

**XIII əsrdə yaşamış dahi Azərbaycan alimi və mütəfəkkiri  
Nəsirəddin Tusinin xatirəsinə həsr olunmuş**

**“RİYAZİYYAT VƏ MEXANİKANIN MÜASİR  
PROBLEMLƏRİ”  
XI BEYNƏLXALQ ELMİ KONFRANSIN**

# **PROQRAMI**

**“MODERN PROBLEMS OF MATHEMATICS AND  
MECHANICS”**

# **PROGRAM**

**OF THE XI INTERNATIONAL SCIENTIFIC CONFERENCE**  
*dedicated to the memory of the brilliant Azerbaijani scientist and thinker of the  
XIII century Nasireddin Tusi*

***July 03-06, 2024  
Baku/AZERBAIJAN***

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**Working group:**

Mammadov Mehdi (Chairman), Aliyev Ramil, Aliyeva Esmira, Aliyeva Lale, Askerova Aida, Isayeva Gunel, Maharramova Khumar, Mammadov Ibrahim, Muradova Shamsiyya, Museibli Parviz, Omarova Mehriban, Sadygova Gumru, Salmanova Sabina, Shikhverdiyev Nemat, Tahirova Aynur

**Technical editors:** Musayeva Tahira, Safarov Zaman.

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<i>Tarix</i>	<i>Saat</i>	
03.07.2024	10:00-11:30	<b>Açılış</b>
	11:30-12:30	<b>Plenar iclas</b>
	15:00-18:00	<b>Bölmə iclasları</b>
04.07.2024	10:00-12:30	<b>Plenar iclas</b>
	15:00-18:00	<b>Bölmə iclasları</b>
05.07.2024	10:00-12:30	<b>Plenar iclas</b>
	15:00-18:00	<b>Bölmə iclasları</b>
	18:00-18:30	<b>Bağlanış</b>
06.07.2024	10:00-18:00	<b>Sosyal Program</b>

<i>Date</i>	<i>Time</i>	
03.07.2024	10:00-11:30	<b>Opening</b>
	11:30-12:30	<b>Plenary session</b>
	15:00-18:00	<b>Sections session</b>
04.07.2024	10:00-12:30	<b>Plenary session</b>
	15:00-18:00	<b>Sections session</b>
05.07.2024	10:00-12:30	<b>Plenary session</b>
	15:00-18:00	<b>Sections session</b>
	18:00-18:30	<b>Glos. ceremony</b>
06.07.2024	10:00-18:00	<b>Social Program</b>

## ***Konfransın açılış iclasının proqramı***

Konfransın açılışı:

***Tarix: 03.07.2024, Saat: 10:00-11:30,***

***Məkan:*** Azərbaycan Respublikası Elm və Təhsil Nazirliyi İnformasiya Texnologiyaları İnstitutunun akt zalında (2-ci mərtəbə) (*Riyaziyyat və Mexanika İnstitutunun yerləşdiyi bina*),

***Ünvan:*** *Bakı şəhəri, Bəxtiyar Vahabzadə küçəsi 9.*

	<b><i>Açılış nitqi:</i></b>
1.	<ul style="list-style-type: none"><li>• <b>İsa Həbibbəyli</b>-AMEA-nın prezidenti, akademik;</li><li>• <b>Eminağa Sadıqov</b> -Azərbaycan Respublikası Elm və Təhsil Nazirliyi yanında Elm və Təhsil üzrə Dövlət Agentliyinin direktor müavini;</li><li>• <b>Həsən Həsənov</b>-Dövlət xadimi, professor “Nəsrəddin Tusinin dünya elmində yeri”;</li><li>• <b>Misir Mərdanov</b>- Riyaziyyat və Mexanika İnstitutunun Baş Direktoru, AMEA-nın müxbir üzvü, professor, Nəsrəddin Tusi- Görkəmli şəxsiyyət, istedadlı müəllim, ensiklopedik alim;</li></ul>
2.	<ul style="list-style-type: none"><li>• <b>Ekrem Savaş</b> - Uşak Universitetinin rektoru, Türkiyə, professor;</li><li>• <b>Azimbay Sadullaev</b> – Özbəkistan Milli Universitetinin kafedra müdiri, akademik.</li></ul>

## ***Program of the opening meeting of the Conference***

The opening meeting of the Conference:

***Date: 03.07.2024, Time: 10:00-11:30***

***Location:*** *Institute of Information Technologies (2nd floor) Azerb. Rep. (the building where the Institute of Math. and Mech. is located),*

***Address:*** *Baku city, Bakhtiyar Vahabzade district 9.*

<b><i>Opening speeches:</i></b>	
1.	<ul style="list-style-type: none"><li>• <b>Isa Habibbeyli</b>- President of ANAS, academician;</li><li>• <b>Eminaga Sadigov</b> - Deputy director of the State Agency for Science and Education under the Ministry of Science and Education of the Republic of Azerbaijan;</li><li>• <b>Hasan Hasanov</b>- Statesman, professor "Nasreddin Tusi's place in world science";</li><li>• <b>Misir Mardanov</b>- General director of the Institute of Mathematics and Mechanics. Corr. member of ANAS, prof. Nasreddin Tusi- Outstanding personality, talented teacher, encyclopedic scholar.</li></ul>
2.	<ul style="list-style-type: none"><li>• <b>Ekrem Savaş</b> - Uşak University, Türkiye, professor;</li><li>• <b>Azimbay Sadullaev</b> - National University of Uzbekistan, academician.</li></ul>

## **PLENARY SESSION- HALL 1**

**03 July (11.30-12.30)**

***Chairman: M.Mardanov, E. Savaş***

**11.30-12.00: Sadullayev Azimbay** (Tashkent, Uzbekistan)– New approach to the study of  $m$  -  $cv$  functions

**12.00-12.30: Abbas Mujahid** (Johannesburg, South Africa) – Approximating the common solution of certain nonlinear operator equations using Inertial-Type AA-Viscosity Algorithms

## **PLENARY SESSION- HALL 1**

**04 July (10:00-12:30)**

***Chairman: L. Kocinac, M. Abbas***

**10.00-10.30: Savaş Ekrem** (Uşak, Türkiye) – On invariant deferred sequence spaces defined by modulus function,

**10.30-11.00: Goginava Ushangi** (Abu Dhabi, UAE)- Limits of sequences of operators associated with Walsh System.

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**11:00-11:30 Coffe break**

**Chairman: U. Goginava, M. Aripov**

11.30-12.00: **Bilalov Bilal** (IMM, Azerbaijan)- On Solvability Problems of Elliptic Equations in Banach-Sobolev Spaces,

12.00-12.30: **Efendiyev Yalchin** (University of Texas, USA)- Multicontinuum homogenization and multiscale finite element methods.

**PLENARY SESSION- HALL 1**

**05 July (10:00-12:30)**

**Chairman: A. Sadullayev, B. Bilalov**

10.00-10.30: **Ljubisa Kocinac** (University of Nis, Serbia)- Some Aspects of Regular and Rapid Variation,

10.30-11.00: **Salimov Arif** (Baku State University, Azerbaijan) Holomorphic manifolds and problems of lifts.

**11:00-11:30 Coffe break**

**Chairman: Y. Efendiyev, H. Jafari**

11.30-12.00: **Gogatishvili Amiran** (Ins. Math. Czech Acad. Sci., Czech Republic)- Quasilinear P.D.E.s, Interpolation spaces and Holderian mappings,

12.00-12.30: **Ismailov Vugar** (IMM, Azerbaijan)- On the equioscillation theorem for approximation by sums of two algebras.

## **SECTIONS SESSION**

*Section – Algebra, Geometry and Topology*

**HALL -III**

**Wednesday, July 03, 2024**

**15:00-18:00**

***Chairmen: A. Salimov, A. Khudoyberdiyev***

1. S.E. Abdullayev, K.M. Veliyeva, S.A. Bayramov, Introduction to neutrosophic topology on soft sets,
2. A.Kh. Khudoyberdiyev, Transposed poisson structures on witt-type algebras,
3. E. Kocakusaklı, Embankment surface according to bishop frame in euclidean 3-space,
4. S.E. Toksoy, S.R. Lopez-Permouth, B. Sarac, On the weak-injectivity domains of modules
5. V. K. Bhat, On some topological indices for the orbit graph of Dihedral group,
6. B. Mesablişvili, On the factorization problem of groups and monoids,
7. E. Aliyev, R. Alizade, N. Mammadli, On polyform Abelian groups,
8. R. Alizade, E. Buyukasik, Modules that generates their simple subfactors,
9. Y.M. Demirci, R. Alizade, B. Nisancı Turkmen, E. Turkmen, On Rings determined by injectivity domains of modules,
10. V.M. Jabbarzade, Probabilistic four-valued classical logic C4
11. Y.N. Aliyev, Intersections of an ellipsoid and its caustics,
12. K. Veliyeva, S. Abdullayev, S.Bayramov, Mappings on neutrosophic topology on soft sets,
13. V.M. Mammadova, Z.A. Panahova, Compactness of weighted composition operatör, B. Mesablişvili, On the factorization problem of groups and monoids,

14. T. Goy, Some combinatorial identities for higher order Fibonacci numbers via the Toeplitz–Hessenberg ,

***Section – Computational Mathematics and  
Mathematical Modeling***

**HALL -IV**

**Wednesday, July 03, 2024**

**15:00-18:00**

***Chairmen: M. Aripov, H. Jafari***

1. H. Jafari, R.M. Ganji, S. Salati, A numerical scheme for solving variable order stochastic advection diffusion equations,
2. M. Aripov, M.M. Bobokandov, The Cauchy problem for a double nonlinear parabolic equation with a critical exponent,
3. M. Aripov, D. Nigmanova, Numerical modeling of diffusion processes in two-component nonlinear media with variable density and source,
4. O.V. Antonova, M.V. Ivanov, A.A. Mikhailov, V.A. Kuzmin, Application of mathematical modeling methods to describe the behavior of sandwich panels with a tetrahedral core,
5. M. Djabri, A. Gasri, The practice of finite element modeling in civil engineering structures ,
6. K. Castillo, A counterexample to a conjecture on semiclassical orthogonal polynomials,
7. Abdelmalek Zine, A high order finite volumes strategy for the solution of non-linear elasticity,
8. Gohar Ali, Generalized Sombor index of some well known families of graphs,
9. S. Jamal, Symmetry transformations of parabolic equations,
10. A.H. Tor, A.M. Bagirov, A comprehensive comparison in nonsmooth optimization methods, and their recent advances,



***Thursday, July 04, 2024***

**15:00-18:00**

***Chairmen: K. Aida-zade, Y. Efendiyev***

11. K.R. Aida-zade, A. Baghirov, About one class of nonlinear optimization problems large dimension,
12. Y. Efendiyev, Multicontinuum homogenization and multiscale finite element methods,
13. N. Temirgaliev, A look at Computer Science, Artificial intelligence and machine learning in the context of a range of results
14. A.G. Kuzmin, Numerical study of transonic flow in a channel at various back pressures,
15. A. Gasri, H. Yousf, Co-existence of 4 types of synchronization in 4-D hyperchaotic dynamical systems,
16. M.B. Rasulov, M.I. Ahmadov, Utilizing inverse matrices and determinants in analyzing the Zhegalkin polynomial,
17. M. Yousefikhoshbakht, A. Dolatnezhadsomarin, A combination of ant colony optimization and simulated annealing for solving the multiple traveling salesman problem,
18. Z.C. Zabidov, Kh.M. Gadirova, Assessment of physiological development stages of flowering of plants in the cultivated area using spectral analysis of images,
19. Z.C. Zabidov, Kh.M. Gadirova, A.I. Mirzebalayeva, Assessment of vegetation cover of territories using various indices.

***Section – Differential Equations and  
Optimal Control-1***

**HALL -II**

***Wednesday, July 03, 2024***

**15:00-18:00**

***Chairmen: V. Kalantarov, H.I. Aslanov***

1. V.K. Kalantarov, Stabilization of solutions to nonlinear parabolic and damped wave equations,

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2. H.I. Aslanov, On the boundedness of the resolvent of the operator generated by partial operator-differential expressions of higher order in Hilbert space,
3. N.M. Suleymanov, On an application of Wiman-Valiron type estimate,
4. Z.S. Aliyev, On a fourth-order spectral problem with indefinite weight
5. Sh.H.Bagyrov, Absence of global solutions to a system of high-order semilinear equations with a biharmonic operator in the main part,
6. N.R. Amanova, R.A. Amanov, Existence of strong solutions to second order semilinear elliptic systems,
7. E.M. Mamedov, On blow-up of solution for one nonlinear problem
8. J. Detemple, Y. Kitapbayev, Valuation of corporate securities with finite maturity debt: A probabilistic approach,
9. Y.M. Farhadova, Reduction of the systems of equations describing the dynamics of oscillations of a suspension bridge to the operator equation,
10. A.E. Fleydanli, Basis properties of eigenfunctions of a spectral problem all boundary conditions which contain the eigenvalue parameter,
11. N.S.Aliyeva, Some global results for nonlinearizable one dimensional Dirac systems.

***Thursday, July 04, 2024***  
**15:00-18:00**

***Chairmen: M. Sadybekov , T. Gasymov***

12. M. Sadybekov, A. Omarbaeva, Nonlocal initial-boundary hyperbolic problems. boundary conditions that do not allow direct use of the Fourier method,
13. D.A. Juraev, On approximate solutions of the Cauchy problem for elliptic systems of the first order,
14. T.B. Gasymov, B.Q. Akhmadli, On the strong solvability of a nonlocal boundary value problem for the Poisson's equation in a rectangular,
15. Mohammad Jahanshahi, Eisa Sefidi and Ali Khani, Special approximation method for solving system of ordinary differential equations,
16. M.T. Jenaliyev, A.S. Kassymbekova, K.B. Imanberdiyev, On one generalized spectral problem for perturbed bi-harmonic operator in cubic domain,

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17. M.M. Sabzaliyev, M.E. Kerimova, A boundary value problem in an infinite strip for a biharmonic equation degenerating into a single characteristic equation,
18. M.M. Sabzaliyev, I.M. Sabzaliyeva, A boundary value problem for higher order elliptic equation degenerating into a lower order elliptic equation,
19. M.M. Mammadova, Global bifurcation from infinity in nonlinearizable eigenvalue problems for some fourth-order ordinary differential equations,
20. V. Yu. Mastaliyev, On the existence and uniqueness of the solution to a mixed problem for one type of non-classical equations,
21. V. Yu. Mastaliyev, U.M. Iskandarova, Studying an eigen-value problem,
22. V.A. Mehrabov, Basis property of root functions of an eigenvalue problem describing bending vibrations of a beam at the ends of which load and inertial load are concentrated,
23. G.R. Gadjeva, Bessel's inequality and basis property for a Dirac type system  $2m \times 2m$ ,
24. E.M. Mustafayev, Conditions for equiconvergence of expansion in eigenfunctions of one Schrodinger operator with generalized potential,
25. H.Sh. Rzayeva, Nodal solutions of some nonlinear Dirac systems.

***Friday, July 05, 2024***  
***15:00-18:00***

***Chairmen: F. Mamedov, A. Guliyev***

26. F.I. Mamedov, Kh.A. Gasimova, V.A. Mamedova, Dirichlet problem for a non-uniformly elliptic equation with small terms,
27. A.F. Guliyev, Wiener-type criterion for the heat equation in terms of the parabolic potential and its corollaries,
28. Kh.R. Gojayeva, Uniform convergence of spectral expansion in eigenfunctions of a fourth-order differential operator,
29. J.K. Guliyev, U.H. Rzayev, Weak solvability of the Dirichlet problem of the completed form Gilbarg-Serrin equation,
30. U.V. Gurbanova, Global bifurcation from zero and infinity in nonlinear Sturm-Liouville problems with indefinite weight and spectral parameter in the boundary conditions,

31. Sh.M. Hasanova, Global bifurcation of positive and negative solutions from infinity of certain nonlinear elliptic problems with indefinite weight,
32. F.V. Mamedov, M.Q. Gahramanov, Cauchy problem for a class of hyperbolic equation with integral nonlinearity and dissipation.

**Section – *Differential Equations and  
Optimal Control-2***

**HALL- I**

***Wednesday, July 03, 2024  
15:00-18:00***

***Chairmen: H. Guliyev, E. Mahmudov***

33. E. N. Mahmudov, M. J. Mardanov, Optimal control of hyperbolic type differential inclusions,
34. M.J. Mardanov, T.K. Melikov, G.V. Hajieva, Some necessary conditions for an extremum in variational problems with delay,
35. M.J. Mardanov, Y.A. Sharifov, Studying the Goursat-Darboux problem with integral conditions,
36. G.F. Guliyev, T.M. Huseynova Optimal control problems for a system of second order hyperbolic equations,
37. H.F. Guliyev, H.T. Tagiev, An optimal control problem for a wave equation with the third nonlocal boundary condition,
38. Abdur Raheem, A study on controllability of second order neutral differential equations,
39. U.K. Koilyshov, Solution of a boundary value problem for the heat equation with discontinuous coefficient by Fourier method,
40. R.M.Zeynalov, N.A Aliyev, Obtaining necessary conditions for the non-local boundary condition problem for a Laplace equation,
41. Y. Mustafayeva, Regularization of necessary conditions of solvability of a boundary value problem for a three-dimensional elliptic equation with variable coefficients,
42. Sh.A. Muradova, Boundedness of parabolic fractional integral operators with rough kernels in parabolic local generalized Morrey spaces.

**Thursday, July 04, 2024**

**15:00-18:00**

**Chairmen: R. Ashurov, Z. Aliyev**

43. R.R. Ashurov, Inverse problems for the subdiffusion equation with fractional Caputo derivative,
44. A.Ya. Akhundov, N.C. Pashayev, Inverse problem for Burgers –type parabolic equation,
45. Y.T. Mehraliyev, E.I. Azizbayov, I.E. Chernin, On the classical solvability of a three-dimensional inverse hyperbolic problem with time-dependent coefficient,
46. A.A. Turemuratova, Inverse source problem for the diffusion equation on a metric star graph,
47. A.Sh. Habibova, C.E. Tagiyeva, On the approximate solution of one inverse problem,
48. A.H. Hasanova, Uniqueness and assessment stability of the solution to the inverse problem for a semilinear equation of parabolic type,
49. M.H. Jafarova, On the inverse boundary value problem for the beam equation with nonclassical boundary conditions,
50. Shiferaw Geremew Kebede, Assia Guezane Lakoud, Existence and stability of solution for time-delayed nonlinear fractional differential equations,
51. M. Dzh. Manafov, M.B. Tanriveren, On the uniqueness of inverse problems for 'Weighted' Sturm-Liouville operator with  $\delta$ -interaction,
52. B. Ogul, Analyzing dynamics and determining solutions for nonlinear twentyfourth order difference equations,
53. M. Ramazanov, N. Gulmanov, S. Kopbalina, Parabolic problem in a non-canonical domain degenerating to a point at the initial moment of time,
54. G.Kh. Shafieva, Nonexistence of global solutions of Cauchy problems for systems of semilinear Klein–Gordon equations,
55. M.G. Yergaliyev, M. Kassen, Direct and inverse problems for parabolic equations in degenerate domains,
56. Y. Mustafayeva, Regularization of necessary conditions of solvability of a boundary value problem for a three-dimensional elliptic equation with variable coefficients,
57. F.M. Namazov, Oscillation properties of solutions of some initial-boundary value problems,

58. R. Amirov, S. Durak, Inverse nodal problems for singular diffusion equation.

***Section – Functional Analysis and  
Theory of Operators***

**HALL -IV**

***Wednesday, July 03, 2024***

**15:00-18:00**

***Chairmen: E. Eyvazov, H. Huseynov***

1. E. Eyvazov, A. Aliyev, Self-adjointness of the Schrodinger operator with a spherically symmetric homogeneous potential,
2. H. Huseynov, J. Osmanly, On the solution of an equation with a spectral parameter in the discontinuity condition,
3. V. M. Kurbanov, A. I. Ismailova, On absolute and uniform convergence of spectral expansion in eigen-functions of Dirac operator,
4. L.I. Mammadova, I. Nabiev, On the solvability of the inverse spectral problem for Sturm-Liouville operator,
5. F. Aleskerov, T. Lomonosov, A. Shipitsyna, Modeling of multicell colony functioning under programmed cell death (Apoptosis),
6. E. Gasymov, Solving not-self-adjoint mixed problems with separable variables,
7. D. Mastaliyeva, Optimization of second order delay-differential inclusions,
8. S. Khaligova, Weighted inequality for fractional maximal operator in generalized Morrey spaces,
9. S. Kasumova, B-Riesz potential in the local complementary generalized B-Morrey spaces,
10. G.A. Agayeva, K.R. Rehimova, Application of multistep methods with the third derivative to solve initial-value problem for the ordinary differential equation of the second order,
11. E. Akhundova, On convergence of spectral expansion in the eigenfunctions of a third-order differential operator.

**Thursday, July 04, 2024**

**15:00-18:00**

**Chairmen: N. Bokayev, H. Mustafayev**

12. H. Mustafayev, Mean ergodic theorem for probability measures,
13. N.A. Bokayev, D.T Matin, A. Adilkhanov, On the compactness of commutators for the Riesz potential on local Morrey-type spaces,
14. L.N. Atamova, A.A. Huseynli, The regularized trace formula for a discontinuous Sturm-Liouville problem with a spectral parameter dependent jump condition,
15. C. Aykol, Commutators of Two-Weighted Phi-Admissible Singular Operators on Generalized Weighted Orlicz-Morrey Spaces,
16. R. Dzhahbarzadeh, About the common eigen vectors of two complete continuous operators in Hilbert space,
17. M. Dzhahbrailov, S.Z.Khaligova, On some embedding theorems in the space of vector-valued functions,
18. M. Adil Khan, On Jensen's Inequality with Applications,
19. D. Seyidov, J. Aliyev, Compactness criterion of the weighted endomorphism of the ball-algebra  $A(B_n)$ ,
20. R. Dzhahbarzadeh, K. Alimardanova, Eigenvalues of a complete continuous operators in Hilbert space,
21. E. Mammadov, Variational principle for a two-parameter spectral problem using a linear functional.

**Friday, July 05, 2024**

**15:00-18:00**

**Chairmen: M.T. Garayev, K. Tulenov**

22. M. Garayev, On some problems of operator theory in model spaces
23. K. Tulenov, Fourier multipliers on noncommutative Euclidean spaces,
24. E. Agyuz, On the Convergence properties of positive linear operators including special polynomials given by generating functions method,
25. Z. O. Azizova, J. Hasanov, Weighted adjoint fractional Hardy operators in local generalized Orlicz-Morrey spaces,

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26. H. Atre, Optimality and duality analysis for non-differentiable interval valued multiobjective optimization with fuzzy environment
27. T. Nurlybekuly, On Riesz type factorization for noncommutative Hardy spaces,
28. R. Dzhabarzadeh, A. Jabrailova, Spectral properties of completely continuous operators in separable Hilbert space,
29. S. Atalar, S. Yasemin Golbol, U. Deger, The Absolute Deferred Riesz Summability of Factored Infinite Series,
30. S. Atalar, S. Yasemin Golbol, U. Deger, On the Riesz submethod summability of factored infinite series,
31. Y. Aliyeva, Nodal solutions of some nonlinear boundary value problems for fourth-order ordinary differential equations,
32. S. Aliyev, E. Agayev, A new method of construction of a system of Chebyshev-Hermite polynomials based on the weighted function,
33. A. Safarova, K. Alimardanova, The direct scattering problem for general stationary systems on a semi-axis,
34. S.R. Sadigova, N. Nasibova, Fredholmness of the Dirichlet Problem for  $2m$ -th Order Elliptic Equations in Grand Sobolev Spaces,
35. N. Vahabov, Isoabelian operators II: characterization.

***Section – Functions Theory***

**HALL - V**

***Wednesday, July 03, 2024***

**15:00-18:00**

***Chairmen: R. Aliev, A. Aplakovi***

1. R. A. Aliev, A. F. Huseynli, On properties of the Riesz transform of Lebesgue integrable functions,
2. A. Aplakovi, Absolute convergence of the multiple series of Fourier-Haar coefficients,
3. B. Abdullaev, D. Qalandarova, An analogue of the Sadullaev-Dinev theorem for the class of  $m$ -convex functions,
4. R. Sharipov, M. Ismoilov,  $m$ -convex-polar sets,



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5. A. Asgarova, V. Ismailov, A. Huseynli, On the equioscillation theorem for approximation by sums of two algebras,
6. A. Najafov, A.Eroglu, On embedding theorems in small Besov spaces,
7. R. Savaş, Matrix Characterization of Asymptotically Deferred Equivalent Sequences,
8. I. Maharov, On the error of approximation by RBF neural networks with two hidden nodes,
9. B. Bhayo, On complete elliptic integrals and their applications in certain problems of structural mechanics.

***Thursday, July 04, 2024***

**15:00-18:00**

***Chairmen: V. Ismailov, T. Tunc***

10. T. Tunc, On Some Shape Preserving Properties of Bernstein Operators,
11. K. Bekmaganbetov, About Embedding of Nikol'skii-Besov Spaces with a Dominant Mixed Derivative and a Mixed Metric,
12. V. Misiuk, One Bernstein-type relation in rational approximation theory,
13. F. Abdullayev, On the Markoff inequality for algebraic polynomials in a weighted Lebesgue space in regions of complex plane,
14. A. Erdem, T. Tunc, On Some Semi-convergences with Applications on Korovkin-type Theorems,
15. R. Dmytryshyn V.A.Goran, On the analytic continuation of the Lauricella-Saran's Hypergeometric Function  $FK$ ,
16. S. Jafarov, Approximation by trigonometric polynomials in weighted grand Lorentz spaces,
17. D.M. Israfilov, A. Testici, Approximation Theorems in Weighted Morrey Spaces.

*Section – Harmonic and Non-Harmonic Analysis;*  
**HALL -VI**

*Wednesday, July 03, 2024*  
**15:00-18:00**

**Chairmen: V. Guliyev, B. Shoimkulov**

1. V.S. Guliyev, M. N.Omarova, Commutator of nonsingular integral operator on generalized weighted Orlicz-Morrey spaces,
2. B.A. Shoimkulov, B.J. Kutlimuratov, Holomorphic continuation of integrable functions defined on the boundary of the domain,
3. R.M.Rzaev, L.R. Aliyeva, Approximation of functions by singular integrals in the terms of higher order mean oscillation,
4. M.G. Hajibayov, R.Sh. Huseynzade, The Peano differentiability of Riesz potentials,
5. E.J. Ibrahimov, S.A. Jafarova, Characterization of G-Lipschitz spaces via commutators of the G-maximal function,
6. M.Zh. Turgumbayev, Z.R. Suleimenova, D.I. Tungushbaeva, On the weighted integrability of the sum of series with respect to the multiplicative.
7. M.I. Ismailov On the boundedness of a singular operator in grand spaces  $L_{p,v}(-\pi, \pi)$ ,
8. E. Mamedov, Y. Sezer, Some remark on laplace equation in grand Lebesgue-Hardy classes,
9. N.R. Ahmedzade, Z.A. Kasumov, The Weighted Grand Lebesgue class of harmonic functions and the Dirichlet problem,
10. V.G. Alili, A.A. Tagiyeva, General solution of homogeneous Riemann problem in Banach Hardy classes,
11. U. Ildiz, S.R. Sadigova, On basicity of some trigonometric system in banach function spaces,
12. A.N. Mammadova, A.E. Abdullayeva, The estimates of approximation by weighted modulus of continuity in Lebesgue spaces,

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13. M.A. Mukhambetzhan, G. Kenzhebekova, Weighted inequalities for Fourier series with respect to the multiplicative system with coefficients of bounded variation,
14. G. Aydin, Boundedness of Gegenbauer fractional maximal operator generalized Gegenbauer-Morrey spaces,
15. N.R. Rustamova Interpolation theorems in Besov-Morrey spaces with dominant mixed derivatives,
16. Y. Sezer, S. Azimi, The basis property of a trigonometric system in Morrey space.

***Section – Theory of Probability and Mathematical Statistics***

**HALL-VI**

***Thursday, July 04, 2024***

**15:00-18:00**

***Chairmen: A. Shamilov, S. Aliyev***

1. A.Shamilov, A.Nizamitdinov, Generalized entropy optimization distributions: a case study application,
2. S.A. Aliyev, I.A. Ibadova, On convergence of age-dependent branching process with emigration,
3. V.S. Khalilov, N.R. Amanova, On solvability of some quasilinear elliptic systems of higher order,
4. F.H. Rahimov, I.A. Ibadova, U.F. Mamedova, On the law of large numbers of the moments of the first intersection of the level by a random walk described by an autoregressive process with a random coefficient,
5. F.G. Rahimov, V.S. Khalilov, U.F. Mamedova, On the law of large numbers sums of the values of first-order autoregressive process with random coefficient (RCA(1)),

***Section – Mechanics***

**HALL- VIII**

***Wednesday, July 03, 2024***

**15:00-18:00 15:00-18:00**

***Chairmen: L. Talybly, E. Abbasov***

1. E. M. Abbasov, Hydrodynamics of the movement of an oil-water mixture in a pipe,
2. L.Kh. Talybly, A.G. Muradova, Viscoelastic stresses in a composite pipe,
3. J.G. Agalarov Waves in a cylindrical net,
4. G.G. Aliyev, Longitudinal - radial vibration of a thick-walled pipe with changing mass taking into account the influence of physical-chemical change of the material,
5. F. Loran, A. Mostafazadeh, On the existence of the fundamental transfer matrix in twodimensional potential scattering and the propagating-wave approximation,
6. E. M. Abbasov, N.A. Agayeva, G.R. Agayeva, T.S. Kengerli, Process of instantly discharge of liquid under high pressure in a horizontal straight pipeline,
7. E. M. Abbasov, S.A. Imamaliyev, Simulation the dynamics of fluid movement in a pipe taking into account mass transfer,
8. G.G.Abdullayeva, H.R.Nagızade, A systematic approach to monitoring medical errors in healthcare,
9. M.A. Mammadova, Torsional scattered destruction of an anisotropic hollow shaft,
10. H.A. Mammadova, On a universal function of corrosion strength of materials with the influence of mechanical stresses and the concentration diffusion of the diffusing substances,
11. Sh.A.Kerimova Displacement's time of fluid from the annular space into the central channel.

***Thursday, July 04, 2024***

**15:00-18:00**

***Chairmen: G. Panahov, N. Rassoulova***

12. G.M. Panahov, Eldar M. Abbasov, G.R. Agayeva, On periodic oscillations in the in-situ rheogaschemical reaction of gas formation,
13. N.B. Rassoulova, T.M. Mahmudzade, Effect of the features of the Earth's crust on wave processes during earthquake,
14. T.M. Shamiyev, R.A. Ismailova, A.S. Hummatova, Torsion of rectangular plate taking into account different modularity,
15. I. H. Mirzazadeh, Importance of monitoring of patients after CO poisoning,
16. A.O.Yuzbashiyeva, P.T. Museibli, I.J.Mammadov, Study of mass exchanges in gas formation in porous media,
17. N.M. Nagiyeva, On determining the fatigue loading cycle of the intermediate shaft of a ship shafting,
18. F.A. Seyfullayev Studying the movement of circular embedding in a linear viscous-elastic medium,
19. V.B. Rzayeva, Vibrations of a fluid-filled inhomogeneous spherical shell stiffened with inhomogeneous ribs in soil,
20. M.G. Isgandarov, M.I.Nusratzade, G. M.Hasanli, K.O.Azimova, Research and modeling of helicopter main rotor blade. Rectangular and curve blade,
21. E.A. Isayeva, New wave function and its new differential equation in quantum physics. The fuzzy logic and fuzzy sets theory of L. Zadeh.

***Section- History of Development of Mathematics and  
Mathematical Education; Astronomy***

**HALL -III**

***Thursday, July 04, 2024***

**15:00-18:00**

***Chairmen: G. Sinkevich, N. Abdullaeva***

1. G. I. Sinkevich, The history of Euler identity,
2. N.I. Abdullaeva, U.I. Murtazaeva, Conceptual features of discrete mathematics in the study of computer sciences,
3. S. Aliyev, A. Aliyeva, Using symmetry in solving problems with a parameter,
4. A.A. Babaev, V.F. Majlumbekova, On the influence of Tusi's works on European mathematical thought,
5. R.G. Babayeva, E.M. Mammadov, Some remarks on modal proposals in Tusi's treatise "Tajrid al-mantik",
6. M.S. Dzhabrailov, S.B. Karimova, The place of mathematical analysis in the preparation of mathematics teachers,
7. E.A. Gasymov, V.L. Hajizadeh, A method for reducing a higher order definite integral of the function,
8. E.A. Gasymov, U.Sh. Mehdiyeva, A methodology for studying the basic properties of an ellipse,
9. E.A. Gasymov, N.N. Shirinova, A methodology for applying geometry to geodesy problem,
10. Z.A. Kuzicheva, On the problems of justification of mathematics,
11. A.T. Omarova, T.S. Orudjov, Formation of students divergent thinking and divergent skills in the mathematics teaching process of grades V-IX,
12. F.S. Sarmasli, Sh.M. Aghazade, Application of Routh's theorem to high school problems,
13. L.A. Sheyxzamanova, Comments by N. Tusi on the work of Archimedes "On the sphere and the cylinder",

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14. D.K. Yakubzhanova, N.A. Ganieva, Mathematics as the basis for the development of artificial intelligence,
15. Z.M. Alishova, S.G. Aliev, V.M. Khalilov, Character of changes in hydrogen lines in the spectra magnetic – CP stars  $\epsilon$ UM a and  $\theta$ Aur,
16. M. Imashkyzy, The significance of Nasiraddin Tusi's works for the development of celestial mechanics and astronomy.

***CLOSING OF THE CONFERENCE  
HALL -I***

***Date: 05.07.2024, 18:00 -18:30***