

The International Conference  
**POLYNOMIAL COMPUTER ALGEBRA**

**April 2-7, Saint-Petersburg, Russia**

Euler International Mathematical Institute

**April 2 Friday**

10.00—11.00 *Registration, coffee*

11.00—11.15 *Opening the conference*

11.15—12.15 *Alexander Bruno*. Analysis of algebraic singularities by algorithms of Power Geometry

12.15—13.00 *Alexander Bruno and Victor Edneral*. Integrability of a planar multiparameter system of ODE

13.00—15.00 **LUNCH**

15.00—15.45 *Natasha Malaschonok*. An algorithm for symbolic solving of partial differential equations

15.50—16.30 *Mhenni M. Benghorbal*. A unified formula for the  $n$ th derivative and the  $n$ th anti-derivative of Bessel function of real orders

16.30—16.50 *Coffee break*

16.50—17.30 *Nikita Gogin, Alexandr Mylläri*. Generating polynomial for the weight-spectrum of the expected waiting time for random  $q$ -ary words

17.30—18.00 *Ioannis N. Parasidis, P. C. Tsekrekos and Th. G. Lokkas*. Correct and selfadjoint problems with biquadratic operators.

18.30 **WELCOME PARTY**

**April 3 Saturday**

10.00—11.00 *Alexander Bruno, Alexander Batkhin, Victor Varin*. The set of stability of a gyroscope problem

11.00—11.25 *Coffee break*

11.20—12.00 *Valery Romanovski*. Small limit cycles in polynomial systems of ODE's

12.00—12.50 *Rashit Faizullin*. The linear algebra analogies for SAT problem

13.00—15.00 **LUNCH**

15.00—15.45 *Sergey Mechveliani*. About the surface of real symmetric matrices with

multiple Eigenvalues

15.50—16.30 *Vladimir Korniyak*. Discrete dynamical models: structural and symmetry analysis

16.30—16.50 *Coffee break*

16.50—17.15 *Sergei Soloviev*. Commutativity of categorical diagrams and computer algebra

17.30—18.00 *Nikolai Proskurin*. On the zeros of the cubic L-function

18.00—18.20 *Larisa Grosheva*. Invariant boundary distributions for a complex hyperbolic space

## **April 4 Sunday**

*Excursion to the Hermitage*

## **April 5 Monday**

10.00—10.55 *Alexander Chistov*. Effective construction of a nonsingular in codimension one algebraic variety over a zero-characteristic ground field

11.00—11.30 *Mikhail Rybalkin and Nikolay Vasiliev*. Permutation binomials and their groups

11.30—11.50 *Coffee break*

11.50—12.30 *Mark Spivakovsky*. Valuations in commutative algebra and algebraic geometry a generalization of the notion of a monomial order

12.30—13.10 *Ronen Peretz*. Keller mappings in dimension two are surjective

13.10—15.00 *LUNCH*

15.00—15.30 *Vladimir Gerdt, Arsen Khvedelidze, and Iurie Palii*. On local invariants for qubit-qutrit system in mixed states

15.30—16.10 *Gennadi Malaschonok*. Architecture of ParCA3 project

16.10—16.30 *Oxana Pereslavceva*. Parallel algorithm for computation of characteristic polynomials of matrices over polynomial rings and some experiments

16.30—16.50 *Coffee break*

16.50—17.15 *Vladimir Gerdt and Mikhail Zinin*. Boolean Involutive bases and SAT solving

17.15—17.40 *Stepan Orevkov*. TBA

17.40—18.10 *Elena Vodolazhskaya*. Placements without neighbors

18.30 **BANQUET**

**April 6 Tuesday**

10.00—10.50 **Vladimir Gerdt.** Discretization of PDE systems and its consistency: role of computer algebra

10.50—11.20 **Timur Seifullin.** Finding isolated polynomial roots by the extension product of bounded root functionals

11.20—11.40 **Coffee break**

11.40—12.20 **Alexander Tiskin.** Communication-efficient parallel multiplication of Boolean matrices

12.20—13.00 **Nikolay Vavilov.** TBA

13.00—15.00 **LUNCH**

15.00—15.30 **Andrey Betin.** Some experiments with a parallel algorithm of computation of adjoint matrix and parallel multiplication of file matrices

15.30—16.00 **Alexei Lapaev.** Параллельный алгоритм решения систем линейных уравнений в рациональных числах

16.00—16.30 **Doru Stefanescu and Simeon Yevlakhov.** Computation of bounds for roots of orthogonal polynomials

**Coffee, Round table discussion, Closing the Conference**