

An International Workshop
«Spectral Theory and Its Applications»
dedicated to the 80th anniversary of
M. G. Gasymov

June 7-8, 2019
Institute of Mathematics and Mechanics,
Azerbaijan National Academy of Sciences



Institute of Mathematics and Mechanics
of Azerbaijan National Academy of Sciences



With the support of employees of the Department of Applied Mathematics of the Baku State University, the Department of General and Applied Mathematics of the Azerbaijan State Oil and Industry University and the Department of Mathematics of the Khazar University

PROGRAM

of an International Workshop dedicated to the 80th anniversary of an outstanding mathematician, academician
Mirabbas Gasymov

June 7-8, 2019

June 7, 2019

Beginning at 10:00

Assembly Hall of the Institute of Mathematics and Mechanics

10:00-10:10. Opening of conference:

Opening address – prof. M.J.Mardanov

10:10-10:40. *A.A.Shkalikov*. Multipliers in Sobolev spaces and their applications in the theory of differential operators

10:45-11:15. *S.S.Mirzoev*. On completeness of the root vectors of the fourth-order operator pencil corresponding to eigenvalues of the quarter-plane

Coffee break

Chairman: A.R.Aliev

11:30-12:00. *B.S.Mityagin*. Jordan blocks in spectral decompositions of Hill-Schroedinger operator

12:00-12:30. *Ya.T.Sultanaev*. The spectral properties of singular differential operators with oscillating coefficients (*with N.F.Valeev and E.A.Nazirova*)

12:30-13:00. *H.A.Isayev*. Quadratic forms and spectral theory of operators

Lunch

Chairman: V.K.Kalantarov

14:15-14:45. *M.A.Sadybekov.* Laplace operator with nonlocal Samarskii-Ionkin type boundary conditions in a disk (*with A.A.Dukenbayeva*)

14:45-15:15. *K.A.Mirzoev.* Asymptotics of solutions to differential equations with singular coefficients (*with N.N.Konechnaya*)

15:15-15:45. *V.K.Kalantarov.* Global existence and blow up of solutions to initial boundary value problem for nonlinear equations of thermoelasticity type

Coffee break

Beginning at 16:00

Assembly Hall of the Institute of Mathematics and Mechanics

Chairman: I.M.Nabiev

16:00-16:20. *A.M.Akhtyamov.* Finiteness of the spectrum of boundary value problems

16:20-16:40. *I.M.Nabiev.* On sufficient conditions for the solvability of the inverse problem for a differential operator

16:40-17:00. *E.S.Panakhov.* About inverse problem for the periodic Sturm-Liouville operator

Beginning at 16:00

Small Assembly Hall of the Institute of Mathematics and Mechanics

Chairman: Ag.Kh.Khanmamedov

16:00-16:20. *H.S.Mustafayev.* Convergence of iterates of operator representations

16:20-16:40. *Ag.Kh.Khanmamedov.* The asymptotic behavior of the spectrum of the perturbed Airy operator with Neumann boundary condition (*with S.M.Bagirova and N.F.Gafarova*)

16:40-17:00. *M.S.Shambassov.* One application of theory of correct restrictions to problem of minimization of rod deviation

Beginning at 16:00

Hall of the Department of "Functional Analysis"

Chairman: M.Dzh.Manafov

16:00-16:20. *Kh.R.Mamedov.* On a scattering problem for a discontinuous Sturm-Liouville problem

16:20-16:40. *M.Dzh.Manafov.* Inverse spectral and inverse nodal problems for Sturm-Liouville equations with point δ and δ' -interactions

16:40-17:00. *M.I.Ismailov.* Inverse scattering problem for a first order system on the half-line

Poster reports

Abdullayev V.M. Solution to a coefficient inverse problem for a system of linear ODE

Abdullayeva A.J. Construction of fundamental solution of middle boundary problem for one integro-differential equation of 3D Bianchi

Agayeva G.A. On a boundary value problem for operator-differential equation on finite segment

Ahmedov S.Z., Mehdiyev A.A. On the solution of a mixed problem for a fourth-order equation

Ahmedzade N.R., Kasumov Z.A. Solvability of the Dirichlet problem for the Laplace equation with boundary value from the Morrey space

Akhiev S.S. A priori estimate of solution for a class of hyperbolic equations system

Akhmedov A.M. Recurrent sequences and their applications

Akhmedov F.Sh., Akperova H.A. Integral representation of solution for a class of hyperbolic equations system

Akhundov A.Ya., Habibova A.Sh. The inverse problem for parabolic equation in a domain with moving boundary

Aliiev A.B., Isayeva S.E. Attractor for nonlinear transmission acoustic problem

Aliiev A.R., Rzayev R.S. On the theory of a class of fourth-order polynomial operator pencils

Aliiev B.A., Kerimov V.Z. Solvability of a boundary value problem for second order elliptic differential-operator equations with a complex parameter in the equation and in the boundary condition

Aliyev I.V. Isomorphism and coerciveness with a defect of the irregular boundary value problems of ordinary differential equations

Aliyev Z.S., Mamedova G.T. Spectral properties of a fourth order differential operator with a spectral parameter in three of the boundary conditions

Aliyeva L.R. Oscillatory integral operator on Lebesgue spaces with variable exponent

Al-jourany K.H. Applications of the affine systems of Walsh type to the construction of smooth basis

Amirov R.Kh. Inverse problems for the diffusion operators with impulse

Aslanov G.I. Completeness of the system of eigen and associated vectors of operators generated by partial operator-differential expressions in Hilbert space

Azizbayov E.I., Mehraliyev Y.T. On an inverse coefficient problem for a longitudinal wave propagation equation with non-self-adjoint boundary conditions

Bagirov Sh.H. Absence of a global solution of a semilinear parabolic equation with a biharmonic operator in the principal part

Bakhshaliyeva M.N. Formula for calculating the normal derivative double layer logarithmic potential

Bilalov B.T., Sadovnichaya I.V. On the Noetherness of the Riemann problem in weighted Smirnov classes

Eyvazly G.M. On unique solvability of a boundary value problem for a fourth order operator-differential equation in Hilbert space

Eyvazov E.H., Orucov H.D. On the semiclassical Laplacian with magnetic field having a quadratic zero set

Gadjiev T.S., Mammadova A.V. Regularity of solutions of classes nonlinear elliptic parabolic problems

Gasimov G.G., Aliyeva S.O. Coefficient-inverse problems on hydraulic networks

Gasymov E.A. Application of finite integral transformation method to solving mixed problems for hyperbolic equations with irregular boundary conditions

Gazilova A.T. Solvability of a class of boundary value problems for third-order differential operator equations

Guliyev A.F. Bounds for the fundamental solution of the heat equation in special domains

Guliyev H.F., Tagiev H.T. On the existence and uniqueness of the solution of a problem with a nonlocal condition for a hyperbolic type equations

Haqverdi T. On the basicity of system $\{\cos(n\theta)\}_{n \in \mathbb{N}_0}$ in grand Lebesgue spaces

Hasanov J.J., Gasymova D.G. Hardy-Littlewood-Stein-Weiss inequality in the generalized Morrey spaces

Hatamova R.F. On well-defined solvability of second order partial operator-differential equation in Hilbert space

Huseynov H.M., Nabadova N.A. Inverse scattering problem for operator Sturm-Liouville with discontinuity conditions

Iskenderov N.Sh., Allahverdiyeva S.I. An inverse boundary-value problem for the Boussinesq-Love equation with non-classical boundary condition

Ismailov M.I., Askerova M.O. On analogs of Riesz and Smirnov theorems in grand-Lebesgue space

Ismayilova K.E. Existence and uniqueness of solutions for the system of first-order nonlinear impulsive differential equations with three-point and integral boundary conditions

Kalmenov T.Sh., Kakharman N. Absence of a finite spectrum of regular boundary value problems for differential equations

Kerimov N.B., Abdullayeva K.F. Uniform convergence of the spectral expansions in the terms of root functions of a spectral problem for the equation of vibrating rod

Khalilov V.S., Bagirova G.A., Hashimova T.E. Central limit theorem for Markov random walk described by the autoregressive process of order one ($AR(1)$)

Kurbanov V.M., Gojayeva Kh.R. On equiconvergence rate of spectral expansion in eigen function of even order differential operator with trigonometric series

Mamedov E.M. On behavior of solution to fourth order nonlinear pseudohyperbolic equation with nonlinear boundary conditions

Mamedov I.G., Nagizadeh H.R. Geometrical middle problem in the non-classical treatment for one generalized Allier equation with non-smooth coefficients

Mammadov R.S., Gasimov S.Y. Finite approximation of solution of one Riccati-type boundary problem

Mammadov Yu.A., Ahmadov H.I. One mixed problem for the heat equation with time advance in the boundary conditions

Mammadova S.R. Application of the generalized dispatch method to the solution of the boundary-value problem for parabolic equation

Mardanov M.J., Melikov T.K., Malik S.T. Necessary conditions for extremum in calculus of variation for problems with higher derivatives

Musayev A. On classes of saturation of linear operators in spaces $L_p(-\infty, \infty)$ ($1 \leq p \leq 2$)

Nasibova N.P., Seyidova F.Sh. On the basicity of a perturbed system of exponents with a unit in Morrey-type spaces

Orudzhev E.G., Aliiev S.A. Spectral analysis of a fourth-order differential bundle with a triple characteristic root

Orujov A.D. Inverse problem for the quadratic pencil of differential operators with periodic coefficients

Otelbaev M. Uniform estimates of solutions of one class of equations in finite dimensional space

Quliyeva A.A., Jafarova S.I. Solvability of one Riemann boundary value problem in generalized weighted Lebesgue spaces

Rahimov F.H., Ibadova I.A., Farhadova A.D. Central limit theorem for perturbed Markov random walk described by the autoregressive process of order one ($AR(1)$)

Sabzaliev M.M. Asymptotics of the solution of a boundary value problem for a quasilinear parabolic equation with angular boundary layer

Sabzalieva I.M. On a boundary value problem for a bisingular perturbed quasilinear elliptic equation

Sadigova S.R., Guliyeva F.A. The general solution of non-homogeneous Riemann-Hilbert problem in the weighted Smirnov classes

Safarov Z.V. The boundedness generalized fractional integrals in the Morrey spaces, associated with the Bessel differential expansions

Salimov M.Y., Salimova A.A. Nonlocal boundary value problem for Davis linear equation

Salmanov V.F., Nurieva S.A. The basicity of the system of sines in the grand-Sobolev spaces

Salmanova Sh.Yu. On the existence of solution of the Dirichlet problem for semilinear elliptic equations

Segizbayeva R.U. Separability of the generalized Cauchy–Riemann system in space $L_2(E)$

Suleymanov N.M., Farajli D.E. On some applications of spectral asymptotics in Wiman-Valiron theory

Tashpulatov S.M. Five-electron systems in the Hubbard model. Third quartet state

Zamanova S.A., Sharifov Y.A. Existence of a saddlepoint in differential game

June 8, 2019

A trip to the city Gobustan

Beginning at 10:00
