INTERNATIONAL MATHEMATICAL FORUM VIII

PROGRAM

International Conference
"Order Analysis and Related Problems of Mathematical Modeling XIV"

3-8 July, 2017
Russia, Tsey Gorge

Vladikavkaz Scientific Centre
of the Russian Academy of Sciences

Southern Mathematical Institute – the Affiliate of Vladikavkaz
Scientific Centre of the Russian Academy of Sciences

North-Ossetian State University

Southern Federal University

PROGRAM

International Conference
"Order Analysis and Related Problems
of Mathematical Modeling XIV"[1]

July 3–8, 2017
Russia, Tsey Gorge

The Program Committee:

Abanin Alexander (Rostov-on-Don, Russia)
Andreucci Daniel (Rome, Italy)
Fang Xiaochun (Shanghai, China)
Korobeynik Yury (Rostov-on-Don, Russia)
Kutateladze Semen (Novosibirsk, Russia)
Moslehian Sal Moslehian (Mashhad, Iran)
Shabat Aleksey (Cherkessk, Russia)
Smirnov Smirnov Eugeny (Yaroslavl, Russia)
Paditz Ludwig (Dresden, Germany)
Weber Martin (Dresden, Germany)

The Organizing Committee:

Chairman: Kusraev Anatoly (Vladikavkaz, Russia)

Abaturova Vera (Vladikavkaz, Russia)
Vatulyan Alexander (Rostov-on-Don, Russia)
Vespri Vincenzo (Florence, Italy)
Emel'yanov Eduard (Ankara, Turkey)
Kamenetcky Evgeny (Vladikavkaz, Russia)
Kunduhova Al'bina (Vladikavkaz, Russia)
Kusraeva Zalina (Vladikavkaz, Russia)
Magaril-Il'yaev George (Moscow, Russia)
Malova Irina (Bryansk, Russia)
Revasova Ekaterina (Vladikavkaz, Russia)
Tedeev Anatoly (Vladikavkaz, Russia)
Sharapudinov Idris (Makhachkala, Russia)

Secretary: Tasoev Batradz (Vladikavkaz, Russia)

The program of the Conference includes plenary lectures
(45 minutes), contributed talks (20 minutes) and short
communications

SHEDULE

3 July (Monday)

9^{00} -9^{30} – Breakfast
10^{00} -10^{15} – Opening
10^{15} -13^{45} – Plenary session
14^{00} -15^{00} – Lunch
15^{30} -17^{40} – Contributed talks
19^{00} -20^{00} – Supper

4 July (Tuesday)

9^{00} -9^{30} – Breakfast
10^{00} -13^{30} – Plenary session
14^{00} -15^{00} – Lunch
15^{30} -18^{00} – Contributed talks
19^{00} -20^{00} – Supper

5 July (Wednesday)

9^{00} -9^{30} – Breakfast
10^{00} -13^{30} – Plenary session
14^{00} -15^{00} – Lunch
16^{00} -17^{00} – Concert
18^{00} -21^{00} – Banquet

6 July (Thursday)

9^{00} -9^{30} – Breakfast
10^{00} -13^{30} – Plenary session
14^{00} -15^{00} – Lunch
15^{30} -18^{00} – Contributed talks
19^{00} -20^{00} – Supper

7 July (Friday)

9^{00} -9^{30} – Breakfast
10^{00} -13^{30} – Plenary session
14^{00} -15^{00} – Lunch
15^{30} -18^{00} – Contributed talks
19^{00} -20^{00} – Supper

8 July (Saturday)

9^{00} -9^{30} – Breakfast
12^{00} – Closing

PLENARY SESSION

Place: Hotel "Victoria", conference room

July 3 (Monday)

10^{00}-10^{15} **Opening**

10^{15} -11^{00} *Abanin Alexander* (Rostov-on-Don, Russia)
"Invariant subspaces of the classical operators in weighted spaces of holomorphic functions"

11^{00} -11^{45} *Kusraev Anatoly* (Vladikavkaz, Russia),
Tasoev Batradz (Vladikavkaz, Russia)
"Representation of Quasi-Banach Lattices"

11^{45} -12^{15} **Break**

12^{15} -13^{00} *Tedeev Anatoly* (Vladikavkaz, Russia)
"Some qualitative properties of doubly degenerate parabolic equations with inhomogeneous density"

13^{00} -13^{45} *Gliklikh Yury* (Voronezh, Russia)
"Optimal solutions of equations and inclusions with mean derivatives"

July 4 (Tuesday)

10^{00} -10^{45} *Vatulyan Alexsander* (Rostov-on-Don, Russia),
Nesterov Sergey (Rostov-on-Don, Russia)
"Inhomogeneous materials with coatings: modelling and identification"

10^{45} -11^{30} *Anil Kumar Karn* (Bhubaneswar, India)
"Orthogonality in C*-algebras"

11^{30} -12^{00} **Break**

12^{00} -12^{45} *Sharapudinov Idris* (Makhachkala, Russia)
"Mean convergence of Fourier -Jacobi sums in variable exponent Lebesgue spaces "

12^{45} -13^{30} *Ilin Konstantin* (York, United Kingdom),
Morgulis Andrey (Rostov-on-Don, Russia)
"Nonlinear waves on the Couette-Taylor flow with through flow"

July 5 (Wednesday)

10^{00} -10^{45} **Pliev Marat** (Vladikavkaz, Russia)
"Order unbounded orthogonally additive operators in vector lattices"

10^{45} -11^{30} **Paditz Ludwig** (Dresden, Germany)
"Nonlinear and quasilinear regression with ClassPad-software, using the Marquardt-Levenberg algorithm"

11^{30} -12^{00} **Break**

12^{00} -12^{45} **Muravnik Andrey** (Voronezh, Russia)
"On positive solutions of quasilinear parabolic equations degenerating at infinity"

12^{45} -13^{30} **Nikonorov Yury** (Volgodonsk, Russia),
Nikonorova Yulia (Volgodonsk, Russia),
Chen Z. (Tianjin, China)
"On invariant Einstein metrics on Ledger-Obata spaces"

July 6 (Thursday)

10^{00} -10^{45} **Karapetyants Alexey** (Rostov-on-Don, Russia)
"On boundedness of Bergman projections in some new Banach spaces of analytic functions"

10^{45} -11^{30} **Sitnik Sergei** (Voronezh, Russia)
"Generalizations of Cauchy-Bunyakowsky inequalities with applications"

11^{30} -12^{00} **Break**

12^{00} -12^{45} **Klimentov Sergey** (Rostov-on-Don, Russia)
"Isomorphism of some integro-differential and singular operators"

12^{45} -13^{30} **Lapin Kiril** (Saransk, Russia)
"Lyapunov vector functions and Poisson boundedness of solutions"

July 7 (Friday)

10^{00} -10^{45} ***Koibaev Vladimir*** (Vladikavkaz, Russia)
"Elementary nets in linear groups"

10^{45} -11^{30} ***Kovalevsky Alexander*** (Ekaterinburg, Russia)
"Variation problems with point-wise functional constraints
in variable domains"

11^{30} -12^{00} **Break**

12^{00} -12^{45} ***Vagabov Abdulvagab*** (Makhachkala, Russia)
"Fourier series on root functions of a differential bunch
of the tenth order with fivefold characteristics"

12^{45} -13^{30} ***Levenshtam Valeriy*** (Rostov-on-Don, Russia)
"Recovery right part of the evolutionary equation
for the incomplete asymptotic his solution"

CONTRIBUTED TALKS I
"MATHEMATICAL ANALYSIS"

Chair: Prof. Abanin Alexander
Place: Hotel "Skazka", conference room 1

July 3 (Monday)

15^{30} -15^{50} *Kaplitskii Vitalii* (Rostov-on-Don, Russia)
"Estimates of the rate of decrease of the eigenfunctions of integral
operators in unbounded domains and their applications
in statistical mechanics"

15^{50} -16^{10} *Dronov Alecksey* (Rostov-on-Don, Russia)
"Interpolation of operators bounded on cones in the Banach
spaces of sequences"

16^{10} -16^{30} *Kusraeva Zalina* (Vladikavkaz, Russia)
"A factorization result and Grothendieck's inequality
for polynomials"

17^{00} -19^{00} *Excursion*

July 4 (Tuesday)

15^{30} -15^{50} *Akniyev Gasan* (Makhachkala, Russia)
"On the solution of first kind integral equations"

15^{50} -16^{10} *Sharapudinov Timur* (Makhachkala, Russia)
"Polynomials, orthogonal on Sobolev, derived
by the Chebyshev polynomials, orthogonal on the net"

16^{10} -16^{30} *Sharapudinov Timur* (Makhachkala, Russia)
"Approximative properties of repeated Vallee Poussin means
for piecewise smooth functions"

16^{30} -17^{00} **Break**

17^{00} -17^{20} *Shakh-Emirov Tadgidin* (Makhachkala, Russia)
"Some questions of approximation theory in Lebesgue spaces
with variable exponent"

17^{20} -17^{40} ***Magomed-Kasumov Magomedrasul*** (Makhachkala, Russia)
"Approximation of piecewise smooth functions by trigonometric
Fourier sums and Vallee-Poussin means"

17^{40} -18^{00} ***Sultanakhmedov Murad*** (Makhachkala, Russia)
"Approximation of functions by special Chebyshev wavelets
of second kind"

July 5 (Wednesday)

16^{00} -17^{00} ***Concert***
18^{00} -21^{00} ***Banquet***

July 6 (Thursday)

15^{30} -15^{50} ***Umarkhadzhiev Salaudin*** (Grosny, Russia)
"Hardy operators in grand Lebesgue spaces"

15^{50} -16^{10} ***Pasenchuk Alexandr*** (Rostov-on-Don, Russia)
"Custom partial multiplicative theory of two-dimensional
Toeplitz operators"

16^{10} -16^{30} ***Muratov Mustafa*** (Simferopol, Crimea),
Pashkova Yulia (Simferopol, Crimea),
Chilin Vladimir (Tashkent, Uzbekistan)
"Maximal commutative ∗-subalgebras of the algebra of locally
measurable operators"

16^{30} -17^{00} **Break**
17^{00}-17^{20} ***Abasov Nariman*** (Moscow, Russia)
"The Hewit-Yosidat theorem for majorized Urysohn operators"

17^{20}-17^{40} ***Ivanova Olga*** (Rostov-on-Don, Russia)
"On the convolution of analytic functionals"

17^{40}-18^{00} ***Elsaev Yakub*** (Grozny, Russia)
"Radon-Nikodym theorem for covariant matrix completely
positive map"

July 7 (Friday)

15^{30} -15^{50} ***Shubarin Mikhael*** (Rostov-on-Don, Russia)
"Remarks on bounded operators between interpolation spaces"

15^{50} -16^{10} ***Stukopin Vladimir*** (Rostov-on-Don, Russia)
"Asymptotic of eigenvalues of large Toeplitz matrices"

16^{10} -16^{30} ***Beshtokova Zaryana*** (Nalchik, Russia)
"A priori estimate for solution for a degenerating differential equation of parabolic type with Riemann-Liouville fractional derivatives"

16^{30} -17^{00} **Break**

17^{00}-17^{20} ***Andreeva Tatiana*** (Rostov-on-Don, Russia)
"The surjectivity criterion for convolution operators on the weighted spaces of analytic functions in bounded convex domains"

17^{20}-17^{40} ***Burchaev Haydar*** (Rostov-on-Don, Russia),
Ryabikh Vladimir (Rostov-on-Don, Russia),
Ryabikh Galina (Rostov-on-Don, Russia)
"Integro-differential properties of integrable analytic functions"

17^{40}-18^{00} ***Kalinichenko Alla*** (Vladikavkaz, Russia)
"Modular sesquilinear mappings and the generalized Stinespring representation"

CONTRIBUTED TALKS II
"DIFFERENTIAL AND INTEGRAL EQUATIONS"

Chair: Prof. Tedeev Anatoly
Place: Hotel "Skazka", conference room 2

July 3 (Monday)

15^{30} -15^{50} **Askhabov Sultan** (Grosny, Russia)
"Criterion of positivity for convolution integro-differential operator and its applications"

15^{50} -16^{10} **Burkin Igor** (Tula, Russia)
"Analytical-numerical methods of finding hidden attractors in multidimensional dynamical systems"

16^{10} -16^{30} **Umarov Khasan** (Grosny, Russia)
"Cauchy problem for the longitudinal fluctuations of a nonlinear and elastic core of infinite length equation"

16^{30} -17^{00} **Break**

17^{00} -17^{20} **Remizov Ivan** (Nizhny Novgorod, Russia)
"Calculus of Chernoff functions and Cauchy problem for evolution equations"

17^{20} -17^{40} **Chernysh Aleksey** (Rostov-on-Don, Russia)
"Asymptotics of the spectrum of a stationary flow of a viscous incompressible fluid for large Reynolds numbers in a spherical layer with a rotating outer sphere"

July 4 (Tuesday)

15^{30} -15^{50} **Popov Vladimir** (Moscow, Russia)
"Generalization of a notion of completeness for Riemannian analytic manifolds"

15^{50} -16^{10} **Polyakov Dmitry** (Vladikavkaz, Russia)
"On asymptotics of eigenvalues for even order differential operator"

16^{10} -16^{30} **Kozhevnikova Larisa** (Sterlitamak, Russia)
"About entropy solutions of anisotropic elliptic equations with variable exponent"

17^{00} -19^{00} **Excursion**

July 5 (Wednesday)

16^{00} -17^{00} *Concert*

18^{00} -21^{00} *Banquet*

July 6 (Thursday)

15^{30} -15^{50} ***Klimentov Dmitry*** (Rostov-on-Don, Russia)
"About calculation of curvature of a surface of a limited variation through characteristics of Wiener processes"

15^{50} -16^{10} ***Tsopanov Igor*** (Vladikavkaz, Russia)
"Traces formulas for a certain boundary value problems"

16^{10} -16^{30} ***Balashova Galina*** (Moscow, Russia)
"On solvability of the Dirichlet problem for differential equations of infinite order"

16^{30} -17^{00} **Break**

17^{00} -17^{20} ***Bazzaev Alexander*** (Vladikavkaz, Russia)
"Numerical methods for solving fractional differential equations"

17^{20} -17^{40} ***Muzaev Illarion*** (Vladikavkaz, Russia),
Muzaev Nugzar (Vladikavkaz, Russia)
"Formulation and solution of initial-boundary value problems modeling the selective intake process in a stratified reservoir"

July 7 (Friday)

15^{30} -15^{50} ***Shishkina Elina*** (Voronezh, Russia)
"Generalized Euler-Poisson-Darboux equation"

15^{50} -16^{10} ***Khybezhty Shalva*** (Vladikavkaz, Russia)
"An approximate solution of singular integral equations using Chebyshev series"

16^{10} -16^{30} ***Durdiev Durdimurod*** (Bukhara, Uzbekistan)
"Solvability of a memory recovering of a medium in the hyperbolic equation of the second order with variable coefficients"

16^{30} -17^{00} **Break**

17^{00} -17^{20} ***Boykov Ilya*** (Penza, Russia)
"Approximate methods for solution of hypersingular integral equations"

17^{20} -17^{40} ***Baranovskii Evgenii*** (Voronezh, Russia)
"On the solvability of a version of the FENE-P model of polymeric flows"

CONTRIBUTED TALKS III
"MATHEMATICAL MODELING"

Chair: Prof. Vatulyan Alexander
Place: Hotel "Victoria", conference room

July 3 (Monday)

15^{30} -15^{50} **Revina Svetlana** (Rostov-on-Don, Russia)
"On the stability problem of two-dimensional viscous flows"

15^{50} -16^{10} **Dudarev Vladimir** (Rostov-on-Don, Russia),
Mnukhin Roman (Rostov-on-Don, Russia)
"On vibration of functionally graded piezoelectric bodies
with residual stress"

16^{10} -16^{30} **Getman Veronika** (Rostov-on-Don, Russia)
"Quasistationary spiral modes in a blood vessel"

16^{30} -17^{00} **Break**

17^{00} -17^{20} **Alpeeva Lyubov** (Rostov-on-Don, Russia)
"Development of a sound ray tracing method using a voxel
traversal algorithm"

17^{20} -17^{40} **Lysenko Sergey** (Rostov-on-Don, Russia)
"About the conditions of Turing instability for the Schnakenberg
system"

July 4 (Tuesday)

15^{30} -15^{50} **Basaeva Elena** (Vladikavkaz, Russia),
Kamenetsky Eugeny (Vladikavkaz, Russia),
Khosaeva Zarina (Vladikavkaz, Russia)
"On the effect of delay accounting on tension"

15^{50} -16^{10} **Volik Mariya** (Vladikavkaz, Russia)
"Research of influence of street length and height of the buildings
on the air movement in three-dimensional elements of urban
development"

16^{10} -16^{30} **Radionoff Anatoly** (Vladikavkaz, Russia)
"On small fluctuations of the feeding system of a volcano"

16^{30} -17^{00} **Break**

17^{00} -17^{20} *Kamenetsky Eugeny* (Vladikavkaz, Russia)
"Modeling the influence of counter-elite on interaction
of Authorities and workers"

17^{20} -17^{40} *Nartikoev Atsamaz* (Vladikavkaz, Russia)
"The use of imitating modeling to analyze the effectiveness
of queuing systems"

July 5 (Wednesday)

16^{00} -17^{00} *Concert*

18^{00} -21^{00} *Banquet*

July 6 (Thursday)

15^{30} -15^{50} *Nasedkina Anna* (Rostov-on-Don, Russia)
"Homogenization models of mixture composites with border
properties in interphase zones"

15^{50} -16^{10} *Kazarnikov Alexey* (Rostov-on-Don, Russia)
"Numerical and analytical study of bifurcations in Rayleigh
reaction-diffusion system"

16^{10} -16^{30} *Muzaev Illarion* (Vladikavkaz, Russia)
"Mathematical modeling of elastic oscillation percussion
instrument"

17^{00} -19^{00} *Excursion*

July 7 (Friday)

15^{30} -15^{50} *Volik Mariya* (Vladikavkaz, Russia)
"Investigation of impact the street length to distribution
of gaseous pollutants within it"

15^{50} -16^{10} *Orlova Natalya* (Vladikavkaz, Russia)
"Vibrofluidized layer structure depending on its initial
thickness"

16^{10} -16^{30} *Orlova Natalya* (Vladikavkaz, Russia),
Minasyan David (Vladikavkaz, Russia)
"Comparison of different approaches for rockfall modeling"

16^{30} -17^{00} **Break**

17^{00} -17^{20} ***Perevaryukha Andrey*** (St. Petersburg, Russia)
"Modeling of a competitively induced deviation in the rate of development of organisms"

17^{20} -17^{40} ***Fedyaev Yuriy*** (Oryol, Russia)
"Mathematical simulation of the evolution of a fluid-fluid interface in an anisotropic layer of a porous medium"

CONTRIBUTED TALKS IV
"MORDEN PROBLEMS OF MATHEMATICAL EDUCATION"

Chair: Prof. Malova Irina
Place: Hotel "Skazka", conference room 3

July 3 (Monday)

15^{30} -15^{50} *Makarenko Mariya* (Vladikavkaz, Russia)
"Analysis of tasks and decisions challange international mathematical modeling"

15^{50} -16^{10} *Gutnova Dzerassa* (Vladikavkaz, Russia)
"Interactive teaching methods in math class"

16^{10} -16^{30} *Harkiladze Georgy* (Vladikavkaz, Russia)
"Inverse problems in mathematical physics"

16^{30} -17^{00} **Break**

17^{00} -17^{20} *Mokrushin Aleksey* (Kaluga, Russia)
"Current state of the problem of forming student's interest to mathematics"

17^{20} -17^{40} *Pustovalova Olga* (Rostov-on-Don, Russia)
"Numerical simulation of the bending deformations of inhomogeneous beam"

July 4 (Tuesday)

15^{30} -15^{50} *Dyatlov Vladimir* (Novosibirsk, Russia)
"Reformulations in solving problems with parameters"

15^{50} -16^{10} *Abaturova Vera* (Vladikavkaz, Russia)
"Modern mathematical achievements' adaptation to mathematical aducation in school"

16^{10} -16^{30} *Nalbandyan Yuliya* (Rostov-on-Don, Russia)
"Mathematical education in Rostov-on-Don (1917-2017)"

16^{30} -17^{00} **Break**

17^{00} -17^{20} *Alborova Victoria* (Vladikavkaz, Russia)
"Practically oriented approach in teaching students informatics"

17^{20} -17^{40} ***Kryukov Dmitry*** (Rostov-on-Don, Russia),
               Ryabikh Galina (Rostov-on-Don, Russia),
               Frolova Natalya (Rostov-on-Don, Russia)
               "Espessially training of people with disabilities"

July 5 (Wednesday)

16^{00} -18^{00} ***Concert***

19^{30} -21^{00} ***Banquet***

July 6 (Thursday)

15^{30} -15^{50} ***Tavasiev Batraz*** (Vladikavkaz, Russia)
               "Features of the mathematical training of specialists of business informatics"

15^{50} -16^{10} ***Malova Irina*** (Bryansk, Russia)
               "Methodical reflation learning math"

16^{10} -16^{30} ***Lobanova Natalia*** (Zelenokumsk, Russia)
               "Differential equations with a support system of an additional education in the geometrical meaning of the derivative"

16^{30} -17^{00} **Break**

17^{00} -17^{20} ***Begieva Tamara*** (Vladikavkaz, Russia)
               "Method of rationalization: an indicative framework for action"

17^{20} -17^{40} ***Ohvat Lyubov*** (Vladikavkaz, Russia)
               "Problems with parameters as means of formation of skills double subject"

July 7 (Friday)

15^{30} -15^{50} ***Karaeva Genni*** (Vladikavkaz, Russia)
               "The solution of tasks with economic contents"

15^{50} -16^{10} ***Smirnov Eugeny*** (Yaroslavl, Russia)
               "The technology of mathematics teaching with synergistic effects by using ICT"

16^{10} -16^{30} ***Testov Vladimir*** (Vologda, Russia)
               "Synergy ordinal and algebraic structures in the preparation of teachers of mathematics"

17^{00} -19^{00} ***Excursion***

MATHEMATICAL SCHOOL
FOR YOUNG SCIENTISTS -2017

July 3 (Monday)

10^{00} -10^{15} Opening

10^{15} -13^{45} Plenary session of the Conference

15^{30} -17^{40} Contributed talks of the Conference

July 4 (Tuesday)

10^{00} -13^{30} Plenary session of the Conference

15^{00} -17^{45}   *Mathematical school for young scientists-2017:*

15^{00} -15^{45} *Kusraev Anatoly* (Vladikavkaz, Russia)
"About continuum problem"

15^{50} -16^{35} *Abanin Alexander* (Rostov-on-Don, Russia)
"Duality theory"

16^{35} -17^{00} *Break*

17^{00} -17^{45} *Dyatlov Vladimir* (Novosibirsk, Russia)
"On training materials structure"

July 5 (Wednesday)

10^{00} -13^{30} Plenary session of the Conference

16^{00} -17^{00} *Concert*

18^{00} -21^{00} *Banquet*

July 6 (Thursday)

10^{00} -13^{30} Plenary session of the Conference

15^{00} -17^{45}   *Mathematical school for young scientists-2017:*

15^{00} -15^{45} *Vatulyan Alexsander* (Rostov-on-Don, Russia)
"Introduction to the theory of the inverce problems"

15^{50} -16^{35} ***Malova Irina*** (Bryansk, Russia)
"Some methods of realization of modern bases
training in mathematics in higher education institution"

16^{35} -17^{00} ***Break***

17^{00} -17^{45} ***Abaturova Vera*** (Vladikavkaz, Russia)
"Higher education's young teacher's scientific and methodical competence"

July 7 (Friday)

10^{00} -13^{30} Plenary session of the Conference

15^{00} -17^{45}   ***Mathematical school for young scientists-2017:***

15^{00} -15^{45} ***Tedeev Anatoly*** (Vladikavkaz, Russia)
"The role of Faber-Kran type inequalities in qualitative researches of the differential equations" (1 lecture)

15^{50} -16^{35} ***Tedeev Anatoly*** (Vladikavkaz, Russia)
"The role of Faber-Kran type inequalities in qualitative researches of the differential equations" (2 lecture)

16^{35} -17^{00} ***Break***

17^{00} -17^{45} ***Tedeev Anatoly*** (Vladikavkaz, Russia)
"The role of Faber-Kran type inequalities in qualitative researches of the differential equations" (3 lecture)

Notes