

Program of the 2nd International Conference “Computer algebra”

Monday, October 30, Plekhanov Russian University of Economics

9:15 – 9:50 Registration

9:50 – 10:00 Opening of the conference. Welcome speech by Prof. V.G. Minashkin, vice-rector of Plekhanov Russian University of Economics

Morning session. Chair: Alexander Prokopenya

10:00 – 10:40 A.I. Zobnin, M.I. Tikhonova. Machine Learning Application for the Improvement of the F4

10:45 – 11:15 Coffee break; discussions

11:15 – 11:55 M. Barkatou. On Linear Difference Equations with Factorial Series Coefficients

12:00 – 13:00 A.D. Bruno. Calculation of Complicated Asymptotic Expansions of Solutions to ODEs

13:00 – 14:00 Lunch break

Afternoon session. Chair: Leonid Sevastyanov

14:00 – 14:40 F. Chyzak, Th. Dreyfus, Ph. Dumas, M. Mezzarobba. Computing Solutions of Linear Mahler Equations

14:45 – 15:25 M. Petkovšek, L. Vukšič. Boolean Functions and Symbolic Computation

15:30 – 16:10 L. Teyssier. Coalescing Complex Singular Points

16:15 – 16:55 R. Kozera, A.N. Prokopenya. Computer Algebra in Photometric Stereo with Two Light Sources

17:00 – 17:30 Coffee break; discussions

Tuesday, October 31, Plekhanov Russian University of Economics

Morning session. Chair: Frédéric Chyzak

10:00 – 10:25 M.N. Gevorkyan, A.V. Demidova, T.R. Velieva, A.V. Korolkova, D.S. Kulyabov, L.A. Sevastianov. Using the Computer Algebra System SymPy to Implement the Method of Stochastization of One-Step Processes

10:30 – 10:55 Coffee break; discussions

11:00 – 11:25 A.B. Batkhin. Generalized Discriminant of a Real Polynomial

11:30 – 11:55 T.M. Sadykov, T.A. Zhukov. Intelligent Methods for Grammatically Correct Text Synthesis in Russian

12:00 – 12:25 A.A. Panferov. Irreducible Differential Systems and Satellite Unknowns

12:30 – 13:30 Lunch break

13:30 – Cultural program: Visit to Tretyakov Gallery (Russian avantgarde)

Wednesday, November 1, Dorodnicyn Computing Centre FRC CSC RAS

Morning session. Chair: Timur Sadykov

- 10:00 – 10:25 A.A. Gusev, S.I. Vinitzky, O. Chuluunbaatar, G. Chuluunbaatar, V.P. Gerdt, V. Derbov, A. Gyzdz, P. Krassovitskiy. Algorithm for Calculating Interpolation Hermite Polynomials for High-Accuracy Finite Element Method
- 10:30– 11:00 Coffee break; discussions
- 11:00 – 11:25 S.A. Gutnik, V.A. Sarychev. Application of Computer Algebra Methods for Investigation of the Dynamics of Axisymmetric Satellites.
- 11:30 – 11:55 V.P. Gerdt. Strongly Consistent Finite Difference Approximations to Systems of PDEs
- 12:00 – 13:00 Lunch break

Afternoon session. Chair: Vladimir Gerdt

- 13:00 – 13:25 V.V. Dikusar, N.N. Olenev, A. Yatsko. Applying Factor Analysis in Solution of Improper Problems of Linear Programming
- 13:30 – 13:55 D. V. Bogdanov. Computation of Amoebas of Polynomials in Two Variables
- 14:00 – 14:25 A.V. Seliverstov. Looking for Points on a Smooth Cubic Hypersurface
- 14:30 – 14:55 V.V. Korniyak. Splitting Permutation Representations of Finite Groups by Means of Gröbner Bases
- 15:00 – 15:25 Ya.Yu. Kuziv, M.D. Malykh, L.A. Sevastianov. Necessary Conditions for the Existence of Algebraic Integrals of ODEs
- 15:30 – 15:55 N.P. Tretyakov, V.V. Marshalov, E.A. Teveleva. Symbolic Calculations in Ising Models
- 16:00 – 17:00 Discussion
- 17:00 – 20:00 Dinner (restaurant of Computing centre)

Thursday, November 2, Dorodnicyn Computing Centre FRC CSC RAS

Morning session. Chair: Marko Petkovšek

- 10:00 – 10:25 A.V. Klimakov, A.A. Mikhalev. Homogeneous Almost Primitive Elements of Free Algebras of Schreier Varieties
- 10:30 – 11:00 Coffee break, discussion
- 11:00 – 11:25 A.A. Kytmanov, A.M. Kytmanov, E.K. Myshkina. An Algorithm for Computing Residue Integrals for a Class of Systems of Algebraic Equations
- 11:30 – 11:55 A.A. Ryabenko. Search for Hypergeometric Solutions of q -Difference Systems by Resolving Sequences
- 12:00 – 13:00 Lunch
- 13:00 – 13:25 S.A. Abramov. EG-Eliminations as a Tool for Computing Rational Solutions of Linear q -Difference Systems of Arbitrary Order with Polynomial Coefficients
- 13:30 – Final discussion; Closing of the conference