

LEONOV CONSTANTIN YAKOVLEVICH

1947 - 2001



On the 23rd of February 2001, we lost our collegue, talented scientist mathematician high cultured man of moral features, the senior researcher of the Institute of Mathematics and Mechanics of the Azerbaijan National Academy of Sciences, the doctor of physical-mathematical sciences Constantin Yacovlevich Leonov.

He was born on the 22nd of January in 1947 in Baku. Finishing secondary school in 1961 he continued his study in the chemistry technology faculty at the Baku oil Technical school. But his interest to mathematics and to the knowledge especially in this branch urges on the young graduater to get the second education. Since 1965 he becomes a student of the mechanical-mathematical faculty of S.M.Kirov Azerbaijan State University. Studying at the University student Leonov at the same time was working as a teacher of mathematics at secondary schools. In 1972 Leonov joined post-graduate course of Azerbaijan State University not leaving the job.

In 1978 is the beginning Leonov's active scientific work at the Institute of Mathematics and Mechanics of the Academy of Sciences of Azerbaijan. His first investigations belong to the questions of existence and uniqueness of solutions of mixed problems for linear and non-linear hyperbolic equations in corresponding Sobolev spaces. He has also the results connected with getting the additional smoothness solution at increasing the smoothness of data of the considered mixed problems.

Working as a leading construction SCB of NAN Azerbaijan in 1979 Leonov defends candidate dissertation on the subject "The mixed problem for one class of non-linear hyperbolic equations and linear equation with disconnected and non-bounded coefficients". The equations, considered in the dissertation work often are met in mechanics, in the theory of elementary particles, in the theory of vibrations and in the other parts of physics, can describe the behaviour of distributed system being in the potential fields having quite compound construction and behaviour of distributed system being under the action of force, having dissipative or autovibrational character.

Besides above enumerated questions connected with the solvability of problems, singularity and additional smoothness of solutions the author has also found the conditions of one dimensional solutions by time, the showing the qualitable character of

behaviour of the system and conditions of stability in the sense A.M. Lyapunov's solutions of the mixed problems.

Since 1988 Leonov works at the Institute at first as chief then leading but since 1995 till now he was senior researcher of the department of the mathematical functions. Being scientist of wide range Constantin Yakovlevich all these years continues scientific researches in the branch of non-linear problems of dynamics of continuum. He is an author of about forty scientific works on mathematics, mechanics. Significant part of investigations in this branch is given in monograph "The mathematical questions of some models of non-linear dynamics of elastic and viscoelastic medium" by academician of Azerbaijan F.G. Magsudov and in the result translated and published in the English language.

Constantin Yakovlevich was an active and stable participant (member) of all necessary scientific symposiums and conferences of international and republican scale. He regularly made scientific reports dedicated to the actual problems of modern mathematics and mechanics. His reports were always met with great interest of the auditorium because his problems were connected with the analysis of resisted models of mechanics of (continuous) compact environment, so represented as theoretical both practical interest. In 1990 C.Ya. Leonov defended the doctoral dissertation at the A.M. Razmadze Institute of Mathematics in Tbilisi in which he investigated the complex mathematics questions of dynamic viscoelastic and elastic bodies.

He has proved the theorems about the global solvability and property of solutions of the initial boundary problems for non-linear system of equations of magnito-elasticity and magnito-viscoelasticity for the system of equations of thermo-viscoelasticity with the coefficients of viscosity and the heat conductivity depending on temperature and the gradient of temperature for the system of equations of transverse longitudinal vibrations of pivat subject to its thermodynamics (the additional system of equations Hirkhopff), the theorems of one-dimensional global solvability of two variants of system equations magnitohetmoelasticity, initial boundary quazilinear equations problems. Moreover by considering the question of uniqueness of solution he apply the new methods. Besides these he suggested methods of finding the initial dates at which the solutions of initial boundary problems for the system of non-linear equations the theory of elasticity non-boundedly continued on time, gave the new methods for the obtained the apriori estimations of solutions of problems, considered the differential properties and the questions on uniqueness of solution of initial boundary problems for the system of non-linear equations of dynamics of plates, the estimation of maximum of modulus of solutions the initial boundary problems for twice non-linear parabolic equations, studied the properties of smoothness. It follows to note the results connected with the solution of the question on character of smoothness of solutions with of the increasing the smoothness of given initial boundary problems for one class of non-linear hyperbolic equations obtained in its time by J.L.Lions.

Colleague remember Constantin Yakovlevich as very firmness, modest, good-natured and honest man. Unfortunately today we don't see such beautiful man among us, our close friend, bright scientist. But all colleague of the Institute of Mathematics and Mechanics will always remember him, he will always remain with us in his works and in his scientific investigations.

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