

Shirkov reaches his 80th birthday

On 3 March, the Russian physicist Dmitri Shirkov celebrated his 80th birthday. Shirkov started his career in physics working on nuclear reactors and neutron diffusion back in 1955 and in 1956 joined the newly established JINR in Dubna. In the mid-1950s he began working with the mathematician and physicist Nikolai Bogoliubov in quantum field theory, and made a fundamental contribution to the axiomatic formulation of perturbation theory for the scattering matrix and to the creation of the renormalization group method. These results formed part of their famous monograph *Introduction to the Theory of Quantized Fields*, which was first published in 1957 and then later translated into English and French. This book, with seven editions, made him known worldwide; it was a bible to generations of mathematically oriented particle physicists.



Celebration

In 1960 Shirkov moved to Novosibirsk, Russia, where he founded the Theoretical Physics Department of the Mathematical Institute and the Chair of Theoretical Physics at Novosibirsk University. At that time, together with his co-workers, he developed dispersion theories of strong interactions at low energy.

Shirkov returned to JINR in 1971 and continued his research into the application of the renormalization group method and formulated the hypothesis of a finite renormalization of the coupling. He initiated a well known series of papers by Dubna theorists on multiloop calculations in QCD and developed the method of summing the asymptotic series that was used to effect in critical phenomena. Shirkov also put forward a general view of the nature of renormalization group transformations in various fields of physics, and introduced a notion of functional self-similarity, generalizing scaling laws. For the past decade, together with his co-workers, he has developed a new approach to QCD based on the renormalization group, analyticity and causality.

From 1993 to 1997 Shirkov was director of the Bogoliubov Laboratory of Theoretical Physics at JINR. He has also devoted much effort to training young scientists, teaching first at Novosibirsk and then at Moscow State University for more than 40 years.