

Scientific projects and works of the faculty of the department

Participation in international and national events that are important for modern integration processes in education.

Professor Abylkasymova A.E. was a member of the National Scientific Council in the priority direction of science "Research in the field of education and science."

Head of the department, professor Abylkasymova A.E. and staff of the department conduct fundamental and applied research in the field of education, funded by the Ministry of Education and Science of the Republic of Kazakhstan (2020-2022) and intra-university projects of KazNPU named after Abay (2022)

For fundamental research under the grant of the Ministry of Education and Science of the Republic of Kazakhstan:

- PhD, Senior Lecturer Nurmukhamedova Zh.M. is the head of a scientific project on the topic "Updating the content of educational programs for training teachers in natural sciences in the context of the modernization of secondary education" (2020-2022), an employee of the department Nurbaeva D.M., Erzhenbek B.

- Candidate of Physical and Mathematical Sciences, Professor Shokanov A.K. is the head of the scientific project on the topic "Development of mobile proppants based on domestic natural raw materials and fly ash to improve the efficiency of hydraulic fracturing" (2022-2024), the study was attended by an employee of the department Tuyakov E.A., Kyrykbaeva A.A., Yerzhenbek B., Ospanbekov E.A.

- PhD, Art. teacher Ospanbekov E.A. is a post-doctoral student of the project on the topic "Physics esepeterdi shygaru practicums" kursin okytu negizinde bolashak physics myfalimderininin arnayı dayyndygyn zhetildiru" (2022-2024), scientific consultant employee of the department Alimbekova G.B.

List of teaching staff who took part in projects funded by the Ministry of Education and Science of the Republic of Kazakhstan and other organizations of the Republic of Kazakhstan in 2022

№	Full name, head, academic title, position	Name of the project	Name of the funding source organization	Funding amount
1	Shokanov A.K., Candidate of Physical and Mathematical Sciences, Professor. Artists: Tuyakov E.A., Kyrykbaeva A.A., Erzhenbek B.,	№AP14869574 Development of mobile proppants based on domestic natural raw materials and fly ash to improve the efficiency of hydraulic fracturing	Science Committee of the Ministry of Science and Higher Education of the Republic of Kazakhstan	10 631 580 tenge

	Ospanbekov E.A.			
2	Ospanbekov E.A., PhD, art. teacher. Scientific consultant: Alimbekova G.B.	No. AP14972674 "Physical esepeterdi shygaru workshops" kursyn okytu negizinde bolashak physics myfalimderininin arnayi dayyndyryn zhetildiru	Science Committee of the Ministry of Science and Higher Education of the Republic of Kazakhstan	3 000 000 tenge
3	Nurmukhamedova Zhanara Muratovna, PhD, senior teacher. Artists: Nurbaeva D.M., Erzhenbek B.	AP08052997 "Updating the content of educational programs for the training of teachers in natural sciences in the context of the modernization of secondary education"	Science Committee of the Ministry of Science and Higher Education of the Republic of Kazakhstan	16 679 474 tenge

Head of the department, Professor Abylkasymova A. E. conducts fundamental and applied research in the field of education, is the head of scientific projects funded by the Ministry of Education and Science of the Republic of Kazakhstan (1997-2022) and intra-university projects of Abai KazNPU (2013-2022). It has trained 10 doctors and more than 30 candidates of pedagogical sciences in didactics and methods of teaching mathematics, as well as 4 PhD doctors in educational mathematics.

Professor of the department Alimbekova G. B. published more than 200 scientific and methodological works, including monographs, textbooks, articles in foreign scientific journals with an impact factor. Conducts training of PhD students in educational physics.

Professor of the department Shokanov A. K. is the author of more than 100 scientific and methodological works, including monographs, textbooks, textbooks and scientific articles in journals with a high impact factor, as well as more than 30 works in foreign journals in English. Head of the scientific project of grant financing of the Ministry of Education and Science of the Republic of Kazakhstan (2018-2020) and the intra-university project of Abai KazNPU (2018-2020).

The leading scientists of the department are the authors of many monographs, textbooks and teaching aids for secondary and higher schools. They have published in the leading journals of the republic, near and far abroad, as well as in the peer-reviewed international scientific journals DB Web of Science, Scopus and RSCI.

According to the results of scientific research by the staff of the department (2020-2021):

- **In 2020, 13** articles were published in publications with a **non-zero impact factor** (Web of Science, Scopus) and **5** articles in peer-reviewed scientific journals of the **RSCI**.

In publications of non – CIS countries – **14** publications (Iran, Mexico, Turkey, Poland, USA, Czech Republic, Germany, Canada, Brazil), near abroad – **16**. In Kazakhstan – **107** publications were published, including in the leading republican peer – reviewed scientific journals CCES RK – **39**, in other Kazakh

journals-28, in conference materials-40.

Employees of the Department published 2 monographs, stamped REMC of Kazakhstan for universities, also published – 10 textbooks for high schools, recommended Scientific Council of the Institute of Mathematics, Physics and Informatics, 12 textbooks, and teaching for secondary schools of Kazakhstan, recommended by the MES RK.

- **in 2021**, the staff of the department published **11** articles **in publications with a non-zero impact factor** (Web of Science, Scopus) and **2** articles in peer-reviewed scientific journals of the **RSCI**.

In publications of non – CIS countries – 24 publications (Japan, Turkey, USA, Switzerland, the Netherlands, Romania), near abroad – 19. In Kazakhstan – 55 publications were published, including in the leading republican peer – reviewed scientific journals CCES RK – 4, in other Kazakh journals-16 in conference materials-39.

Employees of the Department published 2 monographs, stamped REMC of Kazakhstan for universities, also published – 10 textbooks for high schools, recommended AC IMPHI, 12 textbooks, and teaching for secondary schools of Kazakhstan, recommended by the MES RK.

Also, in 2021, the staff of the department published 4 monographs, with the stamp of REMC RK for universities, also published - 1 textbook for universities of the Ministry of Education and Science of the Republic of Kazakhstan REMC for universities, 2 textbooks for universities recommended by Scientific Council of the Institute of Mathematics, Physics and Informatics.

- Based on the results of scientific research, in **2022**, the staff of the department published 10 articles in publications with a non-zero impact factor (Web of Science, Scopus) and 4 articles in peer-reviewed scientific journals of the RSCI.

There are 10 publications in the journals of far abroad countries (USA, Great Britain, Korea, Budapest), near abroad countries - 18, of which 8 are in conference proceedings.

62 publications were published in the Republic of Kazakhstan, including 10 in leading republican peer-reviewed scientific journals of CCES RK, 18 in other Kazakhstani journals, 34 in conference proceedings.

Also, in 2022, the staff of the department published 1 monograph, also published - 1 textbook for universities of the Ministry of Education and Science of the Republic of Kazakhstan REMC for universities, 6 textbook for universities recommended by Scientific Council of the Institute of Mathematics, Physics and Informatics.

Teachers of the department are participants of international forums, international round tables and international scientific conferences. Faculty and students of the Institute maintain contact with foreign universities and have the opportunity to publish their international scientific works in journals, as well as in the republican journals of the Committee for Control in Education and Science (CCES) MES RK.

Teachers of the department carry out research work within the framework

of individual research carried out in master's theses; participate in the development and implementation of research projects.

The staff of the Department professors A. E. Abylkasymova, Cozbi A., Sakaev M. K., Fatalities A. K., Kaskataeva B. R., associate Garaeva L. U., Kosanov B. M., Tuyakov E. A., Iskakova M. T., senior teachers nurmukhamedova J. M., Akim D. M., Ospanbekov E. A., Kyrykbaeva, A. A. have the h-index in the international databases Scopus and Web of Science.