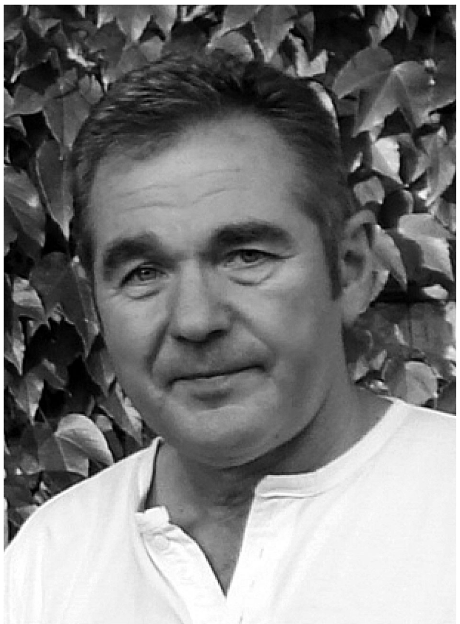
The 60th anniversary of Professor Yurij Kozitsky



Yurij Kozitsky was born on April 21, 1949 in the city of Kremenchukh, Poltava Region of Ukraine. He finished a secondary school and in 1967 entered the Physics Faculty of the Ivan Franko Lviv State University. Being fascinated by two sciences, physics and mathematics, he chose his specialization in the field of solid state theory. The supervisor of his diploma work was Prof. I.V. Stasyuk, a well-known expert in the theory of magnetic, segnetoelectric, and optical phenomena in solids. The objective of the master's thesis by Yu. Kozitsky (1972) was to develop new theoretical approaches in studying the dynamics of segnetoactive crystals with hydrogen bonds. Later, the results of these investigations, augmented and generalized, were published as scientific papers (co-authored with I.V. Stasyuk and R.R. Levitskii).

The making of Yu. Kozitsky as a scientist, physicist and mathematician, as a talented teacher and youth adviser took place in Lviv. Considerable role in this process belongs to two institutions where Yu. Kozitsky used to work. These are the Lviv Institute for Trade and Economy (presently the Commercial Academy) and the Lviv Division of Statistical Theory of Condensed States of the Institute for Theoretical Physics of the Academy of Sciences of Ukraine. In the Lviv Institute for Trade and Economy (since 1982), Yu. Kozitsky covered the way from the chair laboratory assistant to the professor holding the Chair of Higher Mathematics. No less fruitful and important in further creative search of the scientist were the years of his PhD study and his work in the Lviv Division of Statistical Theory of Condensed States (1977–1982). Here, under the supervision of academician I.R. Yukhnovskii, took place the development of scientific interests and insights of Yu. Kozitsky as well as his moulding as an independent scientst. His PhD thesis entitled "Application of the Collective Variables Method to the Investigation of the Renormalization Group Properties in the Ising Model" which was successfully defended in 1981, showed that Yu. Kozitsky became one of the leading experts in the field of phase transition theory by obtaining impotant results in the investigation of the critical behavior of ferromagnets on the basis of generalized hierarchical models.

At the Lviv Institute for Trade and Economy, Yu. Kozitsky gets deeply involved in the problems of the higher educational institution. He teaches students and at the same time gets acquainted with novel areas of mathematics. His scientific interests displace towards mathematical foundations of the theories and methods used in the studies of phase transitions. However, the physical nature of the models and interpretation of the results always remain the most important to him. In 1991 Yu. Kozitsky defended his habilitation thesis entitled "Critical phenomena in classical hierarchical models" and soon became full professor.

Presently, Prof. Kozitsky resides in Lublin, holds the chair of information science in the Maria Curie-Sklodowska University, where has developed his own school of functional analysis and mathematical physics. He maintains regular scientific contacts with his colleagues, physicists and mathematicians from Germany, Israel, Great Britain, Ukraine, Russia. The scientific activities of Prof. Yu. Kozitsky deal with the study and mathematical substantiation of theoretical approaches to the investigation of condensed matter, and the application of his methods in the phase transition theory. He has obtained important results in studying the spin-phonon systems, in particular, in analysing the polariton effects in ferrolectric crystals and in finding the collective excitation spectra. Yu. Kozitsky succeeded in rigorously mathematically verifying the self-similarity symmetry concept in the theory of phase transitions of the second order. The implementation of this concept in the shell integration method by I. R. Yukhnovskii opened up new possibilities for constructing the hierarchical models starting with the lattice models of ferromagnets.

In the last years, the study of mathematical properties of statistical distributions based on quantum Gibbs states takes up the most prominent place in the scientific research of Yu. Kozitsky. He proved that the macroscopic fluctuations of particle displacements in a strictly anharmonic crystal are always non-quantum. Strong quantum effects, if present, oppose the appearance of the long-distance ordering by pushing the phase transition point into the zero-temperature region. Characteristic features of the work by Yu. Kozitsky are the unique intuition in stating the problem, a mathematical rigour, and high culture in performing the calculations.

The editorial board of the "Condensed Matter Physics" congratulates Prof. Yu. Kozitsky on his jubilee and wishes him the long and successful life in science.