

# Second International Conference on Analysis and Applied Mathematics

# ICAAM 2014

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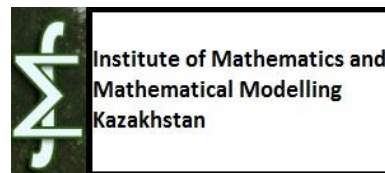
## CONFERENCE PROGRAM

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M. Auezov South Kazakhstan State University, Kazakhstan

Fatih University & Gumushane University,  
Turkey



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Shymkent, Kazakhstan  
September 11-13, 2014

### Honorary Chairs:

Zhumahan Myrkhalykov, Rector of M. Auezov South Kazakhstan State University  
Şerif Ali Tekalan, Rector of Fatih University, Turkey  
İhsan Günaydın, Rector of Gumushane University, Turkey  
Vladimir Aleksandrovich Il'in, Lomonosov Moscow State University, Russia

### Chairs:

Allaberen Ashyralyev, Fatih University, Turkey & ITTU, Turkmenistan  
Abdizhahan Sarsenbi, M. Auezov South Kazakhstan State University

### Co-chairs:

Ordabay Sembyev, M. Auezov South Kazakhstan State University  
Abdullah Said Erdogan, Fatih University, Turkey  
Zafer Cakir, Gumushane University, Turkey

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Thursday, September 11, 2014

OPENING OF THE CONFERENCE AND PLENARY SESSIONS

Tauke Khan avenue, 5 (Assembly Hall)

11.00-14.00	<b>REGISTRATION</b>
14.00-14.30	<b>OPENING CEREMONY</b>
	Opening speech of M. Auezov SKSU Rector, Prof., Member-correspondent of NAS RK <b>MYRKHALYKOV Zhumakhan Ushkempirovich</b>
	Welcome speeches of the conference guests
<b>PLENARY SESSIONS</b>	
	CHAIR: Prof. <b>Allaberen Ashyralyev</b>
14.30-15.15	Prof. <b>Mohammad Mursaleen</b> , Department of Mathematics, Aligarh Muslim University, Aligarh, <b>India</b> <i>On some applications of measures of noncompactness</i>
15.15-16.00	Prof. <b>Tynysbek Sh. Kalmenov</b> , Director of Institute of Mathematics and Mathematical Modeling, Academician of National Academy Sciences of Kazakhstan, Almaty, <b>Kazakhstan</b> <i>Solvability of the Navier-Stokes equations in the weighted space</i>
16.00-16.20	Coffee break (Third floor, Hall of Room 340)

**MAIN SESSIONS**

(The duration of the talk and discussion is 20 min)

	Room 340	Room 342	Room 341	Room 339
	<b>ANALYSIS</b>	<b>APPLIED MATHEMATICS</b>	<b>MATHEMATICAL MODELING OF TECHNOLOGICAL PROCESSES</b>	<b>MATHEMATICS TEACHER EDUCATION</b>
	CHAIRS: Prof. Feyzi Başar, Prof. Eberhard Malkowsky	CHAIRS: Prof. Prof. Kordan Ospanov Prof. Charyyar Ashyralyyev	CHAIRS: Prof. Bahtiyar Ismailov, Prof. Tulegen Amanbayev, Prof. Norman Mariun	CHAIRS: Prof. Dossymkhan Rakhymbek, Prof. Yasar Akkan
<b>Time</b>				
16.20	<b>Feyzi Başar</b> <i>Domain of the composition of some triangles in the space of <math>p</math>-summable sequences</i>	<b>Mukhtarbay Otelbaev</b> , Kordan N. Ospanov <i>Differentiable solutions of the second order elliptic equation</i>	<b>Norman Mariun</b> <i>Mathematical Modelling of a five stage <math>n^2 + n</math> voltage multiplier's output in the time-domain</i>	<b>Dossymkhan Rakhymbek</b> , Anarbay Yunusov, Anipa Madenova <i>Methodological foundations of teaching methods of mathematics</i>

16.40	<b>Lale Cona</b> <i>Weyl numbers of diagonal matrices</i>	<b>Muvasharkhan Jenaliyev</b> , Kanzharbek Imanberdiyev, Karakoz Aimenova <i>Ill-posed problem for the biharmonic equation</i>	<b>Elif Ozturk</b> , Esra Demirel <i>A modelling of thermal source's efficiency via data envelopment analysis</i>	<b>Yasar Akkan</b> <i>Mathematics in the eyes of academics and students of engineering faculty</i>
17.00	<b>Gabdolla Akishev</b> <i>The estimates of widths of classes in the Lorentz space</i>	Makhmud Sadybekov, <b>Batirkhan Turmetov</b> , Moldir Muratbekova <i>On solvability of some nonlocal boundary value problems with the Hadamard boundary operator</i>	Jangerey Ashigaliyev, <b>Ordabay Sembiyev</b> , Tamara Zhukabayeva <i>Mathematical transformations of Erlang formula</i>	<b>Raina Bekmoldaeva</b> , Peruza Duisebayeva, Yeldar Ussenov <i>Enhancing ideological and humanistic orientation in teaching mathematics</i>
17.20	<b>Hulya Acar</b> <i>Loewner evolution and stochastic differential equations</i>	Dulat Dzhumabaev, <b>Elmira Bakirova</b> <i>Solvability of the nonlinear boundary value problem for Fredholm integro-differential equation with impulse effect</i>	<b>Bahtiyar Ismailov</b> , Khayrulla Ismailov, Aijan Urmatova <i>Modeling and calculation of the trajectory of droplets in a multistage channel mass-transfer apparatus</i>	Alpys Papyshv, <b>Bayan Myrzachmetova</b> , Elvira Adilbekova, Zhazira Alibekova <i>Task solving: An effective form of students' mathematical knowledge forming</i>
17.40	<b>Feyzi Başar</b> <i>On line and double integrals in the non-Newtonian sense</i>	<b>Ali Ugur Sazaklioglu</b> <i>A note on the stability of a time-dependent source identification problem</i>	<b>Isabek Orazov</b> , Anar Makhatova <i>An inverse problem of mathematical modeling of the extraction process of polydisperse porous materials</i>	Emmen Kosherov, <b>Laura Iskakova</b> <i>The key teaching issues on mathematics and physics integration</i>

Friday, September 12, 2014

### PLENARY SESSIONS

	CHAIR: Prof. <b>Mohammad Mursaleen</b>
09.30-10.15	Prof. <b>Jozef Banas</b> , Institute of Mathematics, Faculty of Mathematics and Applied Physics, Rzeszyw University of Technology, <b>Poland</b> <i>On an approach to the theory of some nonlinear integral equations</i>
10.15-11.00	Prof. <b>Leonid Kritskov</b> , Lomonosov Moscow State University, <b>Russia</b> <i>Spectral analysis of differential operators using V.A.Il'in's approach</i>
11.00-11.20	<b>Coffee break (Third floor, Hall of Room 340)</b>

**MAIN SESSIONS, Friday, September 12**

	<b>Room 340</b>	<b>Room 342</b>	<b>Room 341</b>	<b>Room 339</b>
	<b>ANALYSIS 1</b>	<b>APPLIED MATHEMATICS 1</b>	<b>ANALYSIS 2</b>	<b>APPLIED MATHEMATICS 2</b>
<b>Time</b>	CHAIRS: Prof. Metin Basasir, Prof. Danial Israfilov	CHAIRS: Prof. Dogan Kaya, Prof. Anar Asanova	CHAIRS: Prof. Mussakan Muratbekov, Prof. Anvarjon Ahmedov	CHAIRS: Prof. Batyrhan Turmetov, Prof. Zafer Cakir, Prof. Abdullah Said Erdogan
<b>11.20</b>	<b>Feyzi Başar</b> <i>Some geometric properties of the domain of the double band matrix defined by Fibonacci numbers in the sequence space <math>\ell(p)</math></i>	Meiramkul Amangaliyeva, <b>Muvasharkhan Jenaliyev</b> , Kanzharbek Imanberdiyev, Murat Ramazanov <i>On a stability of a solution of the loaded heat equation</i>	<b>Meiram Akhymbek</b> , Makhmud Sadybekov <i>Spectral properties of some non strongly regular boundary value problems for fourth order differential operators</i>	Charyyar Ashyralyyev, <b>Zafer Cakir</b> <i>Approximate solution of the two-dimensional singular integral equation</i>
<b>11.40</b>	<b>Cevdet Akal</b> <i>Mean value multipoint multivariate Pade approximations</i>	<b>Abdullah Said Erdogan</b> <i>On a first order partial differential equation with the nonlocal boundary condition</i>	<b>Bazarkan N. Biyarov</b> , Madi Raikhan <i>Nonselfadjoint correct restrictions and extensions with real spectrum</i>	<b>Mahmut Modanli</b> <i>On the numerical solution of a telegraph equation by difference schemes</i>
<b>12.00</b>	<b>Nurgali Ashirbayev</b> , Jozef Banas <i>On an approach to the theory of some nonlinear integral equations</i>	<b>Necmettin Aggez</b> <i>On the nonlocal boundary value problem for semilinear hyperbolic equation</i>	<b>Anvarjon Ahmedov</b> , Abdizhahan Sarsenbi <i>Spectral decompositions related to the polyharmonic operators</i>	<b>Elif Ozturk</b> , Esra Demirel <i>A note on the numerical solution of the semilinear elliptic equation</i>
<b>12.20</b>	<b>Metin Basarir</b> <i>A new three-step iteration for generalized nonexpansive mappings in a <math>CAT(0)</math> space</i>	Makhmud Sadybekov, <b>Nurgissa Yesirkegenov</b> <i>A criterion for the strong solvability of the Neumann-Tricomi problem for the Lavrent'ev- Bitsadze equation in <math>L_p</math></i>	<b>Anvarjon Ahmedov</b> , Nur Amalina Jamaludin <i>Conditions for uniform convergence of expansions of continuous functions from Nikolskii classes in eigenfunction expansions of the Schrodinger operator</i>	<b>Nurdane Kale</b> <i>Finite difference method of fractional parabolic partial differential equations with variable coefficients</i>
<b>12.40</b>	<b>Murat Candan</b> <i>Paranormed sequence space of non-absolute type founded using generalized difference matrix</i>		<b>Mussakan Muratbekov</b> , Bilibay Musilimov, Ainash Sulimbekova <i>On spectral properties of a class of differential equations with operator coefficients</i>	<b>Ozgun Yildirim</b> <i>On fourth order of accuracy stable difference scheme for multipoint NBVP of the hyperbolic type</i>
<b>13.00-14.00</b>	<b>Lunch</b>			

POSTER PRESENTATIONS, Friday, September 12

14.00-14.40 Third floor, Hall of Room 340

1	Skanderbek Joldasbekov , Bakhtugirei Sinchev, Assylbek Jomartov, <i>Definition of number of the valid roots of the polynom</i>
2	Maksat Ahmetzhanov, Muvasharkhan Jenaliyev, <i>On the controllability of the multidimensional phase system</i>
3	Bulat-Batyr Sauhymovich Yesmagambetov, Zhambyl Talhauly Ajmenov, Alexander Mikhailovich Inkov, <i>Definition of characteristics of output streams of the random data in radio telemetering systems with compression</i>
4	Tynysbek Kalmenov, Durvudkhan Suragan, <i>On spectral zeta functions for a non-local boundary value problem of the Laplacian</i>
6	Mirsaid Aripov, Zafar Rakhmonov, <i>The Cauchy problem for a doubly nonlinear parabolic equation with inhomogeneous density and sources</i>
7	Sabyrkul Seitova, <i>Technology of neurolinguistic programming in mathematics teaching</i>
8	Gulsara Berikhanova, <i>Ways of improving the modernization of education in Kazakhstan and problems of specialized education</i>
9	Assylzat A. Kopzhassarova, Dossymkhan Rakhymbek, <i>Scientifically-metodical system of extensive training of the discipline "Elements of the spectral theory of operators" for future teachers of mathematics</i>
10	Saulebek Mahashev, Gabdolla Akishev, <i>On estimates of M-term approximations of classes in a symmetric space</i>
11	Allaberen Ashyralyev, Sema Akturk, <i>Fractional spaces generated by the positive differential operator in the half-line and their applications</i>
12	Abdizhahan Sarsenbi, Abdisalam Sarsenbi, <i>The third-order polynomial bundle and eigenfunctions</i>
13	Amir Shaldanbaev, Assylzat Kopzhassarova, Aigul Imanbaeba, <i>Periodic problem for first-order equations with deviating argument</i>
14	Amir Shaldanbaev, Salima Shalenova, <i>About the strong solvability of mixed problems for first order equations with deviating argument</i>
15	Allaberen Ashyralyev and Sinem Nur Simsek, <i>Nonlocal boundary value problems for a third order partial differential equation</i>
16	Allaberen Ashyralyev, Merdan Artykov and Zafer Cakir, <i>A note on fractional parabolic differential and difference equations</i>
17	Allaberen Ashyralyev, Okan Gercek, Emel Zusi, <i>Well-posedness of difference scheme for elliptic-parabolic equations Holder spaces without a weight</i>
18	Allaberen Ashyralyev and Rishad Shahmurov, <i>High-accurate difference schemes for the differential equation of <math>2n</math>-th order</i>
19	Allaberen Ashyralyev and Rishad Shahmurov, <i>High-accurate difference schemes for the differential equation of <math>2n</math>-th order</i>
20	Tulegen Amanbayev, Gamidulla Tilleuov, Beles Mameshov, Akbope Beisebaeva, <i>Computing analysis of one-dimensional flotation process</i>
21	Bahtiyar Ismailov, Khayrulla Ismailov, Saule Meldebekova, Yulduz Nametova, <i>A method for solving equations of the turbulent atmospheric diffusion</i>
22	Raina Bekmoldayeva, Peruza Duisebayeva, Aygul Polatbek, Anipa Madenova, <i>History of the formation of profile training mathematics in Kazakhstan and prospects of development</i>
23	Alpys Papyshv, Kenesh Abdilda, Nazira Aytbaeva, <i>Educational task - generalized aim of education activity</i>
24	Askarbek Imanchiev, <i>Parameterization method for the second-order nonlinear three-point boundary value problem</i>
25	Charyyar Ashyralyev and Zafer Cakir, <i>Note on small singular values of sequences of matrices</i>

**MAIN SESSIONS, Friday, September 12**

	<b>Room 340</b>	<b>Room 342</b>	<b>Room 341</b>	<b>Room 339</b>
	<b>ANALYSIS 1</b>	<b>APPLIED MATHEMATICS 1</b>	<b>ANALYSIS 2</b>	<b>APPLIED MATHEMATICS 2</b>
	CHAIRS: Prof. Jozef Banas	CHAIRS: Prof. Amantay Berzhanov, Ass. Prof. Maksat Ashyraliyev	CHAIRS: Prof. Zhaksylyk Tas-mambetov, Prof. Anvarjon Ahmedov	CHAIRS: Prof. Zhayshylyk Sartabanov, Ass. Prof. Fatma Songul Ozesenli Tetikoglu
<b>Time</b>				
<b>14.40</b>	<b>Daniyal Israfilov</b> <i>Approximation problems in the variable exponent Lebesgue spaces</i>	<b>Bibigul Tulegenova,</b> Zeynep Kambarova, Aygerim Shaldanbaeva <i>Solution of a singularly perturbed Cauchy problem by the similitude method</i>	Meiramkul Amangaliyeva, <b>Muvasharkhan Jenaliyev,</b> Minzilya Kosmakova, Murat I. Ramazanov <i>On the spectrum of Volterra integral equation with the "in-compressible" kernel</i>	<b>Tulegen Amanbayev</b> <i>Modeling of dispersed particles sedimentation in suspension at available liquid filtration</i>
<b>15.00</b>	<b>Feyzi Başar</b> <i>Some new paranormed sequence spaces and core theorems</i>	Gulshat Abdikalikova, <b>Amantay Berzhanov</b> <i>On multi-periodicity and almost periodicity of solutions of boundary value problem for system of parabolic type equation</i>	Mussakan B. Muratbekov, <b>Abai B. Shyrakbaev,</b> Ainash O. Suleimbekova <i>Existence of solutions and estimates of the velocity of convergence of approximate solutions of nonclassical type nonlinear degenerate equation</i>	<b>Fatma Songul Ozesenli Tetikoglu</b> <i>Well-posedness of a third order of accuracy difference scheme for Bitsadze-Samarskii type multi-point NBVPs</i>
<b>15.20</b>	<b>Sherali Bilal</b> <i>On a Hardy's inequality</i>	<b>Anar Asanova</b> <i>Solvability of the nonlocal multi-point boundary value problem for system of quasilinear hyperbolic equations</i>	<b>Nurlan Imanbaev,</b> Makhmud Sadybekov <i>Characteristic determinant of the spectral problem for the ordinary differential operator with the boundary load</i>	<b>Meltem Uzun</b> <i>On third order of accuracy stable difference scheme for multipoint NBVP of the hyperbolic type operator</i>

15.40-16.00

Coffee break (Third floor, Hall of Room 340)

## MAIN SESSIONS, Friday, September 12

<b>16.00</b>	<b>Kalbibi Myrzataeva</b> , Khanym Ramazanova <i>Oscillatory conditions of the non-linear second order differential equation</i>	<b>Batirkhan Kh. Turmetov</b> , Makhmud A. Sadybekov, Berikbol T. Torebek, <i>On an explicit form of the Green function of the third boundary value problem for the Poisson equation in a circle</i>	<b>Abdizhahan Sarsenbi</b> <i>Well-posedness of a parabolic equation with the involution</i>	<b>Charyyar Ashyralyev</b> <i>Approximation of the inverse elliptic problem with mixed boundary value conditions</i>
<b>16.20</b>	<b>Eberhard Malkowsky</b> <i>Matrix transformations on matrix domains of triangles</i>	<b>Abdulgafur Taskin</b> <i>New difference schemes for the neutron transport equation</i>	<b>Allaberen Ashyralyev</b> <i>Well-posedness of a parabolic equation with the nonlocal boundary condition</i>	<b>Zilal Direk</b> <i>A second order of accuracy finite difference scheme for the integral-differential equation of the hyperbolic type</i>
<b>16.40</b>	<b>Kanat Tulenov</b> <i>Duality theorems for the noncommutative spaces</i>	<b>Faruk Dusunceli</b> <i>Numerical solution for high-order linear complex differential equations in a circular domain</i>	<b>Zhaksylyk Tasmambetov</b> <i>About solutions of one special system in two variables Bessel functions</i>	<b>Maksat Ashyralyev</b> <i>On the numerical solution of hyperbolic equations with singular source terms</i>

## Saturday, September 13, 2014

### PLENARY SESSIONS

	CHAIR: Prof. <b>Feyzi Basar</b>
<b>09.30-10.15</b>	<b>Prof. Zuhair Nashed</b> , Department of Mathematics, University of Central, Florida, USA <i>Perspective on ill-posed problems and regularization methods</i>
<b>10.15-11.00</b>	<b>Prof. Dogan Kaya</b> , Department of Mathematics, Istanbul Commerce University, Istanbul, Turkey <i>A numerical comparison for recent modifications of Adomian decomposition methods for nonlinear fractional KdV equations</i>
<b>11.00-11.20</b>	Coffee break (Third floor, Hall of Room 340)



## MAIN SESSIONS, Saturday, September 13

	Room 340	Room 342	Room 341	Room 339
	<b>APPLIED MATHEMATICS 1</b>	<b>APPLIED MATHEMATICS 2</b>	<b>ANALYSIS</b>	<b>APPLIED MATHEMATICS 3</b>
	CHAIRS: Prof. Jurgen Appell, Prof. Nurgali Ashirbayev, Prof. Maksat Kalimoldayev	CHAIRS: Prof. Muvasharkhan Jenaliyev, Prof. Charyyar Ashyralyyev	CHAIRS: Prof. Sherali Bilal, Prof. Leonid Kritskov	CHAIRS: Ass. Prof. Maksat Ashyraliyev, Assoc. Prof. Muhammet Kurulay
<b>Time</b>				
<b>11.20</b>	<b>Jurgen Appell</b> <i>A friendly introduction to condensing operators</i>	<b>Charyyar Ashyralyyev</b> <i>Inverse Neumann problem for an equation of elliptic type</i>	<b>Fatih Sabahattin Tetikoglu,</b> <i>The positivity of the second order difference operator with periodic conditions in Holder spaces and its applications</i>	<b>Maksat Kalimoldayev,</b> Muvasharkhan Jenaliyev, Assel Abdildayeva, Leila Kopbosyn <i>On the optimality of one power system</i>
<b>11.40</b>	<b>Nurgali Ashirbayev, Azimkhan Abzhapbarov, Zhazira Alibekova</b> <i>The wave field in a rectangular area with discontinuities in boundary conditions</i>	<b>Myrzagali N. Ospanov</b> <i>Coercive estimates for solutions of one singular equation with the third-order partial derivative</i>	<b>Abdizhahan Sarsenbi,</b> Makhmud Sadybekov <i>About an approach to the fourth-order operator bundles</i>	<b>Muhammet Kurulay</b> <i>Hybridizable discontinuous Galerkin method for solving Caputo fractional boundary value problems</i>
<b>12.00</b>	<b>Azhibek Dasibekov, Azimkhan Abzhapbarov, Nurgali Ashirbayev, Aliya Taskulova</b> <i>Bessel functions in problems of inhomogeneous soil consolidation</i>	<b>Bakytbek Koshanov</b> <i>On the solvability of boundary value problems for the non-homogeneous polyharmonic equation in a ball</i>	<b>Amir Shaldanbayev,</b> Isabek Orazov, Manat Shomanbayeva <i>On the restoration of an operator of Sturm-Liouville by one spectrum</i>	<b>Kerimbekov Akilbek</b> <i>Approximate Solution of the Boundary Control Problem of The Thermal Processes Described by the Fredholm Integro-Differential Equations</i>

## CLOSING CEREMONY AND CONFERENCE PHOTO

<b>12.20-13.00</b>	<b>Second floor, Conference Hall</b>
<b>13.00-14.00</b>	<b>Lunch</b>
<b>15.00-18.00</b>	<b>Excursion in Shymkent</b>

## Sunday, September 14, 2014

<b>9.00-18.00</b>	<b>Excursion: Shymkent – Otyrar – Arystanbab – Turkestan – Ahmet Yesevi Mausoleum– Ahmet Yesevi University – Shymkent</b>
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