

The International Conference *Polynomial Computer Algebra*

April 13-18, Russia, Saint-Petersburg, Euler International Mathematical Institute

April 13

9.30 —10. 20 *Registration, coffee*

10.20—10.30 *Opening the conference*

10.30—11.10 *Vladimir V. Kornyak Combinatorics of discrete dynamical models*

11.10—11.50 *Bruno Buchberger A New Algorithm for Computing Gröbner Bases Using Generalized Sylvester Matrices*

11.50—12.20 *Gaiane Panina, Alena Zhukova Discrete Morse theory for the moduli space of a flexible polygon, or trictrac game on the circle*

12-30 —13.00 *TBA*

13.10—15.00 *Lunch*

15.00—15.30 *Nikolai V. Proskurin Short summary on numerical computation of zeros of L-functions*

15.30—16.00 *Yury A. Blinkov, Pavel. V. Fokin SAT problems solved with ZDD diagrams*

16.00—16.30 *Coffee break*

16.30—17.00 *Boris Kazarnovski Product of cocycles of polyhedral complexes in convex and tropical geometry*

17.00—17.30 *Alexander B. Batkhin, Alexander D. Bruno Investigation of a Real Algebraic Surface*

17.30—18.00 *Yuri A. Blinkov, Artem V. Mesyanzhin, Oksana M. Romakina Gröbner Bases and Generation of Difference Schemes for Shallow Water Equations*

18.30 *WELCOME PARTY*

April 14

10.00—10.50 ***Vladimir P. Gerdt Hidden Lagrangian constraints and differential Thomas decomposition***

11.50—11.20 ***Coffee break***

11.20—11.50 ***Vladimir P. Gerdt, Dmitry A. Lyakhov Linearization of ODEs: algorithmic approach***

11.50—12.20 ***Natalia Iyudu Three dimensional Sklyanin algebras and Gröbner bases***

12.20—13.00 ***Mikhail D. Malykh On Integration of the Differential Equations In Finite Terms and Their Numerical Solutions***

13.00—15.00 ***Lunch***

15.00—15.30 ***Vladimir Gerdt , Arsen A Khvedelidze, Yuri Palii О пространстве запутанности смешанных X-состояний 2-х кубитов***

15.30—16.00 ***Sergey Yu. Slavyanov On polynomial degree reduction of a fuchsian 2x2 system***

16.00—16.30 ***Coffee break***

16.30—17.00 ***Andrei Malyutin Satellite knots strike back***

17.00—17.30 ***Sergei D. Meshveliani On provable programs for list processing***

17.30—18.00 ***Fedor Petrov Number of paths in graded graphs and polynomial identities***

18.00—18.30 ***Natasha Malaschonok The Laplace transform method for solving differential equations with delayed argument***

19.00 ***Chamber music Concert. Euler Institute***

April 15

- 10.00—10.50 ***Dima Grigoriev Bounds in tropical geometry: between complex and real***
- 10.50—11.30 ***Alkiviadis G. Akritas Various Methods for Computing Subresultant Polynomial Remainder Sequences (PRS's)***
- 11.30—12.00 ***Coffee break***
- 11.00—11.30 ***Alexandr V. Seliverstov Cubic hypersurfaces with an odd number of singular points***
- 12.00—12.30 ***Maxim Karev Klein wight systems***
- 12.30—13.00 ***Mikhail V.Babich On birational canonical parameterisation of (co)adjoint orbits of classical groups***
- 13.00—15.00 ***Lunch***
- 15.00—15.45 ***Gennadi Malaschonok, Anton Scherbinin New Type of Triangular Matrix Decomposition***
- 15.45—16.10 ***Semjon Adlaj New unexpected solutions to well-known differential equations***
- 16.10—16.30 ***Alexander B. Batkhin On the Structure of Discriminant Set of Real Polynomial***
- 16.30—17.00 ***Coffee break***
- 17.00—17.30 ***Anatol Slissenko On the entropy convergence of algorithms***
- 17.30—18.00 ***Sirgey Kireev, Gennadi Malaschonok Tropical mathematics in Math Partner***
- 18.00—18.20 ***Sergei Pozdniakov, Vasiliy Akimushkin Computer enhanced Olympiad in theoretical informatics and discrete mathematics***

April 16

10.00—10.40 **Ernst W. Mayr, Stefan Toman** *The Complexity of the Membership Problem for Radical Binomial Ideals*

10.40—11.10 **Alexander L. Chistov** *Fundamental result in theory of computation with parameters*

11.10—11.30 *Coffee break*

11.30—12.00 **Mark Spivakovsky** *On the Local Uniformization Problem in Arbitrary Characteristic*

12.00—12.30 **Anatoly Vershik** *Universal combinatorial filtrations and action of discrete groups*

12.30—14.15 *Lunch*

Bus Excursion around St.Petersburg and visit to [The General Staff Building](#)
The bus will start from the Euler Institute at 14:15

19.00 **Conference dinner in the Euler Institute**

April 17

10.00—10.40 **Stephen Watt** *Algorithms for Symbolic Polynomials, Matrices and Domains*

10.40—11.10 **Alexander Tiskin** *The seaweed monoid: an algebraic superglue for string comparison*

11.10—11.40 **Coffee break**

11.40—12.20 **Nikolai Vavilov** *Decomposition of unipotents, revisited.*

12.20—12.50 **Ilya Nekrasov, Gaiane Panina** *Volume and lattice points counting for the cyclopermutohedron*

13.00—15.00 **Lunch**

15.00—15.30 **Aleksandr Mylläri, Nikita Gogin** *Some Properties of Fibonacci and Padovan Polynomials*

15.30—16.00 **Vasily Duzhin, Nikolay Vasilyev** *Computation of maximal dimensions of irreducible representations of symmetric groups S_n*

16.00—16.30 Coffee break

16.30—17.00 **Ronen Peretz** *Fractals and the two dimensional Jacobian Conjecture*

17.00—17.30 TBA

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April 18

10.00—10.30 ***Victor F. Edneral Searching for integrability of Algaba's System***

10.30—11.00 ***Vladimir P. Gerdt, Yury A. Blinkov Pairwise involutive division defined in terms of reduced monomial Gröbner basis***

11.00—11.30 ***Yury A. Blinkov, Vladimir P. Gerdt Package PyGInv***

11.30—12.00 ***Coffee break***

12.00—12.30 ***Stephen Watt, Vadim Mazalov A Distance-Based Model for High Frequency Trading***

12.30—13.00 ***Ilya Krepiy Sandpile groups: properties and calculation in context of matroids***

13.00—13.30 ***Valentin Zaitsev, Lidiya Linchuk, Alexander Flegontov About Local and Nonlocal Symmetries and Inverse Problems for Ordinary Differential Equations***

Closing of the Conference, coffee