08.01.1932 – 23.06.2013

In memory of Arlen Mikhailovich Il'in

On 23rd of June, 2013, an outstanding mathematician, academician of RAS, the editor of "Ufa Mathematical Journal" Arlen Mikhailovich Il'in passed away. He was born on January 8, 1932 in Leningrad and he had a long course of life. In his childhood, he lived in Ulan-Ude, in Batumi, in Moscow, in Kurgan region (during evacuation). After the evacuation he returned back to Moscow with his parents, where he graduated a famous school no. 59 and joined the faculty of Mechanics and Mathematics of Moscow State University. His diploma thesis supervised by Olga Arsen'evna Oleinik was devoted to strongly degenerating elliptic equations depending on a small parameter. The results of this work published in Doklady AN SSSR in 1955 played an important role in the theory of partial differential equations with a small parameter. It should be noted that the main part of subsequent scientific achievements of Arlen Mikhailovich were related with studying of such problems.

From 1954 to 1963 Arlen Mikhailovich worked at the department of differential equations of Moscow State University headed by academician Ivan Georgievich Petrovskii and studied asymptotics of solutions to second order linear parabolic differential equations for large time. He also studied the behavior of solutions to second order nonlinear parabolic equations.

In 1963 Arlen Mikhailovich moved to Sverdlovsk and started to work in a just established Sverdlovsk brach of Steklov Mathematical Institute (now it is Institute of Mathematics and Mechanics of Ural Branch of RAS). The result of collaboration between the department of mathematical physics headed by Arlen Mikhailovich and Oceanology Institute of RAS was a creation of two new scientific directions extremely important for applications. The first direction came from a small paper in "Mathematical Notes" where he found difference schemes providing effective numerical solutions to differential equations with a small parameter at higher derivatives. The second direction was related to an analytic studying a new class of problems called nowadays as problems with bi-singular perturbations.

Having moved to Ufa in 1974, Arlen Mikhailovich headed the sector of differential equations in the Department of physics and mathematics of Bashkir branch of AS USSR where he completely switched to the studies of asymptotic problems for PDEs with small parameter. A strong group of graduates of Ural and Bashkir universities had been created under his supervision. The group advanced in the method of matching of asymptotic expansions applying it to a wide class of bi-singularly perturbed problems being hardly solved by other approaches.

In 1988 Arlen Mikhailovich returned back to Sverdlovsk and started to lecture in Ural Polytechnic Institute and work in IMM UB RAS, first as the leading scientific researcher and later as the head of the department of equations of mathematical physics. During this period Arlen Mikhailovich initiated a study of a new class of problems with bi-singular perturbation related to optimal control theory, in line with the main research directions of the institute.

In 2002 Arlen Mikhailovich moved to Chelyabinsk and till the last days he worked as a professor of the department of computational mathematics in Chelyabinsk State University being the scientific supervisor of the department of equations of mathematical physics in IMM UB RAS.

The research activities of A.M. Il'in were highly recognized by the scientific society. In 1994 he was elected as a corresponding member of RAS and in 2000 he became the full member of RAS. In 1995 he was awarded Petrovskii prize of RAS for the series of works "Asymptotic methods in mathematical physics" (jointly with O.A. Oleinik). In 2000 he became the winner of the State Prize of Russian Federation (jointly with V.S. Buslaev and M.V. Karasev).

Arlen Mikhailovich was known not only as an outstanding mathematician, but as an excellent teacher as well. Wherever he worked, in Moscow, Sverdlovsk (Ekaterinburg), Ufa, Ulan-Ude, Chelyabinsk, he always brought up a group of young researches who later became scholars of authority. The scientific school created by A.M. Il'in was widely recongnized in Russia and abroad. Seventeen PhD theses were prepared and defended under his supervision, and there are eight doctors of sciences (habilitated) among his pupils. Arlen Mikhailovich was a member of the expert boards in Higher Attestation Commision and Russian Foundation for Basic Researchers. He entered as well the editorial boards of leading mathematical journals, making all his best to keep the high level of mathematical culture in Russia. Arlen Mikhailovich gained the respect and recognition of his colleagues not only for his outstanding scientific achievements. The combination of exactingness and goodwill to everyone, no matte a student or academician, had wined the love and respect of people around him.

A blessed memory on Arlen Mikhailovich will stay forever in the hearts of people familiar with him.

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R.G. Akhmetov, D.I. Borisov, R.R. Gadyl'shin, A.R. Danilin, L.A. Kalyakin,
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