

PROGRAM
Of The Twelfth China-Russia Conference on Numerical Algebra with Applications –CRCNAA 2026
(06.07.2026-12.06.2026)

05.07.2026		
During the day	Arrival of Chinese and Russian participants	SFU Hotel Complex 76Ж Svobodny Avenue
06.07.2026		
During the day	Arrival of Russian participants	SFU Hotel Complex 76Ж Svobodny Avenue
19:00 – 21:00	Welcome party	SB of the RAS Scientists' House
07.07.2026 SibFU Library, Room B4-06, Svobodny Prospekt 79/10		
9:30-10:00	Registration of participants	
Plenary session. (10:00-12:20), Chairperson Galina Muratova		
10:00-10:30	Conference Opening Ceremony. Photo of the participants.	
10:30-11:10	<u>Vladimir Shaidurov</u> IMPROVING THE ACCURACY OF OPERATIONAL FORECASTING A SOCIO-ECONOMIC OR TECHNICAL DYNAMICAL MODEL DESCRIBED BY A SYSTEM OF ORDINARY DIFFERENTIAL EQUATIONS	
11:10-11:50	<u>Bai Zhong-Zhi</u> REFINED ERROR BOUNDS FOR RELAXED GREEDY RANDOMIZED KACZMARZ METHODS	
11:50-12:20	<u>Mikhail I. Karyakin</u> , Leonid Zubov NUMERICAL IMPLEMENTATION OF THE SEMI-INVERSE METHOD FOR LARGE DEFORMATION PROBLEMS OF COSSERAT-TYPE ELASTIC SHELLS	
Coffee break (12:20 -12:40)		

Plenary session (12:40-14:10), Chairperson Mikhail Karyakin	
12:40-13:10	<u>Zheng-Da Huang</u> ON A RELAXATION WEIGHTED GREEDY BLOCK KACZMARZ METHOD FOR SOLVING LINEAR SYSTEMS IN HILBERT SPACES
13:10-13:40	<u>Andey V. Nasedkin</u> HOMOGENIZATION OF PIEZOELECTRIC METAMATERIALS WITH PERIODIC BOUNDARY CONDITIONS: MATHEMATICAL ISSUES, FINITE ELEMENT IMPLEMENTATION AND NUMERICAL RESULTS
13:40 -14:10	<u>Valeriy P. Ilyin</u> ON ALGEBRAIC-TOPOLOGICAL MULTIGRID DOMAIN DECOMPOSITION METHODS (ADDM-MG)
Lunch (14:10 -15:20)	
Sectional meeting (15:00-16:20) Chairperson Vasily Govoruhin	
15:20-15:40	<u>Min LI</u> A SPLITTING-BASED KPIK METHOD FOR EDDY CURRENT OPTIMAL CONTROL PROBLEMS
15:40-16:00	<u>Mikhail M. Karyakin</u> , Yana Demyanrnko NUMERICAL POLYGONAL MASK GENERATION WITH CONTROLLABLE GEOMETRY AND TOPOLOGY FOR BENCHMARKING INPAINTING ALGORITHMS
16:00-16:20	<u>Maxim Vavilkin</u> , Yana Demyanrnko SINGLE-KERNEL PREFIX SUM WITH GRID SYNCHRONIZATION FOR K-D TREE CONSTRUCTION ON GPU

08.07.2026 SibFU Library, Room B4-06, Svobodny Prospekt 79/10

Plenary session. (10:00-12:00), Chairperson Bai Zhong-Zhi

10:00-10:30	<u>Mikhail Filimonov</u> DIGITAL TWINS OF HEAT AND MASS TRANSFER IN PERMAFROST REGIONS: BEARING CAPACITY OF SOILS AND DEVELOPMENT STRATEGY OF OIL AND GAS FIELDS
10:30-11:00	<u>Galina Muratova</u> , T.S. Martynova CURRENT COMPUTATIONAL ALGORITHMS AND THEIR ACCELERATION METHODS
11:00-11:30	<u>Cun-Qiang Miao</u> ON COLUMN-BLOCK ENHANCED RANDOMIZED EXTENDED KACZMARZ METHOD FOR SOLVING INCONSISTENT LINEAR SYSTEMS
11:30-12:00	<u>Natalia Vaganova</u> NUMERICAL MODELING OF TEMPERATURE FIELDS FOR PREDICTING ACTIVE LAYER THICKNESS EVOLUTION UNDER PILE FOUNDATIONS IN PERMAFROST REGIONS WITH SEASONAL THERMAL STABILIZATION UNDER CLIMATE WARMING

Coffee break (12:00-12:20)

Plenary session (12:20-13:50), Chairperson Andey V. Nasedkin.

12:20-12:50	<u>Rui Li</u> AN ACCELERATED SURROGATE HYPERPLANE KACZMARZ METHOD BASED ON TWO-DIMENSIONAL SEARCH
12:50 -13-20	<u>Vyacheslav Tsybulin</u>

	HIGH-ORDER FINITE-DIFFERENCE SCHEMES AND THE INHERITANCE OF CONVECTIVE PROBLEM PROPERTIES.
13:20-13:50	<u>Vasily Govorukhin</u> AUTOMATED VORTEX DETECTION USING LIMITED FLOW VELOCITY DATA AND AN ANALYTICAL VORTEX MODELS
Lunch (13:50 -15:00)	
Sectional meeting (15:00-16:00) Chairperson Zheng-Da Huang	
15:00-15:20	<u>Lu Wang</u> ON CONVERGENCE RATE OF THE RANDOMIZED MULTIPLICATIVE SCHWARZ METHOD
15:20-15:40	<u>Xiaolong Liu, Galina V. Muratova</u> DYNAMICS AND DATA: PARAMETER FITTING IN THE LIF NEURON MODEL
15:40-16:00	<u>Wei-Hong Zhang</u> A MODIFIED PRECONDITIONED QUASI SHIFT-SPLITTING METHOD FOR DOUBLE SADDLE POINT PROBLEMS WITH LIQUID CRYSTAL DIRECTOR MODELING

09.07.2026 Excursion day	
10.07.2026 SibFU Library, Room B4-06, Svobodny Prospekt 79/10	
Plenary session (10:00-12:00), Chairperson Mikhail Filimonov	
10:00-10:30	<u>Jian-Jun Zhang</u> ACCELERATION OF THE MODULUS-BASED ITERATION METHODS BY GEOMETRICALLY SMOOTHED MOMENTUM FOR SOLVING LINEAR

	COMPLEMENTARITY PROBLEMS
10:30-11:00	<u>Pavel A. Zelenchuk</u> PREDICTION OF AORTIC THROMBOSIS RISK BASED ON A COMPUTATIONAL MODEL: PLATELETS AND VON WILLEBRAND FACTOR
11:00-11:30	<u>Li Xu</u> A BLOCK-SHIFTED CYCLIC REDUCTION ALGORITHM FOR SOLVING A CLASS OF QUADRATIC MATRIX EQUATIONS
11:30-12:00	<u>Min-Li Zeng</u> A SPLITTING-BASED KPIK METHOD FOR EDDY CURRENT OPTIMAL CONTROL PROBLEMS
	Coffee break (12:00-12:20)
	Sectional meeting (12:20-13:20) Chairperson Vyacheslav Tsibulin
12:20-12:40	<u>Pavel A. Zelenchuk</u> ANALYTICAL AND NUMERICAL INVESTIGATION OF TURING INSTABILITY IN A REACTION-DIFFUSION PREDATOR-PREY MODEL1
12:40-13:00	<u>V.A. Afanasyev</u> , S.A. Tyasto DISCRETE EVENT SIMULATION FOR LMS-DRIVEN EXTENDED REALITY MODELING OF PRODUCTION PROCESSES
13:00-13:20	<u>Roman A. Golubev</u> , Vladimir V. Shaydurov, Lidiya V. Gileva INCREASING THE ORDER OF APPROXIMATION OF DIFFERENCE SCHEMES BY CORRECTING THE RIGHT-HAND SIDE USING THE ORIGINAL SOLUTIONS
	Lunch (13:20 -15:00)
15:00-16:00	Conference Closing Ceremony

11.07.2026 SFU		
10:00-12:00	Roundtable discussion on scientific collaboration. Meetings at SFU.	
12.07.2026	Departure of participants	SFU Hotel Complex, 76Ж Svobodny Avenue