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Dmitrii Igorevich Kazakov (on his 70th birthday)

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October 6, 2021 was the 70th birthday of the outstanding theoretical physicist, director of the JINR Laboratory of Theoretical Physics, doctor of physical and mathematical sciences, professor, and corresponding member of the Russian Academy of Sciences (RAS), Dmitrii Igorevich Kazakov.

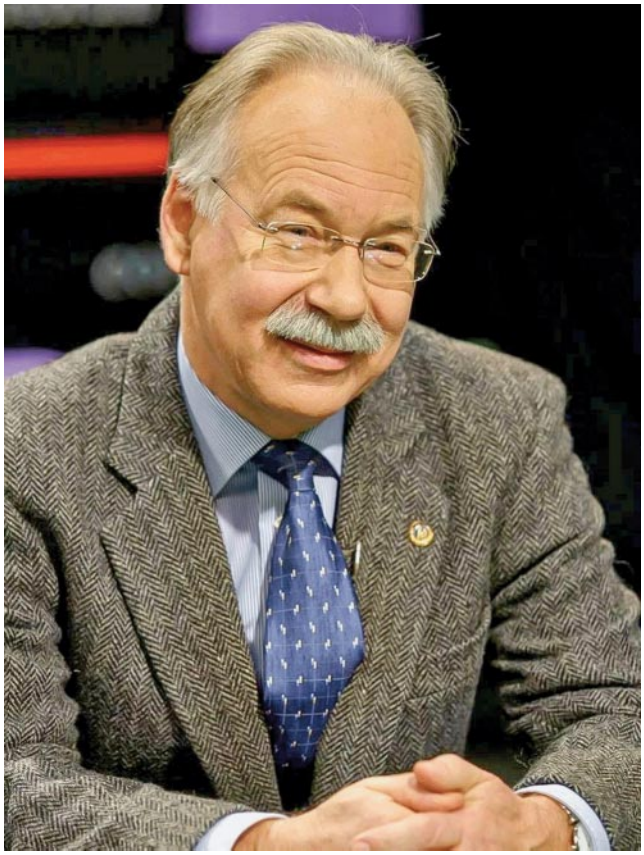
Dmitrii Igorevich was born in Moscow. His father, Igor' Efimovich Kazakov, was doctor of technical sciences, professor, major general, and aviation engineer. He was a prominent scientist in the field of automatic control systems and was head of the Chair of Guided Aircraft Missiles at the N E Zhukovskii Air Force Engineering Academy.

In 1968, D I Kazakov entered the Physics Department of Lomonosov Moscow State University (MSU). He studied in the Chair of Quantum Statistics and Field Theory, headed by academician N N Bogoliubov. Upon graduating from MSU in 1974, D I Kazakov began working at the Laboratory of Theoretical Physics of the Joint Institute for Nuclear Research (JINR, town of Dubna, Moscow region) as a trainee-researcher. There, in 1974, he successfully defended his candidate thesis, ''Renormalizations in dynamic symmetry theories,'' under the guidance of corresponding member of the USSR AS, D V Shirkov (academician of RAS since 1994).

Dmitrii Igorevich's further scientific biography is connected to the Bogoliubov Laboratory of Theoretical Physics (LTP) of JINR, where he progressed from trainee-researcher and junior research fellow to director of the laboratory. At LTP, he became leader of theoretical studies in high energy physics, and in 1988, defended his doctoral thesis, ''Finite supersymmetric models in quantum field theory.'' Since 2004, he has conducted the largest thematic group at LTP, Fundamental Interactions of Fields and Particles. In 2016, Dmitrii Igorevich was appointed to the post of head of the Scientific Department of the Theory of Fundamental Interactions, and, in 2017, after elections at the Scientific Council of JINR, he became director of the Bogoliubov Laboratory of Theoretical Physics.

In 2004–2016, D I Kazakov also headed the Laboratory of Fundamental Interactions at the Institute of Theoretical and Experimental Physics in Moscow. In 2016, he was elected corresponding member of the Russian Academy of Sciences. In the Russian Academy of Sciences, he has held the post of deputy academician secretary of the Division of Physical Sciences.

D I Kazakov is a prominent specialist in elementary particle physics, quantum field theory, and supersymmetry. He has repeatedly been invited by many leading international scientific centers for joint work. In the early 1990s, he worked over a year at the University of Southampton (Great Britain). He was an invited professor at the University of Karlsruhe (Germany) and at KEK — the High Energy Accelerator Research Organization (Japan). He has published more than 200 papers, of which the most well known are devoted to renormalizations in theories with broken supersymmetry and to a phenomenological analysis of supersymmetric extensions of the Standard Model — the modern elementary particle theory.



Dmitrii Igorevich Kazakov

D I Kazakov successfully developed effective methods of calculation and summation of higher-order quantum corrections both in the Standard Model and in other field-theoretic models appearing in high-energy physics and in condensed matter physics. His original ideas made it possible to perform record calculations of critical indices in scalar models and to systematically find renormalization group functions in broken supersymmetry models.

Dmitrii Igorevich developed a large class of supersymmetric theories without ultraviolet divergences and suggested a new approach to renormalization of models in spaces with extra dimensions. He developed an effective method of renormalizations in theories with spontaneous supersymmetry breaking. Of great importance were D I Kazakov's results concerning the mass spectrum of superpartners and Higgs bosons in the supersymmetric Standard Model and the idea of experimentally searching for them, suggested on the basis of

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these results. Well known are his studies devoted to dark matter in the Universe and a comprehensive analysis of the possibility of discovering supersymmetry in both collider and non-accelerator experiments.

D I Kazakov's scientific and organizational work is closely related to his pedagogical work. From 1998 to 2016, he delivered lecture courses in elementary particle physics and quantum field theory at the Chair of Elementary Particle Theory and the Chair of Fundamental and Applied Problems of Physics of the Microworld at the Moscow Institute of Physics and Technology (MIPT). Since 2012, he has been head of the Chair of Fundamental and Applied Problems of Physics of the Microworld. Eleven candidate theses and over 15 master's theses have been defended under the guidance of Dmitrii Igorevich.

D I Kazakov is a brilliant lecturer. He gives many scientific talks and popular lectures on elementary particle physics. His talks invariably draw large audiences in Russia and abroad. He constantly delivers lectures for young scientists at the Moscow International Physics School. Dmitrii Igorevich does his best to successfully organize and hold European schools in high energy physics (CERN–JINR schools), where young scientists from the whole world raise their professional level. In recent years, Dmitrii Igorevich has often given popular scientific online reports, the number of listeners of these lectures sometimes exceeding hundreds of thousands.

For his achievements in both scientific and pedagogical activities, D I Kazakov has received numerous awards. He received the State Scientific Scholarship for outstanding scientists in Russia. Dmitrii Igorevich was awarded the Veteran of Atomic Power Engineering and Industry seal, honorary diplomas from JINR, an honorary diploma from the head of the town of Dubna, and an honorary diploma from the Ministry of Education and Science. In 2019, he received the N N Bogoliubov Prize of JINR.

D I Kazakov is a recognized expert in theoretical and mathematical physics. He was chair of the Expert Council of the Russian Foundation for Basic Research (RFBR) on theoretical physics, chair of the Expert Council of the Basis Foundation, and a member of the Steering Committee of the Heisenberg–Landau Program for collaboration with German universities.

D I Kazakov possesses a distinct talent to gather around him various people who are in contact with him in work and life. He is known for his strong civic-mindedness and uncompromising scientific principles, which have brought him great authority and the respect of people around him. On behalf of his numerous colleagues, disciples, and friends, we conheartily wish Dmitrii Igorevich Kazakov all the best on his 70th birthday and wish him sound health, new creative achievements, and impressive advances in his scientific work.

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