Program of
Eighth
China-Russia
conference

Numerical algebra with applications

June 24-27, 2019

June 24 (Monday)

Registration

June 25 (Tuesday)

09:30-10:00	Registration
10:00-10:10	Opening ceremony
Chairperson	**Galina V. Muratova**
10:10-10:35	**Zhong-Zhi Bai** *Academy of Mathematics and Systems Science, Chinese Academy of Sciences. , Beijing, P.R. China* COMPUTING EIGENPAIRS OF HERMITIAN MATRICES IN PERFECT KRYLOV SUBSPACES *Bai Z.-Z., Miao C.-Q. .*
10:35-11:00	**Mikhail I. Karyakin** *Southern Federal University, Rostov-on-Don, Russia* EQUILIBRIUM AND STABILITY OF THE INHOMOGENEOUS NONLINEARLY ELASTIC BODIES *Karyakin M., Obrezkov L., Pustovalova O.*
11:00-11:25	**Guo-Yan Meng** *Xinzhou Teachers University, Xinzhou, P.R. China* THE GENERALIZED HSS METHOD WITH A FLEXIBLE SHIFT-PARAMETER *Meng G.-Y., Wen R.-P.*
11:25-11:50	**Konstantin A. Nadolin** *Southern Federal University, Rostov-on-Don, Russia* COMPUTATIONAL EXPERIMENTS BASED ON REDUCED MODEL OF A LONG AND SHALLOW STREAM *Nadolin K.A., Zhilyaev I.V.*
11:50-12:15	**Zeng-Qi Wang** *Shanghai Jiao Tong University, Shanghai, P.R. China*

	PMHSS PRECONDITIONERS FOR STOKES CONTROL OPTIMIZATION PROBLEMS *Wang Z.-Q., Cao S.-M.*
12:15-13:30	**Lunch**
Chairperson	**Zhong-Zhi Bai**
13:30-13:55	**Galina V. Muratova** *Southern Federal University, Rostov-on-Don, Russia* MULTIGRID METHOD FOR BIOLOGICAL AND MEDICAL PROBLEMS *Muratova G. V., Bavin V. V.*
13:55-14:20	**Dan-Fu Han** *Hangzhou Normal University, Hangzhou, P.R. China* A *P*-VERSION TWO LEVEL SPLINE METHOD FOR 2D NAVIER-STOKES EQUATIONS
14:20-14:45	**Mohamed E. Nassar** *Southern Federal University, Rostov-on-Don, Russia, Menoufia University, Menouf, Egypt* NUMERICAL STUDY OF EFFECTIVE MODULES OF POROUS PIEZOCOMPOSITES WITH METALLIZED INTERFACES IN UNIT CELL WITH CUBIC OR SPHERICAL PORES *Nasedkin A.V., Nassar M.E.*
14:45-15:10	**Xiang Zhang** *Department of Mathematics Science, Guizhou Normal University, P.R. China* ON THE QUADRATIC EQUATIONS AND MATRIX FUNCTION
15:10-15:35	**Vyacheslav G. Tsybulin** Southern Federal University, Rostov-on-Don, Russia CONVECTION IN A POROUS MEDIUM: COSYMMETRY AND ITS CONSERVATION

	THROUGH A FINITE-DIFFERENCE APPROXIMATION
15:35-15:55	**Tatyana S. Martynova** *Southern Federal University, Rostov-on-Don, Russia* POSITIVE DEFINITENESS AND M-MATRIX CONDITIONS OF A CONVECTION-DIFFUSION DIFFERENCE OPERATOR WITH BOUNDARY CONDITIONS OF THE THIRD KIND *Chikina L.G., Shabas I.N., Martynova T.S.*
15:55-16:15	**Coffee Break**

Chairperson	**Tatyana S. Martynova**
16:15-16:30	**Svetlana V. Revina** *Southern Federal University, Rostov-on-Don, Russia* THE REGION OF TURING INSTABILITY IN SCHNAKENBERG SYSTEM *Lysenko S.A., Revina S.V.*
16:30-16:45	**Nikita E. Krymov** *National Research University Moscow Power Engineering Institute, Moscow, Russia* ASYMPTOTIC APPROXIMATIONS FOR ONE RADIATIVE-CONDUCTIVE HEAT TRANSFER PROBLEM *Amosov A.A., Krymov N.E.*
16:45-17:00	**Michael E. Abramyan** *Southern Federal University, Rostov-on-Don, Russia* ABOUT SOME FEATURES OF THE HEURISTIC IMPLEMENTATION OF BRANCH AND BOUND METHOD FOR THE PROBLEM OF NFA MINIMIZATION *Abramyan M. E., Melnikov B.F.*

17:00-17:15	**Lubov G. Chikina** *Southern Federal University, Rostov-on-Don, Russia* THE SECOND ORDER DIFFERENCE SCHEME OF THE 3D CONVECTION-DIFFUSION PROBLEM WITH THE ROBIN'S BOUNDARY CONDITIONS *Chikina L.G., Shabas I.N., Chikin A.L.*
17:15-17:30	**Litovchenko D.E.** *Southern Federal University, Rostov-on-Don, Russia* ABOUT SOME NEW APPROACHES TO TEXT SENTIMENT ANALYSIS AND TOXICITY ANALYSIS USING DEEP LEARNING METHODS *Abramyan M.E., Litovchenko D.E..*

June26 (Wednesday)

	Chairperson	Zeng-Qi Wang
10:00-10:25	**Sergey I. Garmashov** *Southern Federal University, Rostov-on-Don, Russia* COMPUTER SIMULATION OF MIGRATION OF LIQUID CYLINDRICAL INCLUSIONS IN A CRYSTAL IN SOME CASES OF INTERFACIAL ENERGY ANISOTROPY *Garmashov S.I., Karpenko A.S.*	
10:25-10:50	**Hao Liu** *Nanjing University of Aeronautics and Astronautics, Nanjing, P.R. China* MINIMUM NORM PARTIAL QUADRATIC EIGENVALUE ASSIGNMENT FOR VIBRATING STRUCTURES USING RECEPTANCE METHOD *Liu H., He B.-X., Chen X.-P.*	
10:50-11:15	**Vasiliy N. Govorukhin** *Southern Federal University, Rostov-on-Don, Russia* NUMERICAL ANALYSIS OF COSYMMETRY VIOLATION IN FILTRATION CONVECTION PROBLEM	
11:15-11:40	**Rui-Ping Wen** *Taiyuan Normal University, Taiyuan, P.R. China* A THREE-TERM ACCELERATED TECHNIQUE FOR HSS-TYPE METHODS *Wen R.-P., Jiang W.*	
11:40-12:00	**Coffee Break**	

Chairperson	Vasiliy N. Govorukhin
12:00-12:15	**Olga A. Pichugina** *Southern Federal University, Rostov-on-Don, Russia* NUMERICAL STUDY OF THE SKEW-SYMMETRIC PRECONDITIONERS
12:15-12:40	**Xi Yang** *Nanjing University of Aeronautics and Astronautics, Nanjing, P.R. China* A FAST NULLSPACE METHOD BASED ON MATRIX EXPONENTIAL FOR THE UNSTEADY STOKES EQUATIONS
12: 40-12:55	**Dmitriy V. Dzama** *Nuclear Safety Institute, Russian Academy of Science, Moscow, Russia* PHYSICAL AND MATHEMATICAL MULTIFUNCTIONAL MODELS, SPECIALIZED NUMERICAL ALGORITHMS AND SOFTWARE FOR MODELING PROPAGATION OF CONTAMINATION, TAKING INTO ACCOUNT THREE-DIMENSIONAL URBAN OR INDUSTRIAL BUILDING *Dzama D.V., Sorokovilova O.S., Asfandiyarov D.G.*
12:55-14:30	**Lunch**
	Poster Session
1	**Chubatov A.A., Karmazin V.N.** *Armavir State Pedagogical Academy, Armavir, Russia* A REGULARIZATION METHOD ON THE BASE AUGMENTED SYSTEM FOR IDENTIFICATION PROBLEM FOR INTENSITY OF ATMOSPHERIC POLLUTION SOURCE

2	**Andreeva E.M., Muratova G.V.** *Southern Federal University, Rostov-on-Don, Russia* FOURIER ANALYSIS OF MULTIGRID METHOD WITH HSS METHODS AS SMOOTHERS
3	**Abramyan M.E.** *Southern Federal University, Rostov-on-Don, Russia* BIPARTITE GRAPHS IN THE PROBLEM OF NFA MINIMIZATION AND ALGORITHMS FOR CALCULATING THEIR NUMBER
4	**Kirichenko O.V., Revina S.V** INVESTIGATION OF THE STABILITY OF TWO-DIMENSIONAL FLOWS CLOSE TO THE SHEAR**.**

June27 (Thursday)

Departure