's top restaurants. He was an avid outdoorsman and an enthusiastic scuba diver. Ter-Pogossian had impeccable manners and was a true gentleman, in every sense of the word.

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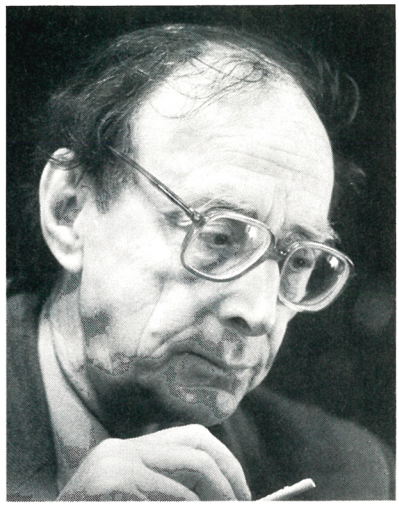
Viktor Isaakovich Ogievetsky



Viktor Isaakovich Ogievetsky

Viktor Isaakovich Ogievetsky, an eminent Russian theorist, passed away in Moscow on 23 March 1996.

Ogievetsky was born on 6 August 1928 in Dnepropetrovsk, USSR (now Ukraine). He attended Dnepropetrovsk State University, where he met Igor E. Tamm. This fortunate acquaintance determined his scientific interests and destiny. After graduating in physics in 1949, Ogievetsky began his career as a school teacher. Nevertheless, he was preoccupied by theoretical physics. In 1954, he received his PhD from the P. N. Lebedev Physics Institute in Moscow, and in 1956 he joined the just-founded Joint Institute for Nuclear Research in Dubna, near Moscow. He stayed in Dubna for the rest of his career. From the early 1970s until his death, Ogievetsky led the supersymmetry group in the institute's laboratory of theoretical physics.

From the very beginning of his career, Ogievetsky concentrated on the theory of symmetries of elementary particles. His first studies in this direction were devoted to the physics of K mesons.

In the early 1960s, in a close collaboration with his colleague Igor V. Polubarinov, Ogievetsky undertook a series of investigations of the field-theoretical treatment of gauge theories and gravity, based on viewing the relevant gauge fields as carrying a definite spin and assuming that they are generated by conserved currents. This approach played an essential role in enabling physicists to make further progress with gauge theories.

In the process of their studies, Ogievetsky and Polubarinov made discoveries whose significance became clear only years later. In 1965, for instance, they introduced the "notoph," an antisymmetric tensor gauge field that describes helicity 0, and is complementary to the photon field, which describes helicities ± 1; later, others rediscovered the notoph in the context of string theory. In 1964, Ogievetsky and Polubarinov found that spinor fields can be incorporated consistently into gravitation theory if the spinor transformation law is nonlinear in the metric. This result anticipated the general theory of nonlinear realizations later developed by Steven Weinberg, Dmitri Volkov and others.

After receiving his habilitation (qualification) in theoretical and mathematical physics in 1966 from the Joint Institute for Nuclear Research, Ogievetsky continued his work on symmetry principles in quantum field theory. He focused on the theory of nonlinear realizations and the closely related idea of spontaneous symmetry breaking, as applied to both spacetime and internal symmetries.

In 1973, Ogievetsky arrived at a novel and suggestive understanding of gravitation theory as the simultaneous nonlinear realization of two spontaneously broken finite-dimensional spacetime symmetries—the conformal and affine symmetries—which yield as their closure the full general covariance group. This statement is now referred to as "the Ogievetsky theorem." This profound analogy between the gravitation and gauge theories on the one hand, and sigma models of spontaneously broken internal symmetries on the other, has proved to be very fruitful.

Ogievetsky next turned to a new and unusual type of symmetry—supersymmetry. One of the first reviews of supersymmetry and superspace was written by Ogievetsky and Luca Mezincescu and published in 1979 in *Uspekhi fizicheskikh nauk* (English-language version: Soviet Physics—*Uspekhi*). This paper still stands out in terms of the clarity and completeness of its exposition.

During the late 1960s and early 1970s, Ogievetsky created in Dubna a team of young researchers who were inspired by the beauty and clarity of his ideas on the superspace geometry of supersymmetric theories. His main achievement during that period was the geometric superfield formulation of $N = 1$ supergravity. His approach allowed him to construct a linearized off-shell superfield supergravity in 1977 and then to discover that the fundamental gauge group of supergravity is the group of diffeomorphisms of complex chiral $N = 1$ superspace. These results revealed for the first time the deep interrelations between supergravity and the theory of complex manifolds.

A natural extension of this work was the generalization of $N = 1$ superfield theories to the more complicated case of extended supersymmetry with a nontrivial internal symmetry group. Indeed, in 1984, Ogievetsky and the Dubna group proposed the concept of harmonic superspace, an enlargement of conventional superspace using the parameters of the internal symmetry group as coordinates.

Just before his death, Ogievetsky was very enthusiastic about his discovery that, in the framework of super self-duality, a self-consistent description of higher-spin fields becomes possible—something that is forbidden in conventional supersymmetric theories.

Ogievetsky left a large scientific school, with many students and colleagues who grieve over his unexpected and tragic passing. For them, he was not only their teacher but also an honest and principled person with a highly professional and creative attitude toward his science. His bright individuality, extraordinary amicability, kindness and frankness attracted to him colleagues and friends over the whole world.

Ogievetsky initiated fruitful and now well-established contacts between researchers in Dubna and many prominent scientists in the West. During his last years, he worked in many centers of theoretical physics abroad, where he often startled his new colleagues with the profundity of his mind.

We have lost a great scientist and a remarkable person.

Jonathan Bagger
Alexander Galperin
Johns Hopkins University
Baltimore, Maryland
Eugeny Ivanov
Joint Institute for Nuclear Research
Dubna, Russia
Emery Sokatchev
Laboratory for Particle Physics
Annecy-le-Vieux, France