



13th International Conference on Modern Problems of Mathematics and Mechanics

PROGRAM

**September 9-12, 2026
Baku, Azerbaijan**

9 September (Wednesday)	
09:00 – 10:00	Registration of local participants Vestibule (<i>1st floor</i>)
10:00 – 11:30	Opening Ceremony Assembly Hall (<i>1st floor</i>)
11:30 – 11:45	Coffee break (<i>5th floor</i>)
11:45 – 13:00	Plenary Session Assembly Hall (<i>5th floor</i>)
13:00 – 14:00	Lunch break
14:00 – 15:50	Section 1: Differential Equations and Optimal Control (<i>6th floor, #601</i>)
	Section 2: Algebra, Geometry and Topology (<i>6th floor, #607</i>)
	Section 3: Computational Mathematics and Mathematical Modeling (<i>6th floor, #610</i>)
	Section 4: Functional Analysis and Theory of Operators (<i>6th floor, #613</i>)
15:50 – 16:10	Coffee break (<i>5th floor</i>)
16:10 – 18:00	Section 1: Differential Equations and Optimal Control (<i>6th floor, #601</i>)
	Section 2: Problems of Mechanics (<i>6th floor, #607</i>)
	Section 3: Computational Mathematics and Mathematical Modeling (<i>6th floor, #610</i>)
	Section 4: Functional Analysis and Theory of Operators (<i>6th floor, #613</i>)
10 September (Thursday)	
10:00 – 11:15	Plenary Session Assembly Hall (<i>5th floor</i>)
11:15 – 11:35	Coffee break (<i>5th floor</i>)
11:35 – 12:50	Plenary Session Assembly Hall (<i>5th floor</i>)
12:50 – 14:00	Lunch break
14:00 – 15:50	Section 1: Differential Equations and Optimal Control (<i>6th floor, #601</i>)
	Section 2: Problems of Mechanics (<i>6th floor, #607</i>)
	Section 3: Computational Mathematics and Mathematical Modeling (<i>6th floor, #610</i>)
	Section 4: Functional Analysis and Theory of Operators

	<i>(6th floor, #613)</i>
15:50 – 16:10	Coffee break <i>(5th floor)</i>
16:10 – 18:00	Section 1: Differential Equations and Optimal Control <i>(6th floor, #601)</i>
	Section 2: Problems of Mechanics <i>(6th floor, #607)</i>
	Section 3: Computational Mathematics and Mathematical Modeling <i>(6th floor, #610)</i>
	Section 4: Theory of Functions <i>(6th floor, #613)</i>
11 September (Friday)	
11:00 – 11:50	Plenary Session Assembly Hall <i>(5th floor)</i>
11:50 – 12:10	Coffee break <i>(5th floor)</i>
12:10 – 13:00	Plenary Session Assembly Hall <i>(5th floor)</i>
13:00 – 14:00	Lunch break
14:00 – 15:50	Section 1: Differential Equations and Optimal Control <i>(6th floor, #601)</i>
	Section 2: Non-Harmonic Analysis <i>(6th floor, #607)</i>
	Section 3: Theory of Probability and Mathematical Statistics <i>(6th floor, #610)</i>
15:50 – 16:30	Closing Ceremony Assembly Hall <i>(5th floor)</i>
12 September (Saturday)	
10:00 – 18:00	Social Program

VENUE: Institute of Mathematics, 68 B.Vahabzade str., Baku

JOIN ZOOM

<i>HALL</i>	<i>Meeting ID</i>	<i>Passcode</i>
Opening Ceremony, Plenary Session, Section 1	<u>837 8096 3601</u>	2026
Section 2	<u>974 3931 5680</u>	2026
Section 3	<u>912 5891 5660</u>	2026
Section 4	<u>967 5453 3889</u>	2026

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9 September (Wednesday)

Program

13th International Conference on Modern Problems of Mathematics and Mechanics (MPMM 2026, September 9-12, 2026)

10:00 – 11:30

Opening Ceremony

***Location:** Institute of Mathematics, Assembly Hall (1st floor)*

- **Elkhan Sabziev** – Chair of Organizing Committee, Director of the Institute of Mathematics of the Ministry of Science and Education
- **Ulkar Sattarova** – Director of the State Agency for Science and Higher Education of the Ministry of Science and Education
- **Rasim Alguliyev** – Vice-President of ANAS, Director General of the Institute of Information Technologies of the Ministry of Science and Education
- **Misir Mardanov** – Chair of Program Committee, Baku State University
- **Mersaid Aripov** – National University of Uzbekistan (Uzbekistan)
- **Roman Dmytryshyn** – Vasyl Stefanyk Carpathian National University (Ukraine)

11:30 – 11:45

Coffee break

11:45 – 13:00

Plenary Session

(Assembly Hall, 5th floor)

Moderators: *Misir Mardanov, Varga Kalantarov*

11:45-12:10 *Brian Straughan.* Convection and Constitutive Memory: An Evolutionary Operator Viewpoint.

12:10-12:35 *Ljubiša Kočinac.* Topologies on Locally Finite Graphs.

12:35-13:00 *Roman Dmytryshyn.* On the Approximation of Special Functions by Branched Continued Fractions.

13:00 – 14:00

Lunch break

SECTIONS

Section 1 Differential Equations and Optimal Control

14:00 – 15:50

(6th floor, #601)

Moderator: *Adalat Akhundov*

1. *Adalat Akhundov, Areste Habibova, Nahid Pashaev.* Inverse Problem for Burgers-Type Parabolic Equation.
2. *Vagif Abdullayev, Vugar Hashimov.* Feedback Control of Boundary Conditions and Sensor Motion During Rod Heating.
3. *Aygun Abdullayeva, Atif Namazov.* On Stabilization of Solutions to Benjamin-Bona-Mahony-Burgers Equation.
4. *Nihan Aliyev, Ramin Zeynalov.* Investigation of the Solution of the Boundary Value Problem for a Linear, Homogeneous, Constant Coefficient Ordinary Differential Equation with Fractional Derivatives.
5. *Narmin Aliyeva, Yagub Aliyev.* Equivalence of Minimality Conditions.
6. *Narmina Asgarova.* Second-Order Optimality Conditions for a Variational Problem with a Free Right Endpoint and Terminal Cos.

7. *Tahir Gadjiev, Aybeniz Yagnaliyeva, Khalil Aliyev.* The Qualitative Property of Solutions Parabolic Non-Linear Equations.
8. *Elmaga Gasymov, Saddein Efendi.* Inversion Formula for Solving Parametric Problems with Irregular Boundary Conditions for Variable Coefficients Equations.
9. *Gülseren Çiçek.* On Duality of the Lagrange Problem with Differential Inclusions and Multiple Delays.

15:50 – 16:10

Coffee break

Section 1

Differential Equations and Optimal Control

16:10 – 18:00

(6th floor, #601)

***Moderator:* Rauf Amirov**

1. *Rauf Amirov.* On the Inverse Nodal Problem for Diffusion Operator.
2. *Hamlet Guliyev, Tunzale Huseynova.* Optimal Control Problem for Second Order Hyperbolic Equations with Control in Coefficients.
3. *Hamlet Guliyev, Vusala Nasibzadeh.* Numerical Solution of the Problem of Determining the Initial Function in a Problem for a String Vibration Equation.
4. *Hamlet Guliyev, Hikmat Tagiyev.* An Optimal Control Problem for Unstable Parabolic Equation with a Nonlocal Boundary Condition.
5. *Sevinj Hadiyeva.* On a Problem for Hyperbolic Equations with Discontinuity Conditions.
6. *Asma Hanif.* Fractional Optimal Control Analysis of COVID-19 and Dengue Fever Co-infection Model with Atangana-Baleanu Derivative.
7. *Yousef Jafarzadeh.* Some New Results from Combining Taylor Series and Block Pulse Functions.
8. *Nazim Jafarov.* The Green Function for a Class of Second Order Parabolic Equations in Paraboloid Type Domains.
9. *Davron Juraev, Gulsum Aghayeva.* Optimal Control Problem for Matrix Factorizations of the Helmholtz Equation on the Plane.

9 September (Wednesday)

Section 2
14:00 – 15:50

Algebra, Geometry and Topology
(6th floor, #607)

Moderator: *Arif Salimov*

1. *Sebuhi Abdullayev, Çiğdem Gündüz, Sadi Bayramov.* A Note on Perturbed Soft S-Metric Space.
2. *Furkan Arıkan, Orhan Dışkaya.* An Extension of the Narayana Sequence to Non-Ineger Indices.
3. *Ali Babaev, Vafa Mammadova, Zumurud Panahova, Eminaga Mamedov.* Some Remarks on Uniform Algebras Valued Composition Operator.
4. *Rena Babayeva, Sabir Mirzoev, Eminaga Mamedov.* The Concept of Quantity and Equality in the Works of Nasir Al-Din Al-Tusi.
5. *Elmaga Gasymov, Arifa Kerimova.* Some Relations Between Trigonometric Functions and Algebraic Polynomials.
6. *Habil Fattayev.* Curvature Properties of the Fiberwise Berger type Deformed Sasaki Metric on the Coframe Bundle.
7. *Vagif Jabbarzade.* A k -Valued Discrete-Probability Logic of Event Formulas Without Combinatorial Explosion.
8. *Farkhod Mukhamadiev.* On Uniform Structures in the Superextension.
9. *Selma Özçağ, Haydar Saraf.* Topological Games in Bitopological Spaces: The Banach–Mazur Game.
10. *Kamala Veliyeva, Nuride Museyibova, Sadi Bayramov.* Homology Theory of Soft Sets in the Category of Shostak Topological Spaces.

15:50 – 16:10

Coffee break

Section 2
16:10 – 18:00

Problems of Mechanics
(6th floor, #607)

Moderator: *Nazila Rassoulova*

1. *Nazila Rassoulova, Mubariz Rassoulov, Tehmine Mahmudzade.* Solution of Lamb's Problem for an Elastic Half-Space.

2. *Elkhan Abbasov, Nurlana Agayeva, Aynur Darishova*. Simulation of Stationary Annular Flow of a Gas-Liquid Mixture in a Pipe, Considering Radial Viscosity Variation of the Gas Cushion.
3. *Elkhan Abbasov, Aynur Darishova*. Dynamics of Gas-Liquid Mixture Flow in a Pipe, Taking into Account Phase Transitions and Heat Exchange with the Environment.
4. *Elkhan Abbasov, Serkar Imamaliyev*. Modeling the Dynamics of a Gas-Liquid Mixture Flow in a Pipe, Taking into Account Phase Transformations and Pipe Wall Deformation.
5. *Surxay Akbarov, Emin Bagirov, Fuad Huseynov, Arzu Abbasova*. On the Wave Propagation in the Eccentric Hollow Cylinder Containing an Inviscid Compressible Fluid.
6. *Sona Farajova, Yusif Sevdimaliyev*. Dynamics of an Initially Stressed Eccentric Hollow Cylinder.
7. *Elshan Hashimov, Bayram Ibrahimov, Marko Radovanovic, Aziz Talibov, Valeh Bakhshali, Ismayil Ismayil*. Assessment of the Technical Condition of Mechanical Systems Using Digital Twin and Artificial Intelligence Technologies.
8. *Aynura Khudiyeva*. Dynamics of Flexural-Gravity-Capillary Waves in Floating Viscoelastic Plates under Stochastic Loading.

Section 3

Computational Mathematics and

14:00 – 15:50

Mathematical Modeling (6th floor, #610)

Moderator: *Yegana Ashrafova*

1. *Kamil Aida-zade, Yegana Ashrafova*. Computational Analysis of Fluid Flow in Complex Pipeline Networks.
2. *Konul Aliyeva, Khatira Babayeva*. Analysis of Methods, Models and Algorithms of Mathematical Modeling Used in Logistics Research.
3. *Rakhmatillo Aloev, Dilfuza Nematova*. Discrete Lyapunov Stability of a 3D Godunov-Type Scheme for Symmetric Quasilinear Hyperbolic Systems with Dissipative Boundary Conditions.

4. *Mirsaid Aripov, Firuza Kabiljanova, Maftuha Sayfullayeva.* Mathematical Modeling of Nonlinear Biological Populations.
5. *Mirsaid Aripov, Dilobar Nigmanova, Mohidil Rahmonova.* Mathematical Modeling of Coupled Diffusion Systems with Convective Transfer.
6. *Alisher Matyakubov, Jasurbek Salimov.* On the Asymptotic Behaviour of Solutions to a Nonlinear Parabolic System in Non-Divergence Form with Variable Density.
7. *Sumita Dahiya, Suhana Chaudhary, Priyanka Yadav.* Numerical Study of the Gilson–Pickering Equation for Nonlinear Plasma Wave Dynamics.
8. *Oybek Djabbarov, Mahbuba Samadova, Muzaffar Karimov.* Qualitative Properties of Solutions to a Parabolic Heat Equation in Nondivergence Form with Two Nonlinear Source Term.

15:50 – 16:10

Coffee break

Section 3

Computational Mathematics and

16:10 – 18:00

Mathematical Modeling (6th floor, #610)

Moderator: Azizaga Shakhverdiev

1. *Rahul Agarwal, Sumita Dahiya.* A Polynomial Differential Quadrature–Crank–Nicolson Scheme for a Reaction–Diffusion Dengue Epidemic Model.
2. *Akhmat Ikramov, Askhad Polatov, Farrukhkhon Polatov, Wei Guo.* Convergence Analysis of Q4 and Q8 Elements for Elliptical Cavities in Composite Plates.
3. *Arzu Mammadova, Konul Aliyeva.* Applications of Functional Analysis in Physics.
4. *Alisher Matyakubov, Abrorjon Mamatov.* Asymptotic Behavior of Self-Similar Solutions for Degenerate Diffusion-Absorption Systems with Time-Dependent Coefficients and Variable Density.

5. *Zakir Zabidov, Khayala Gadirova*. Refinement of Low-Resolution Images with High-Resolution Images.
6. *Sardorbek Murodov, Elvira Shakayeva, Chori Normurodov*. Numerical Solution of Two-Parameter Singularly Perturbed Boundary Value Problems Using the Spectral-Grid Method.
7. *Niyetbay Uteuliev, Gafur Djaykov, Gulnaz Mamutova*. Explicit Inversion Formula and Regularization for Function Reconstruction from Circular Arc Integrals.
8. *Mahmoud Moustafa*. Dynamical Analysis of Hantavirus Infection Model.

Section 4 Functional Analysis and Theory of Operators

14:00 – 15:50

(6th floor, #613)

Moderator: *Hamidulla Aslanov*

1. *Alper Erdem*. Semi Cauchy Variants of Alpha Convergence and Exhaustiveness with Korovkin-Type Theorems.
2. *Narmin Amanova, Rabil Amanov, Togrul Muradov*. An Oscillation Theorem for Solutions of Nonuniformly Degenerate Second-Order Elliptic–Parabolic Equations.
3. *Hamidulla Aslanov, Gunel Eyvazli, Kamilla Alimardanova*. Investigation of Resolvent of Operator Generated by Differential Expressions with Operator Coefficients in Hilbert space.
4. *Özlem Baksi, Kemal Demir, Baharchin Akhmadli*. The Strong Solvability of a Nonlocal Boundary Value Problem for the Poisson Equation in a Rectangle.
5. *Bilal Bilalov, Ümit Ildiz, Yonca Sezer*. Solvability of a Nonlocal Problem in Orlicz–Sobolev Spaces.
6. *Yuliya Abbasova*. On the Absolute and Uniform Convergence of the Expansion in the Eigenfunctions one of a Boundary Value Problem for a Third-Order Differential Equation.
7. *Gulsum Aghayeva, Davron Juraev, Nurbala Suleymanov*. Boundary

Value Problems for a Class of Fourth-Order Operator-Differential Equations on a Finite Interval.

8. *Ekrem Savaş*. On Generalized Almost Statistical Convergence of Weight g in Partial Metric Spaces.

15:50 – 16:10

Coffee break

Section 4 Functional Analysis and Theory of Operators

16:10 – 18:00

(6th floor, #613)

Moderator: *Veli Kurbanov*

1. *Telman Gasyimov, Ilkin Feyzullayev, Amiragha Shikhammadov*. On the Strong Solvability of a One-Dimensional Parabolic Problem with a Non-Classical Boundary Condition.
2. *Veli Kurbanov, Leyla Buksayeva*. Estimating the Local Equiconvergence Rate for the One-Dimensional Schrödinger Operator with Summable Potential.
3. *Sabina Sadigova, Vafa Alili, Asmar Mirzabalayeva*. Schauder-Type Estimates for Higher Order Elliptic Equations in Grand Sobolev Spaces.
4. *Elchin Ibadov*. On Convergence of the Spectral Expansion in Root Vector Functions of Discontinuous Schrödinger Operator with Matrix Potential.
5. *Migdad Ismailov, Chinara Hasanova*. Grand Classes of Hardy and the Cauchy Formula.
6. *Nigar Gadirli*. On Asymptotics of the Green Function Cauchy Problem for Parabolic Equation Corresponding Higher Order Operator-Differential Equation in Hilbert Space.
7. *Zaur Kasumov, Nigar Ahmedzade, Tarlan Garayev*. Some Properties of X -valued Poisson Integrals in Bochner Spaces.
8. *Ahmet Köprücü, Uğur Değer*. Degree of Approximation for Harmonically Modulated Functions in the Hölder Class.

10 September (Thursday)

10:00 – 11:15

Plenary Session

(Assembly Hall, 5th floor)

Moderators: *Ljubiša Kočinac, Attila Aşkar*

- 10:00-10:25** *Kirill Kopotun.* Comonotone Approximation by Periodic Splines of Minimal Defect.
- 10:25-10:50** *Michel Chipot.* On Some Liouville Theorems for p-Laplace Type Operators.
- 10:50-11:15** *Sergey Zelik.* Sharp Bounds for the Attractors Dimension for 2D Navier-Stokes Equations.

11:15 – 11:35

Coffee break

11:35 – 12:50

Plenary Session

(Assembly Hall, 5th floor)

Moderators: *Roman Dmytryshyn, Mersaid Aripov*

- 11:35-12:00** *Mirsaid Aripov.* About the Solution of a Nonlinear Diffusion Equation in Non-Divergence Form with a Source.
- 12:00-12:25** *Viktor Savchuk.* Lower Estimates for the Best Approximation of Continuous Holomorphic Functions.
- 12:25-12:50** *Vugar Ismailov.* Approximation Properties of Feedforward Neural Networks on Topological Spaces.

12:50 – 14:00

Lunch break

SECTIONS

Section 1 Differential Equations and Optimal Control
14:00 – 15:50 (6th floor, #601)

Moderator: *Farman Mamedov*

1. *Farman Mamedov, Khayala Akhundova.* On the Weak Solvability of the Nonlinear Nonuniform Elliptic Equations with $L^1(D)$ Data.
2. *Baxtiyar Kadirkulov, Dilfuza Uzaqbaeva.* Direct and Inverse Problems for a Fourth-Order Mixed-Type Equation with Power Degeneration in a Three-Dimensional Domain.
3. *Adil Kahramanov.* Boundary Value Problems for Equations Not Resolved with Respect to the Highest Derivative.
4. *Mahbuba Kerimova.* On one Boundary Value Problem for Singularly Perturbed Quasilinear Differential Equation of Arbitrary Odd Order.
5. *Ikrombek Khajiev, Elbek Shobdarov.* Conditional Well-Posedness of an Initial-Boundary Value Problem for a Composite Pseudohyperbolic Equation.
6. *Elimhan Mahmudov, Gökhan Göksu.* Optimal Control of Parabolic Differential Inclusions Depending on First-Order Partial Derivatives.
7. *Eldar Mammadov.* On the Structure of the Numerical Range of a Multiparameter Problem under the Right Definiteness Condition.
8. *Akmal Mamatov.* On One Modular Maximin Control Problem.
9. *Famil Mammadov, Mesud Gahramanov.* The Cauchy Problem for a Class of Nonlinear Dissipative Hyperbolic Equations.

15:50 – 16:10

Coffee break

10 September (Thursday)

Section 1 Differential Equations and Optimal Control
16:10 – 18:00 (6th floor, #601)

Moderator: Telman Melikov

1. *Misir Mardanov, Telman Melikov, Aygun Isayeva.* Sufficient Conditions for Minimum in Delayed Variational Problems.
2. *Elchin Mamedov, Aynur Hasanova.* On the Stabilization of Generalized Solution for a Strongly Dissipative Hyperbolic Equation with a Nonlinear Source Term and Nonlinear Boundary Conditions.
3. *Elchin Mamedov, Aishan Mammadova.* On the Qualitative Properties of Generalized Solutions for the Heat Equation with a Strong Dissipative Term and Nonlinear Boundary Conditions.
4. *Samin Malik.* Sufficient Conditions for a Minimum in a Nonsmooth Delayed Problem of the Calculus of Variations.
5. *Vagif Mastaliyev.* Application of the Method of Residues to the Solution of a Mixed Boundary Value Problem for a Class of Variable-Coefficient Differential Equations.
6. *Rashad Mastaliyev, Nicat Hasanli.* First Order Necessary Optimality Conditions in Stochastic Step Control Problem.
7. *Shemsiyye Muradova.* Investigation of Parabolic Fractional Integral Operators (with Rough Kernels) in Parabolic Local Generalized Morrey Spaces.
8. *Yelena Mustafayeva, Nihan Aliyev.* Necessary Conditions of Steklov Problem with Global Term in the Boundary Conditions for Laplace Equation.
9. *Malahat Najafova.* On a Necessary Optimality Condition for a Linear Nonlocal Discrete Control Problem with a Nondifferentiable Objective Functional.

10 September (Thursday)

Section 2

Problems of Mechanics

14:00 – 15:50

(6th floor, #607)

Moderator: *Geylani Panahov*

1. *Geylani Panahov, Nazim Valiyev, Eldar Abbasov, Babek Sultanov.* Assessment of Near-Wellbore Formation Stability Under Hydromechanical and Thermochemical Effects.
2. *Ramil Bakhtizin, Geylani Panahov, Fuad Khudaverdiyev.* On Some Spectra of Mathematical Modeling of Heat Conduction in Nonequilibrium Multicomponent Media.
3. *Bakhtiyor Khuzhayorov, Tursunpulat Dzhiyanov.* Inverse Problem for Colloidal Particle Transport in a Two-Zone Porous Medium with Different Properties.
4. *Hijran Mammadova.* Corrosion-Induced Failure of a Circular Concentric Plate Under Internal Pressure.
5. *Mehriban Mammadova.* Taking Into Account the Influence of Groundwater on the Durability of a Vertical Well.
6. *Ibrakhim Mirzev, Sultan Gaynazarov.* Mathematical Modeling of Oblique Impact of Elastic Waves on a Parallelepiped with Transparent Borders.
7. *Mahir Mehdiyev, Sahib Aliyev.* Three-Dimensional Dynamics of Non-Axisymmetric Moving Load Acting in the Interior of the Bi-Layered Hollow Cylinder.

15:50 – 16:10

Coffee break

Section 2

Problems of Mechanics

16:10 – 18:00

(6th floor, #607)

Moderator: *Eldar Abbasov*

1. *Ayten Muradova.* Cyclic Torsion of a Viscoelastoplastic Bar: Deformation and Long-term Strength Prediction.

2. *Nigar Nagiyeva*. Theoretical Investigation of Elastic-Plastic Cyclic Torsion and Fatigue Features Minimum Cross-Section Rectangular Torque Structural Elements.
3. *Vusala Rzyayeva*. Vibrations of a Cylindrical Shell Stiffened with Inhomogeneous Rods and Rings.
4. *Irada Mirzazadeh, Gulchin Abdullayeva*. Data-Driven Long-Term Monitoring After Carbon Monoxide Intoxication: A Framework for Clinical Decision Support.
5. *Tebriz Shamiev, Ruhiyye Zamanova, Rena Ismailova*. Stability of the Plane Form of Bending of Thin-Walled Rods with Regard to Bimodularity.
6. *Famil Seyfullaev, Alikhan Garayev*. Influence of Effect of a Sliding Friction on the Characteristic of Natural Frequencies of the Longitudinally Supported Cylindrical Envelopes with Filler at an Axial Compression.
7. *Geylani Panahov, Eldar Abbasov, Afat Yuzbashiyeva, Ibrahim Mamedov*. Electrokinetic Effects During the Displacement of Miscible Electrolytes in a Porous Medium.

Section 3

14:00 – 15:50

Computational Mathematics and

Mathematical Modeling

(6th floor, #610)

Moderator: *Dauletbay Utebaev*

1. *Mirsaid Aripov, Dauletbay Utebaev, Sapura Kalmuratova*. High-Accuracy Difference Schemes for a Multidimensional Parabolic Equation.
2. *Zafar Rakhmonov, Aziza Zaripova*. On the Properties of Solutions to a Multidimensional Nonlinear Heat Conduction Problem with Coupled Nonlinear Boundary Conditions.
3. *Nasridin Zhabborov, Behzod Husenov, Abdurasul Narmanov*.

A-Tomographic Transform and Main Properties.

4. *Niyetbay Uteuliev, Abat Seidullaev, Ilkhom Bektemirov*. Reconstruction Algorithms for a New Class of Weighted Integral Geometry Problems with Weight Function.
5. *Priyanka Yadav, Sumita Dahiya*. Scheme Based Comparison for Benjamin-Bona-Mahony-Burgers Equation Governing Flood Predictions.
6. *Ibtissam Sannaky, Imane El Berrai, Khalid Adnaoui*. Dry Versus Wet Season Dynamics of Cystic Echinococcosis: Insights from Stochastic Extinction Analysis and Deterministic Scenario Comparison.
7. *Alisher Rasulov, Gulnora Raimova*. Solution Semi-Linear Helmholtz Equation with a Quadratic Source term for Groundwater Flow.

15:50 – 16:10

Coffee break

Section 3

16:10 – 18:00

Computational Mathematics and Mathematical Modeling

(6th floor, #610)

Moderator: *Anar Rahimov*

1. *Anar Rahimov*. On Numerical Solution to Inverse Problem of Restoring Special Type Source of Parabolic Equation.
2. *Serbun Ufuk Değer*. Local Stability and the Emergence of Stable Two-Cycles in a Nonlinear Difference System.
3. *Vitaliy Goran*. On the Numerical Stability of Branched Continued Fraction Expansions of Some Ratios of Triple Hypergeometric Functions F_K .
4. *Allaoua Hemmak*. Neuro-Metaheuristic Approache for Adaptive Vehicle Routing in Urban Transport Networks.
5. *Nargiza Nurmukhamedova, Nargiza Boltaeva*. Sequential Fixed-Width Confidence Intervals for Right-Censored Data via Averaged Stochastic Approximation.

10 September (Thursday)

6. *Aygun Omarova, Tofiq Orujov*. Mathematical Modeling of Production Efficiency Under Different Constraints.
7. *Askhad Polatov, Akhmat Ikramov, Sukhbatulla Pulatov, Uchkunbek Adambaev*. Geometric Effects on Stress Localization in Fiber Composites.

Section 4 Functional Analysis and Theory of Operators

14:00 – 15:50

(6th floor, #613)

Moderator: *Araz Aliev*

1. *Araz Aliev, Elshad Eyvazov*. Self-Adjointness of the Schrödinger Operator with Slowly Decaying Potential.
2. *Shakhnoza Akhmatova*. Global Spectral Configurations of a Two-Particle Lattice Schrödinger Operator.
3. *Mohammed Benharrat*. Solvability of a Class of a Linear Fourth-Order Boundary Value Problems in Hilbert Spaces.
4. *Alper Erdem, Engin Furat*. A Note on Convergence Notions Invariant Under Uniform Conjugacy.
5. *Seda Kızılbudak Çalışkan, Sümeyye Gica, Baharchin Akhmadli*. Uniqueness and Existence of One Nonlocal Problem in Orlicz-Sobolev Space.
6. *Sema Metina, Uğur Değer*. Roughness Behaviors of Fractal Interpolation Functions via Cesàro Mean.
7. *Heybetkulu Mustafayev*. Mean Ergodic Theorem for Probability Measures.

15:50 – 16:10

Coffee break

Section 4

16:10 – 18:00

Theory of Functions

(6th floor, #613)

Moderator: Marta Dmytryshyn

1. *Fahreddin Abdullayev, Meerim Imashkyzy*. On the Behavior of m – th ($m \geq 1$) Derivatives of Algebraic Polynomials in Unbounded Domains of the Complex Plane.
2. *Yagub Aliyev, Zamina Guliyeva*. On the Generalization of Sierpinski's Inequality.
3. *Marta Dmytryshyn, Volodymyr Hladun*. On the Stability to Perturbations of S-fractions.
4. *Behzod Husenov*. The Geometry of $A(z)$ -Analytic Spaces and the Bergman Reproducing Kernel.
5. *Daniyal Israfilov*. Approximation Theorems in Variable Exponent Smirnov Classes.
6. *Ivan Nyzhnyk*. On the Analytical Extension of Some Ratios of Triple Hypergeometric Functions FM.
7. *Viktor Savchuk, Maryna Savchuk*. Coefficient Estimates for Bounded Holomorphic Functions.
8. *Niyaz Tokmagambetov*. Pitt-Type Inequalities for General Monotone Functions.

11 September (Friday)

11:00 – 11:50

Plenary Session

(Assembly Hall, 5th floor)

Moderators: *Brian Straughan, Viktor Savchuk*

11:00-11:25 *Attila Aşkar.* A Promenade in the Nonlinear World.

11:25-11:50 *Azizaga Shakhverdiev.* Modeling the Instability of the Oil-Water Displacement Front During Multiphase Flow Based on a Polynomial Dynamical System.

11:50 – 12:10

Coffee break

12:10 – 13:00

Plenary Session

(Assembly Hall, 5th floor)

Moderators: *Michel Chipot, Sergey Zelik*

12:10-12:35 *Marat Arslanov.* Computable and Non-Computable Real Numbers.

12:35-13:00 *Varga Kalantarov.* Stabilization of Damped Nonlinear Wave Equations by Controllers Depending on Finitely Many Parameters.

13:00 – 14:00

Lunch break

SECTIONS

Section 1 Differential Equations and Optimal Control

14:00 – 15:50

(6th floor, #601)

Moderator: Varga Kalantarov

1. *Gunay Rzayeva*. On the Triangular Representation of the Jost-Type Solution to the Perturbed Modified Mathieu Equation.
2. *Mahir Sabzaliyev, Ilhama Sabzalieva*. On Asymptotics of Solution of Boundary Value Problem for Nonclassical Type Singularly Perturbed Quasilinear Differential Equation of Arbitrary Odd Order.
3. *Sevilay Demir Sağlama, Elimhan Mahmudov*. A Duality Framework for Optimal Control of Hyperbolic Differential Inclusions.
4. *Khayala Seyfullayeva*. Optimal Boundary Control for Plates in the Special Cases.
5. *Veli Shakhmurov*. Nonlocal Navier-Stokes Equations and Applications.
6. *Yagub Sharifov, Nazaket Mammadova*. Reduction of a Nonlocal Boundary Value Problem of a Second-Order Differential Equation to an Integral Equation.
7. *Rafiq Tagiyev, Aytaj Mammadova*. On the Optimal Control Problem of a Second-Order Elliptic Equation with Periodic Boundary Conditions.
8. *Shakir Yusubov, Elimhan Mahmudov, Shikhi Yusubov*. On the Representation of Solutions to a Linear Hyperbolic Equation with Fractional Partial Derivatives in the Caputo Sense.
9. *Shirmail Bagirov*. Absence of Global Solutions in an Infinite Domain for a System of Second-Order Semilinear Equations with Fractional Time Derivatives.

11 September (Friday)

Section 2

Non-Harmonic Analysis

14:00 – 15:50

(6th floor, #607)

Moderator: Bilal Bilalov

1. *Aytekin Abdullayeva, Aynur Mammadova, Lale Aliyeva.* Asymptotic Properties of Bivariate Bernstein-Chlodowsky Polynomials on a Triangle.
2. *Rovshan Bandaliyev, Aytekin Abdullayeva, Dunya Aliyeva.* On the Boundedness of One-Dimensional Hausdorff Operators in Orlicz Spaces.
3. *Rovshan Bandaliyev, Vugar Khalilov, Khalida Nasirova.* On Kolmogorov-Riesz Compactness Theorem in Quasi-Grand Lebesgue Space.
4. *Aynur Huseynli.* On the Integrability of the Boundary Values of Harmonically Conjugate Functions.
5. *Elman Ibrahimov, Aynura Binnatova, Saadat Jafarova.* Gegenbauer Fractional Integral Operator and Its Commutators on Gegenbauer-Orlicz Spaces.
6. *Rahim Rzaev, Lale Aliyeva, Surayye Isayeva.* Description of the Generalized Besov Spaces in Terms of Mean Oscillation.

Section 3

Theory of Probability and Mathematical

14:00 – 15:50

Statistics (6th floor, #610)

Moderator: Soltan Aliyev

1. *Soltan Aliyev, Irade Ibadova.* On Convergence of Branching Processes with Several Types of Particles and Migration.
2. *Ulviyya Idrisova, Rovshan Aliyev.* On the Probability Characteristics of the Ruin Moment of the Risk Process with Erlang(2) Distributed Claim Sizes.
3. *Hurshidjon Jumaqulov.* Estimation of the Means of Branching Processes with Immigration.

11 September (Friday)

4. *Ulvi Mammadzada*. Predicting Output Contractions in Emerging Economies: Probit Versus Random Forest.
5. *Fada Rahimov, Gulnara Baghirova, Vugar Khalilov, Ulfat Mammadova*. On the Strong Law of Large Numbers for the Family of First Passage Times of the Parabolic Boundary by the Markov Random Walk, Described by the Autoregressive Process $Ar(1)$.

15:50 – 16:30

Closing Ceremony

(Assembly Hall, 5th floor)

All questions you can address to
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