

HONOURED SCIENTIST

The other day the eminent representative of Azerbaijan mathematical sciences, great scientist, noble and respectable man, academician Jalal Eyvaz oglu Allahverdiyev in his 85 years.

He was born in the city Shusha, Republic of Azerbaijan.

In 1951 he graduated with honors diploma from Baku State University, Department of Mechanics and Mathematics. In this year he joined post-graduate school at the Moscow State University named after M.V.Lomonosov in Moscow. In 1957 he defended his thesis for Candidate of Sciences (Ph.D.) degree on the theme “On completeness of eigen function of non self-adjoint operators” under supervision of academician M.V.Keldysh.

In 1962-1964 he attended the courses on preparation the Doctor of Sciences (D.S.) degree at the Moscow State University after M.V.Lomonosov in Moscow. In 1968 he defended his thesis for Doctor's degree (D.S) on the theme “On eigenvalues and eigenelements of non-self-adjoint operators, rationally depending on spectral parameter” at the Institute of Applied Mathematics AS USSR in Moscow.

Academician M.V.Keldysh recommended him to study the problems concerning to the completeness of the system of eigen- and adjoint elements of polynomial operator functions — operator bundles depending on spectral parameter. In this direction J.E.Allahverdiyev gave first new sense for the s -numbers of compact operators acting in Hilbert space. s -number is a best eigennumber of square root of the product of compact operator and its dual. He showed that s -number of compact operator is a best approximation of this operator with finite dimensional operators. The new definitions of s -numbers plays main role in solving many problems in mathematics. Many famous monographs includes this result as main fact of functional analysis. The definition of s -numbers in the sense of Jalal Allahverdiyev helped him and other specialists to generalize their results to the Banach and some topological spaces. The eminent scientists Kolmogorov, Gelfand, Pontryagin, Tikhonov, Nikolsky, Maslov and others think much of him.

The next works of J.Allahverdiyev are devoted to the investigations of the completeness problems of the rational operator bundles in Hilbert and Banach spaces. Here he suggested his new method using new definition of s -number in his sense and the lemma proved by him (in scientific works named after him as “J.E.Allahverdiyev's lemma”). J.Allahverdiyev in this lemma defines the orthogonal projector close to the nonorthogonal projector in the sense of norm. This lemma is used in many scientific works. He introduced the notion “derivative chain” of rational operator bundle which is a generalization of corresponding Keldysh system of the polynomial operator bundles. This fact showed the naturalness of the Keldysh's approach for the system of polynomial operator bundles.



J.Allahverdiyev successfully continues his pedagogical activity. J.Allahverdiyev created his school in the spectral theory of non-selfadjoint operators. Many specialists were prepared in this school.

In 1953 he began his creative activity at BSU (senior laboratory associate, senior teacher, associate professor). From 1960 he took a post of deputy director of CC BSU. From may 1965 head of the Department of Theoretical Cybernetics at IC NAS of Azerbaijan. In 1969 the scientific title professor was confirmed upon him. In 1969-1970 deputy director on scientific work at IC NAS of Azerbaijan, 1970-1988 director, from 1988 head of the department "Theoretical control problems" at IC NAS of Azerbaijan, 1988-1994 pro-rector on scientific work at BSU and 1994 head of the chair "Investigation of operations and mathematical simulation" of the department of Applied Mathematics and Cybernetics at BSU. In 1972 he was elected corresponding-member of NAS of Azerbaijan. In 1972 he was awarded the State Prize of Azerbaijan on "Science and engineering". In 1982- Honored Science Worker. In 1998-2000 years worked at Istanbul University (Turkey). Since 2001 full member of NAS of Azerbaijan and academician of International Eco-Energy Academy (IEA). Read the lectures at universities of USA (1975), England (1976).

His scientific results have been published more than 150 scientific papers in famous mathematical journals. He took part in many International scientific conferences in Odessa, Varna, Minsk, Vilnius and in countries USA, France, Yugoslavia, Hungary, Iran, Pakistan, Turkey, India and Argentina. Supervised more than 50 candidates of sciences dissertations. Many of them became Doctors of sciences.

He worked on a number of the functional analysis problems and differential equations. He received remarkable results in stochastic systems, optimal control theory and in approximated calculations of eigenvalues of operators

We congratulate the 85 years of J.Allahverdiyev and wish him long life, strong health and enormous success in his life and in science.

*Academician Akif Gadjiev, Academician Mahammad Mehdiyev,
Professor Misir Mardanov, Professor Ali Akhmedov*