ASLANOV HAMIDULLA ISRAFIL oglu
(to the 50th anniversary)

Doctor of physico-mathematical sciences, professor Aslanov Hamidulla Israfil oqlu is 50. H.I. Aslanov was born on the 16 of February in 1950 in Jagirli village of Shamakhi region of Azerbaijan Republic.

In 1967, after graduating from Narimankend secondary school of Shamakhi region he entered the mechanical-mathematical faculty of Azerbaijan State University. In 1972 he graduated from the University with honors. After graduating from the University he was accepted to the post graduate courses of the Institute of Mathematics and Mechanics of the Academy by Sciences of Azerbaijan. In 1976 he defended his candidate dissertation under the guidance of academician M.A. Gasymov and professor M. Bairamoqlu on the theme: "Distribution of eigen-values of some self-adjoint and not self-adjoint differential operators". In 1976-1978 he was a research associate of "differential equations" department of the Institute of Mathematics and Mechanics of the Academy of Sciences of Azerbaijan SSR.

In 1978 he moved to Stepanakert city of Nagorny-Garabagh region and worked at Pedagogical Institute at first as a chief teacher, associate professor and then a head of "Mathematical Analysis" chief of Stepanakert Pedagogical Institute. In 1988 in in connection with events around Nagorny-Garabagh region the azerbaijanian sector of Stepanakert Pedagogical Institute was closed and its teachers were transferred to other higher schools of the Republic. H.I. Aslanov was transferred to the "Higher mathematics" chief of Azerbaijan Polytechnical Institute.

His scientific activity became more fruitful. In 1996 in scientific Council of the Institute of Mathematics and Mechanics of the Academy of Sciences of Azerbaijan he defended his doctoral dissertation entitled " The problems of solvability, completeness and asymptotics of the spectra of operator differential equations in a Hilbert space " with great success.

Beginning from 1977 he is a professor of the " Higher mathematics " chief of Azerbaijan Engineering Institute.

H.I. Aslanov began his scientific activity being a student of the mechanical-mathematical faculty in seminars of academician M.G. Gasimov and academician Z.I. Khalilov.

He listened special courses of acad. Z.I. Khalilov on the theory of generalized functions and functional analysis.

The first scientific paper of H.I. Aslanov was devoted to the studying of Green's function and distribution of unbounded eigen-values of not self-adjoint elliptic operators of second order in unbounded domains. Then he investigated a Green's function, a condition of discreteness of a spectrum and distribution of eigen values of ordinary operator differential equations on a semi-axis with zero boundary conditions.

In 1975 he introduced the notion " weighted-trace " for operator equations and found the asymptotics of the weighted trace of Sturm-Lioville operator equation with unrestricted operator coefficients.

The obtained formula generalizes B.M. Levitan and A.G. Kostyuchenko's known formula for the function of distribution of eigen values of Strum-Lioville equation.

He found an asymptotic formula of a weighted trace for an arbitrary " 2n " order operator equation and for Schrodinger equation, he investigated a Green's function of operator differential equation in case when the coefficients are normal operator functions. These results generalize and complete the known results by B.M. Levitan, when the coefficients of a differential equation are self-adjoint operator functions.

In 1980 he proved a theorem on the completeness of the system of eigen and adjoined functions of non self-adjoint elliptic operators in an unbounded domain. For a higher order operator-differential operators he found an asymptotic formula for a weighted trace when an asymptotic formula is determined by all the coefficients of a differential operator.

These results are similar to results for scalar operators obtained by M.G. Gasymov and A.G. Kostyuchenko.

Beginning from 1990 H.I. Aslanov began to research the solvability of partial operator differential equations in Hilbert spaces. He investigated a univalent, normal and Fredholm solvability of such equations, constructed the asymtotics of the solution, investigated the smoothness of the solution. He proved the completeness of the system of eigen and adjoint vector-functions of partial operator-differential equations in Hilbert spaces.

He also proved "m-fold completeness of eigen and adjoined functions of a elliptic operators bundle".

The obtained abstract theorems are applied to the problems of the existence and uniqueness of a generalized solution of Dirichlet's problem and Neimann's problem for a Poisson equation in unbounded domains of multivariate type.

For a second order general elliptic equations *in unbounded domains, a* generalized solution of Neimann's problem have been investigated in weight spaces.

The results obtained in this direction were published in prestige journals as "Uspekhi matematicheskikh nauk", "Doklady RAN", "Matematicheskiye zametki", "Differentsialnye uravneniya", "Doklady AN Azerbaidzhana", "Izvestiya AN Azerbaidzhana" and others.

He gave great attention to the problems of teaching of mathematics.

Tens of his papers have been published in such journals as "Fizika ve riyazayyat tedrisi", "Matematika v shkole" and others.

His paper "Instruction method for a bound of functions", "Instruction method for geometric constructions problems in school", "Analysis of problems in graduating exams at pedagogical Institutes", "Typical mistakes of pupils in oral calculations", and others have been devoted to actual problems of instruction method of mathematics.

Beginning from 1990 he pays great attention to popularization of mathematics in our Republic. His paper "Incomprehensible fortress" in collaboration with acad. F.G. Maksudov has been published in the journal "Elm ve hayat" *(Science and life). The*

article is devoted to the history of five famous problems of antiquity. The articles " On natural numbers ", " On calculation systems ", on the applications of mathematics have been published in the journal "Elm ve hayat" in collaboration with acad. M.G. Gasymov.

On the whole, H.I. Aslanov has published more then 70 papers devoted to the theory of differential operators, to the problems of solvability of partial operator-differential equations in Hilbert spaces, to the problems of instruction of mathematics, and scientific popular articles.

He participated in All Union and International Conferences and Symposiums held in Moscow, Leningrad, Kiev, Novosibirsk, Tbilisi, Samarkand and other cities.

In 1994-1995 he was invited to Iran Islam Republic and gave lectures in Tabriz University. H.I. Aslanov was a member of Scientific Councils in Baku State University and Institute of Mathematics and mechanics on awarding scientific degrees of doctor of physico mathematical sciences, and candidate of physico- mathematical sciences.

He is an opponent of 5 doctoral and 10 candidate dissertations. He is a supervisor of some candidates for a degree.

As a member of Republican organizational committee on conducting olympiads among the students of higher schools he takes an active part in selecting capable mathematicians.

H.I. Aslanov is a deep expert of classic Azerbaijan literature and music. He popularizes gazels by N. Ganjavi, M. Fizuli, I. Nasimi, S.A. Shirvani and classic mugams among the youth.

We congratulate the talanted mathematician H.I. Aslanov on the occasion of his jubilee, wish him a good health and new creative successes.

M.G. Gasimov, A.B. Aliyev, I.T. Mamedov
S.S. Mirzoyev, B.A. Iskenderov, N.I. Shikhaliyev