RESEARCH INSTITUTE

Mathematics and Mechanics

History

Research Institute of Mathematics and Mechanics at the Kazakh State

University. Al-Farabi is organized by the Academic Council of KSU them. Al-Farabi by order №167 dated October 13, 1994, the Government of the Republic

Kazakhstan №984 dated 6 September 2002, reorganized into subsidiary state enterprise on the right of business "Scientific-Research Institute of Mathematics and Mechanics," Republican state enterprise on the right of business "Al-Farabi University."

Danaev NARGOZY Tursinbaevich

Doctor of Physical and Mathematical Sciences, Professor, State Prize of the Republic of Kazakhstan, academician of the National Academy of Engineering Republic of Kazakhstan and the International Academy of Engineering.

The first director of the Research Institute of Mathematics and Mechanics (1994-October 1997, from July 2000 to present)

SMAGULOV Shaltai Smagulovich

Doctor of Physical and Mathematical Sciences, Professor, State Prize of the Republic of Kazakhstan, academician of the National Academy of Engineering Republic of Kazakhstan and the International Academy of Engineering.

He worked as director of the Institute of MM from November 1997 to June 2000

In 2004 the Institute celebrates its 10th anniversary. To his tenth anniversary of the Institute has become a major research units

University carries out research in various fields of mathematics, mechanics and computer science. The amount of funding from various sources in recent years

exceeded 50 million tenge per year. It should be noted that since the 90s research funding has been fully implemented on a tender basis. The state places orders for basic and applied research in scientific institutions on a competitive basis. Therefore, the number of awarded grants for research are an important indicator of the potential of scientific research institute or university.

In the achievements of the institute, in the creation of its strong scientific and material base has played a huge role Danaev Nargozy Tursinbaevich that since 2000 once again led the institute. Danaev NT guides the scientists and faculty of the Institute to address the most urgent problems of science and industry, paid great attention to the development and use of information technologies in industry and education.

As a scientist N.T.Danaev formed in Novosibirsk mathematical school, where he studied at the graduate school after the end of the Mechanics and Mathematics Faculty of KSU. On the formation of scientific N.T.Danaeva greatly influenced by academician of the USSR NN Yanenka. In 1981, under the leadership of N.T.Danaevym NNYanenko defended PhD thesis, and in 1995 - doctoral thesis on a specialty "computational mathematics".

Danaev NT is one of the leading specialists in the field of computational fluid dynamics and is actively engaged in numerically solving the equations of gas dynamics, Navier-Stokes equations for an incompressible fluid, issues mathematical foundation of stability and convergence of difference schemes. Danaevym NT created a new method of constructing curvilinear grids condensing in areas with a large gradient flow characteristics by which successfully solved many problems of gas and fluid dynamics in complex areas. Danaev NT is the supervisor of several projects of the institute and led the work on information technology in education. He is the author of about 100 scientific papers. He has supervised 10 PhD theses, three of whom defended doctoral. For a series of "Numerical simulation of fluid dynamics and gas theory and numerical experiment" a group of scientists, which includes the N.T.Danaev in 1994 was

awarded the State Prize of the Republic of Kazakhstan in the field of science, technology and education.

MM Research Institute combines intellectual power, scientific and industrial base 10 Department of Mechanics and Mathematics Faculty and consists of 4

departments of mathematics, computational mathematics and information technology, optimization methods and control theory, mechanics, 14 laboratories and student workshop. The total number of artists currently is 240 people, of which 165 are pluralists from the treasury. Successfully participate in the implementation of research projects, and at the same time gain knowledge and experience of more than 40 graduate students, undergraduates and students of the faculty. In carrying out research projects at the institute involved 5 academicians of NAS RK, 32 doctors and 69 PhDs.

MM Research Institute carries out scientific research in the following areas: problems of mathematics and mathematics teaching methods, computational mathematics and mathematical modeling, optimization techniques and management theory, continuum mechanics, theoretical and applied mechanics, computer science and information technology.

Since its establishment in MM Research Institute carried out a study on 17 Republican scientific and technical programs, customers were the Ministry of Education and Science and the Science Foundation of NAS RK. In addition, the Institute participated in 12 projects carried out in the framework of fundamental research programs. Already in 2003, the institute is working on 31 projects with a total of more than 60 million tenge.

In the department of mathematics conducted important scientific work program of basic research. The main areas of research are asymptotic methods for solving differential equations, the study of partial differential equations, periodic solutions of differential equations, properties of the operators in classes of functions of several variables, generalized analytic functions and boundary value problems for

them, generalized computability and algorithmic problems of algebra, definability and structural properties of the models , Mathematical problems in cryptography, the geometry of generalized spaces. Successfully operating in Kazakhstan known school on asymptotic methods of singularly perturbed equations headed by Academician of NAS RK KA Kasymova. Conducted important research on initial and boundary value problems for singularly perturbed ordinary differential, integral and differential equations and partial differential equations of hyperbolic type with initial jumps.

In order to develop basic and applied research in the country in the late 90s was established State scientific grant for scientists and experts who have made outstanding contributions to the development of science and technology. State grant holders, among other Kazakh scientists have become academicians and employees Suggestion K.A.Kasymov, NK Bliev, A.A.Zhensykbaev, Professor SA Aisagaliev, Sh.S.Smagulov, A.K.Kubesov.