IN MEMORY OF PROFESSOR RAUF SADYKHOV
(21.10.1944 – 15.03.2015)

This year marks the 75th anniversary of the birth of a well-known Belarusian scientist in the field of technical cybernetics and computer science, doctor of science, Professor Rauf Sadykhov.

Rauf Sadykhov was born in Baku. After finishing school, he successfully graduated from the Azerbaijan Polytechnic Institute and in 1971 he started postgraduate study at the Institute of Engineering Cybernetics (IEC) of the Academy of Sciences of Belarus. After finishing postgraduate school, starting from 1974 till 2015, he constantly worked at IEC in various scientific positions. He worked his way from junior to chief researcher. In 1992 he was elected for the position of the head of the systems identification laboratory and was in charge of it for more than 20 years. Beginning from 1995 Rauf Sadykov successfully combined his scientific work at the institute with educational work at the Belarusian State University of Informatics and Radioelectronics as the head of the Electronic Computing Machines Department.

In 1975 Rauf Sadykhov defended his thesis for the degree of Candidate of Technical Sciences in the specialty "Technical Cybernetics and Information Theory", and in 1991 his doctoral degree in the specialty "System Analysis, Information Management and Processing". In 1992 he was awarded the title of Professor.

Scientific interests of Professor Sadykhov were closely associated with digital signal processing, image analysis, architectures for parallel information processing and artificial intelligence systems. He developed original methods and algorithms for random processes and objects' dynamics analysis. In particular, they are the methods of digital signal processing based on discrete exponential functions and piecewise constant Walsh and Haar systems; algorithmic and hardware implementations of these methods in discrete bases. The obtained results allowed him to form a universal approach to the development of methods and computational structures for digital signal processing in automation systems of experimental research.

Much of the research activity of Professor Sadykhov is associated with computer science. He developed an original approach to solving pattern recognition and image processing problems based on neural network technologies and parallel computing. Based on theoretical studies, he proposed a technology for constructing high-performance systems and software-hardware systems for real-time image processing in video surveillance systems and machine vision.

Professor Rauf Sadykhov published about 500 scientific papers, including 4 monographs and 80 copyright certificates.

He was one of the leaders of the scientific schools of IEC of the National Academy of Sciences of Belarus: automation of scientific researches (the head of the scientific school - P.M. Chegolin) and image processing (the head of the scientific school - S.V. Ablameyko). These schools had a significant influence on the development of science and technology in the USSR, Belarus and abroad.

In 2002 Professor Sadykhov founded a scientific school of digital signal processing and system identification. It united 45 scientists, including 6 doctors and 20 candidates of sciences.

On his initiative, the research laboratory "Computer systems for image identification" was established based on Electronic Computing Machines department. The following projects were carried out on the most important republican and allied scientific and technical programs: "Computer Science", "Scientific Basis of Information Technologies", "Supercomputer", "Belcosmos", "Triad", "Grid Computing", etc. It is also worth mentioning that Professor Rauf Sadykhov participated in implementation of innovative projects of the Scientific and Technological Park "Polytechnic" of the Belarusian National Technical University and "Intellectual Processors" LLC for the development of domestic neural-like computers with massive parallelism for solving identification problems in medicine, forensics, radiolocation, engineering, scientific research and education. In particular, the results of studies on the processing of spatial three-dimensional vibrations were implemented at the Minsk Automobile Plant, and the results of studies on digital signal and image processing - at the Minsk Tractor Plant, OJSC "INTEGRAL" and the concern "Planar".

As a part of the laboratory function, joint research was carried out with the Bialystok Institute of Informatics (Poland), the University of Calgary (Canada), the Technical University of Milan (Italy), the Neurocomputer Scientific Center (Moscow, Russia), the Ternopil Academy of Management (Ukraine), and the Paris University (University Paris Est Creteil, France), Ravensburg-Weingarten Technical Institute (Germany),

etc.

Professor Rauf Sadykhov successfully combined scientific research with teaching. More than two thousand engineers were trained by the department headed by him, including 6 doctors and 20 candidates of science those were trained under his direct supervision.

For many years, Professor Sadykhov was a member of two specialized councils for the defense of doctoral theses, as well as the chairman of the specialized council of the Higher Attestation Commission of the Republic of Belarus. He was also a member of the International Association for Pattern Recognition (IAPR), a member of the English Society of Electrical Engineering and Radioelectronics (IEE), Vice-Chairman of the Belarusian Branch of the International Society of Neural Networks and the Belarusian Association for Image Analysis and Pattern Recognition.

For successful work, Professor Rauf Sadykhov repeatedly received various awards and honorary titles. He won the State Prize of Belarus for the scientific work "Recognition and analysis of stochastic data and digital images". As a talented teacher, he was twice encouraged by a scholarship of the President of the Republic of Belarus. Professor Sadykhov was also awarded with diplomas of the National Assembly, the National Academy of Sciences, the Higher Attestation Commission and the Ministry of Education of the Republic of Belarus, and repeatedly with diplomas of the Belarusian State University of Informatics and Radioelectronics, diplomas of the Russian Cosmonautics Federation. In 2009 he was awarded with the mark "Excellence in Education of the Republic of Belarus".

The memory of Professor Rauf Sadykhov, a great scientist, an excellent teacher, a talented leader, will continue in his many works and in the hearts of his followers, students and members of our team.

Students and colleagues