

## Report on the work of the dissertation council

Dissertation council at NAO “Aktobe Regional University named after K. Zhubanov” in charge of training personnel for the Doctor of Philosophy (PhD) degree in the profile 6D060100 - Mathematics.

By the decision of the Academic Council of NAO “Aktobe Regional University named after K. Zhubanov” dated May 20, 2022, Protocol No. 12, the permanent composition of the dissertation council for the specialty 6D060100-8D05401 - Mathematics was approved (Order No. 369-N dated 24. 05.22):

Sartabanov Zhaishylyk Almaganbetovich – Doctor of Physical and Mathematical Sciences, Professor, Chairman of the dissertation council, Hirsch index - 3;

Tleubergenova Madina Almukhanovna – Candidate of Physical and Mathematical Sciences, Associate Professor, Deputy Chairman of the dissertation council, Hirsch index - 5;

Abdikalikova Galiya Amirgaliyevna – Candidate of Physical and Mathematical Sciences, Associate Professor, member of the dissertation council;

Tleubergenov Marat Idrisovich – Doctor of Physical and Mathematical Sciences, Professor, member of the dissertation council, Chief Researcher of the Institute of Mathematics and Mathematical Modeling of the Ministry of Education and Science of the Republic of Kazakhstan, Hirsch index - 5;

Seilova Roza Dzhambulovna – Candidate of Physical and Mathematical Sciences, Academic Secretary of the dissertation council, Hirsch index - 2.

The dissertation council is authorized to accept dissertations for defense in the specialty 6D060100-8D05401 - Mathematics.

The report contains the following information:

- 1. Data on the number of meetings held. During its work, the Dissertation Council for Mathematics held 4 (four) meetings.**
- 2. The last names, first names, and patronymics (if any) of the members of the dissertation council who attended less than half of the meetings. None.**
- 3. A list of doctoral students indicating their training organizations.**

№	Full name	Organization of training
1	Zhumagazyev Amire Khaliuly (the defense took place on August 24, 2022)	Aktobe Regional State University named after K. Zhubanov
2	Aitenova Gulsezim Muratovna (the defense took place on December 21, 2022)	Aktobe Regional State University named after K. Zhubanov

**4. A brief analysis of the dissertations reviewed by the council during the reporting year, highlighting the following sections:**

**4.1.1 Analysis of the topic of the doctoral work of Zhumagazyev A.Kh.:**

The dissertation work of Zhumagazyev A.Kh., a doctoral student at ARU named after K. Zhubanov, is written on the topic "Multi-periodic solutions of systems of equations with different differentiation operators."

Joint research was conducted with a foreign scientific consultant, Doctor of Physical and Mathematical Sciences, Professor of the Bashkir State Pedagogical University named after M. Akmulla, Sultanaev Yaudat Talgatovich (Ufa, Bashkortostan, Russia).

The aim of the work is to develop a method for simplifying the differentiation operator, a methodology for integrating and studying multi-periodic solutions of linear and quasi-linear systems with different differentiation operators, as well as a boundary value problem for a linear hyperbolic system in the narrow sense.

The practical significance lies in new approaches to integration and the study of the existence of multi-periodic solutions of narrowly hyperbolic quasilinear equations with matrix differentiation operators with respect to variables of arbitrary number, described by the block systems method, the method of introducing additional variables, and the method of projectors.

**4.2.1** The relevance of the dissertation topics to the directions of scientific development formed by the Higher Scientific and Technical Commission under the Government of the Republic of Kazakhstan in accordance with paragraph 3 of Article 18 of the Law "On Science" and/or state programs.

The dissertation work corresponds to the priority area of scientific development "10. Scientific research in the field of natural sciences, 10.1 Fundamental and applied research in the field of mathematics and mechanics."

**4.3.1 Analysis of the level of implementation of the dissertation results in practical activities.**

The main provisions of the dissertation were discussed at meetings and scientific seminars of the Department of Mathematics of Zhubanov ARU, at online (Zoom) scientific seminars jointly with the Institute of Mathematics and Mathematical Modeling of the Republic of Kazakhstan (Almaty), as well as at international conferences. Based on the results of the doctoral dissertation, 13 printed works were published, including 4 articles in scientific journals included in the list recommended by the Committee for Quality Assurance in Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan, and 1 article in a publication from the Scopus database: in the Azerbaijan Journal of Mathematics (percentile = 48, 2022). Additionally, 8 publications were made in the materials of international conferences, including 1 publication in the proceedings of foreign conferences.

**4.1.2 Analysis of the topic of the doctoral work of Aitenova G. M.:**

The dissertation work of the doctoral student Aitenova G. M. at Zhubanov ARU was completed on the topic "Study of boundary value problems and multi-periodic solutions of systems of integro-differential equations with a differentiation operator in the direction of a vector field." Joint research was conducted with a foreign scientific consultant, Doctor of Physical and Mathematical Sciences, Professor Kerimbekov Akylbek of the Kyrgyz-Russian Slavic University named after B.N. Yeltsin (Bishkek, Kyrgyz Republic). The aim of this work is to study initial problems for boundedly hereditary quasilinear integro-differential systems of equations with a differentiation operator in the direction of a vector field, problems of multi-periodic solutions, and the study of boundary value problems and their development for integro-differential equations of parabolic type.

The practical significance lies in the development of methods for studying linear and nonlinear systems of integro-differential equations with a differentiation operator in the direction of a vector field, establishing sufficient conditions for the solvability of two-point boundary value problems with respect to a spatial variable for linear integro-differential equations, obtaining conditions for the existence and uniqueness of multi-periodic solutions of systems of integro-differential equations with a differentiation operator and a hereditary period, as well as for linear integro-differential equations of convective parabolic type, and finding sufficient

conditions for the solvability of initial-boundary value problems in the space of multi-periodic time variables.

**4.2.2 The relationship of the dissertation topics with the areas of scientific development established by the Higher Scientific and Technical Commission under the Government of the Republic of Kazakhstan in accordance with paragraph 3 of Article 18 of the Law "On Science" and/or state programs.**

The dissertation work corresponds to the priority area of scientific development "10. Scientific research in the field of natural sciences, 10.1 Fundamental and applied research in the field of mathematics and mechanics."

**4.3.2 Analysis of the level of implementation of the dissertation results in practical activities.**

The main provisions of the dissertation were discussed at meetings and scientific seminars of the Department of Mathematics at Zhubanov ARU, at online (Zoom) scientific seminars jointly with the Institute of Mathematics and Mathematical Modeling of the Republic of Kazakhstan (Almaty), as well as at international conferences.

Based on the results of the doctoral dissertation, 15 printed works were published, including 4 articles in scientific journals recommended by the Committee for Quality Assurance in Education and Science of the Ministry of Higher Education of the Republic of Kazakhstan, 1 article in a publication from the Scopus database: in the Eurasian Mathematical Journal (percentile = 26, 2022), and 10 publications in the materials of international conferences, including 3 publications in the proceedings of foreign conferences.

**5. Analysis of the work of official reviewers (with examples of the lowest quality reviews).**

The reviewers of doctoral dissertations for the degree of Doctor of Philosophy (PhD) were appointed in accordance with the requirements of the Model Regulations on the Dissertation Council. Information about the appointed reviewers is provided below:

№	Doctoral student	Reviewers	
1	Zhumagazyev Amire Khaliuly	Yuldashev Tursun Kamaldinovich – Doctor of Physical and Mathematical Sciences (01.01.02 – Differential Equations and Mathematical Physics), Professor, National University of Uzbekistan named after Mirzo Ulugbek, Tashkent, Uzbekistan;	Uteshova Roza Yesenovna – Candidate of Physical and Mathematical Sciences (01.01.02 – Differential Equations and Mathematical Physics), Assistant Professor, International University of Information Technologies, Almaty, Kazakhstan.
2	Aitenova Gulsezim Muratovna	Ramazanov Murat Ibraevich – Doctor of Physical and Mathematical Sciences (01.01.02 – Differential Equations and Mathematical Physics), Professor, Karaganda University named after Academician E.A. Buketov, Karaganda, Kazakhstan;	Temirkhanova Ainur Maralkyzy – Doctor of Philosophy, PhD (01.01.00 – Mathematics), Associate Professor of the Department of Fundamental Mathematics, L.N. Gumilyov Eurasian National University, Astana, Kazakhstan.

Reviewers D.Sc. (Phys.-Math.), Professor Yuldashev T.K., D.Sc. (Phys.-Math.), Assistant Professor Uteshova R.E., D.Sc. (Phys.-Math.), Professor Ramazanov M.I., and Doctor of Philosophy, PhD, Associate Professor Temirkhanova A.M. demonstrated high professionalism.

There are no comments on the reviewers' work.

6. Suggestions for further improvement of the system for training scientific personnel.

7. The number of dissertations for the degrees of Doctor of Philosophy (PhD) and Doctor of Science in the profile, in the context of areas of personnel training:

	Specialty 6D060100 - Mathematics
1) dissertations accepted for defense (including doctoral students from other universities)	2 (two)
2) dissertations withdrawn from consideration (including those of doctoral students from other universities):	-
3) dissertations that received negative reviews from reviewers (including those of doctoral students from other universities):	-
4) dissertations with a negative decision following the defense (including those of doctoral students from other universities):	-
5) dissertations submitted for revision (including those of doctoral students from other universities):	-
6) dissertations submitted for re-defense (including those of doctoral students from other universities):	-

Chairman of the Dissertation Council  Sartabanov Zh.

Scientific Secretary of the Dissertation Council  Seilova R.D.

Seal date " 10 " 01 2023