

Program of PCA2023 Conference

The PDF file with the program can be downloaded from https://pcapdmi.ru/2023/Program_PCA2023.pdf

You can download the book of abstracts from [pca2023_book.pdf](#)

Please contact to the organizers if you see some mistakes and/or collisions with your own schedule.

April 17

10:00 — 10:30	Registration, coffee
	Euler Institute, Pesochnaya nab. 10 The direct link to the Zoom channel of PCA2023 is in your personal account
10:30 — 11:00	Mikhail Malykh (Peoples' Friendship University of Russia) Reversible difference schemes for classical nonlinear oscillators
11:00 — 11:30	Alexandr Seliverstov (Institute for Information Transmission Problems of the Russian Academy of Sciences) Notes on Obstacles to Dimensionality Reduction
11:30 — 12:00	Coffee break
12:00 — 12:30	Yuri Blinkov , Mikhail Malykh (Saratov State University) First differential approximation for ODE systems with parameters
12:30 — 13:00	Denis Yanovich (Joint Institute for Nuclear Research) Summing-up Involutive Bases Computations Experience
13:00 — 15:00	Lunch in the Hotel Kamennooostrovskaya
15:00 — 15:40	Vladimir Korniyak (Joint Institute for Nuclear Research, LIT) Constructive Versions of Quantum Mechanics
15:40 — 16:10	Nikolai Krivulin (Saint Petersburg State University) An algorithm for solving two-sided linear vector equations in tropical algebra
16:10 — 16:40	Coffee break
16:40 — 17:10	Gaiane Panina (St. Petersburg Department of Steklov Mathematical Institute of Russian Academy of Sciences, SPbGU) Envy-free division in the presence of a dragon
17:10 — 17:40	Sergey Gutnik (Moscow State Institute of International Relations (MGIMO University)) Investigation of the Stationary Motions of the System of Two

Connected Bodies Moving along a Circular Orbit Using
Polynomial Algebra Methods

17:40 — 18:20

Elina Shishkina, Oleg Marichev (Voronezh State University,
Wolfram Research)
Fractional order differentiation of Meijer G-functions and their
cases

Welcome party

April 18

Euler Institute, Pesochnaya nab. 10
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[personal account](#)

10:00 — 10:45

Yuri Matiyasevich (St.Petersburg Department of Steklov
Institute of Mathematics)
Approximation of the zeros of the Riemann zeta function by
rational functions

10:45 — 11:15

Fedor Petrov (St Petersburg University, St Petersburg
Department of Steklov Institute of Mathematics)
Real stability of spanning tree enumerator

11:15 — 11:40

Coffee break

11:40 — 12:10

Tony Shaska (Research Institute of Science and Technology)
Machine learning and moduli spaces

12:10 — 12:40

Nikolai Proskurin (St. Petersburg Department of Steklov
Institute of Mathematics)
Some observations on degree 3 and 4 exponential sums over
finite fields

12:40 — 13:10

Ksaverii Malyshev, Mikhail Malykh (Skobeltsyn Institute of
Nuclear Physics, Peoples' Friendship University of Russia)
Implementation of A.N. Krylov series convergence acceleration
in the CAS Sage

13:10 — 15:00

Lunch in the [Hotel Kamennooostrovskaya](#)

15:00 — 15:30

A.A.Gusev, G.Chuluunbaatar, O.Chuluunbaatar, S.I.Vinitsky (Joint
Institute for Nuclear Research)
Construction and application of fully symmetric quadrature rules
on the simplexes

15:30 — 16:00

Vladimir Titov (Saint Petersburg State University)
Levi-Civita reduction in three body problem

16:00 — 16:30

Victor Edneral, Alexander Aranson (Lomonosov Moscow State
University (SINP MSU))

On the integrability of the resonant case of the generalized Lotka–Volterra system

16:30 — 17:00

Coffee break

17:00 — 17:30

Alexey Rosaev (Yaroslavl State University)

The phase portrait of the pendulum model of resonance in (a, λ) coordinates

17:30 — 18:00

Alexander Aranson (Institute of Long-Range Radio Communication)

Painleve Test and Integrability of Polynomial ODEs

18:00 — 18:30

Eugene Zima (Wilfrid Laurier University, Waterloo, CANADA)

Accelerating modular arithmetic with special choice of moduli

April 19

Joint session of the PCA2023 and

[Seminar on Representation Theory and Dynamical Systems](#)

The link for Zoom of PCA2023 is in your [personal account](#)

10:00 — 10:30

Boris Kazarnovskii (Institute for Information Transmission Problems)

How many roots of a random polynomial system on a compact Lie group are real?

10:30 — 10:55

Vladislav Shubin, Nikita Gogin (Petrozavodsk State University)

Bernstein Polynomials and MacWilliams Transform

11:00 — 11:30

Coffee break

11:30 — 12:00

Alexander Tiskin, Nikita Gaevoy (St Petersburg State University)

Doubly-periodic string comparison

12:00 — 12:30

Astghik Torosyan, Arsen Khvedelidze (Joint Institute for Nuclear Research)

Describing classicality of states of a finite-dimensional quantum system via Wigner function positivity

12:30 — 13:00

Chenqi Mou (Beihang University)

Sparse Triangular Decomposition Based on Chordal Graphs

13:00 — 15:00

Lunch in the [Hotel Kamennooostrovskaya](#)

15:00 — 15:50

Anatoly Vershik (St.Petersburg Department of Steklov Institute of Mathematics)

Scaled entropy and dynamics of metrics; recent achievements

16:00 — 16:30

Alexander Chistov (St. Petersburg Department of Steklov Mathematical Institute of the Academy of Sciences of Russia)

Effective algorithm for factoring polynomials in the ring of multivariable formal power series in zero--characteristic

16:30 — 17:00	Coffee break
17:00 — 17:30	Alexander Bruno , Alijon Azimov (Keldysh Institute of Applied Mathematics of RAS) Computing unimodular matrices of power transformations
17:30 — 18:00	Gleb Koshevoy , Denis Mironov (Institute for Information Transmission Problems) F-polynomials and Newton polytopes
18:00 — 18:30	Alexander Sakharov (Synstretch) A Normal Form of Derivations for Quantifier-Free Sequent Calculi With Nonlogical Axioms

April 20

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There are changes in the schedule of the session

10:00 — 10:50	Alexander Bruno , Alijon Azimov (Keldysh Institute of Applied Mathematics of RAS) Parametric expansions of an algebraic variety near its singularities
10:50 — 11:20	Coffee break
11:20 — 11:50	Mark Alekseev (Higher School of Economics, Faculty of Mathematics) On the topology and singularity theory of functions on two-dimensional sphere
11:50 — 12:20	Timur Sadykov (Plekhanov Russian University of Economics) Computing the Complement to the Amoeba of a Multivariate Polynomial
12:20 — 12:45	Egor Smirnov-Maltsev (Peoples' Friendship University of Russia) On a property of Young diagrams of maximum dimensions
12:45 — 14:45	Lunch in the Hotel Kamennooostrovskaya
14:45 — 18:30	Bus Excursion and visit to the islands of Saint Petersburg and Peter and Paul Cathedral. The bus will start from the Vyazemsky pereulok at 15:00
19:00 — 23:00	Conference dinner at the restaurant "Qwakker" (str. Akademika Pavlova 7)

April 21

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10:00 — 10:50	Alexander Batkhin , Alexander Bruno (Keldysh Institute of Applied Mathematics of RAS) Asymptotic forms of solutions to systems of nonlinear PDE
10:50 — 11:20	Coffee break
11:20 — 12:00	Nikolai Vavilov , Boris Kunyavskii, Andrei Lavrenov, Eugene Plotkin (St Petersburg State University) Bounded generation of Chevalley groups and Steinberg groups
12:00 — 12:30	Mikhail Babich (St. Petersburg Department of Steklov Mathematical Institute) On Jordan structure of nilpotent $\mathfrak{so}(N, \mathbb{C})$ -matrices.
12:30 — 13:00	Vasilii Duzhin , Artem Kuzmin, Nikolay Vassiliev (Saint Petersburg Electrotechnical University "LETI") Modeling of bumping routes in the RSK algorithm
13:00 — 15:00	Lunch in the Hotel Kamennooostrovskaya
15:00 — 15:30	Soloviev Sergei (Université de Toulouse 3, Institut de Recherche en Informatique de Toulouse) ToulST, a Pedagogical Tool for Logic, Algebra, and Discrete Mathematics
15:30 — 16:00	Andrei Maljutin (St.Petersburg Department of Steklov Institute of Mathematics) The (discrete) Heisenberg group and (restricted) Young's lattices
16:00 — 16:20	Coffee break
16:20 — 16:35	Alexander Yurkov , Nikolai Vavilov, Vladimir Khalin, (Saint Petersburg State University) Mathematics for non-mathematicians: memories of the future
16:35 — 16:50	Aleksandr Kotochigov (Saint Petersburg Electrotechnical University "LETI") TBA
16:50 — 17:20	Victoria Kazakevich , Sergey Kolonitskii, ElenaTolkacheva (Saint-Petersburg Electrotechnical University "LETI") Integration of tropical mathematics into software engineers' curriculum
17:20 — 17:50	Tatiana Myllari , Aleksandr Myllari (St. George's University) Maxima in teaching basic matrix algebra
18:00 — 19:30	Free round-table discussion, Closing the conference. Farewell party and coffee break