

Third International Conference Mathematics in Armenia

Dedicated to 80th anniversary of foundation of
Armenian National Academy of Sciences

2 - 8 July, 2023, Yerevan, Armenia

PROGRAM

3 JULY

10⁰⁰-10¹⁵ Opening Ceremony

PLENARY LECTURES – Chairman: G. Gevorkyan

10¹⁵-10⁵⁵ Przemyslaw Wojtaszczyk, Lipschitz widths

11⁰⁵-11⁴⁵ Alex Iosevich, Finite point configurations and connections with learning theory

11⁴⁵-12¹⁵ *Coffee Break*

PLENARY LECTURE – Chairman: A. Dalalyan

12¹⁵-12⁵⁵ Vladimir Spokoiny, TBA

13⁰⁰-14³⁰ *Lunch*

Section A – Chairman: A. Guterman

14³⁰-14⁵⁰ Varuzhan Atabekyan, On the spread of infinite 3/2-groups

14⁵⁰-15¹⁰ Vahagn Mikaelian, Embeddings of groups and the universal elements in free groups

15²⁰-15⁴⁰ Hayk Melikyan, Melikyan Algebras in Classification of Simple Modular Lie Algebras

15⁴⁰-16⁰⁰ Arman Bayramyan, On semigroup automorphisms of square matrices

Section B – Chairman: P. Borodin

- 14³⁰-14⁵⁰ Hakop Hakopian, On n-independent, n-correct, and GCn sets
- 14⁵⁰-15¹⁰ Ilya Krishtal, Predictive algorithms in dynamical sampling
- 15²⁰-15⁴⁰ Gegham Gevorkyan, Karen Keryan, Uniqueness of Ciesielski series with subsequence of partial sums converging to an integrable function
- 15⁴⁰-16⁰⁰ Zhirayr Avetisyan, Elements (functions) that are universal with respect to a minimal system
- 16⁰⁰-16²⁰ *Coffee Break*

Section A – Chairman: V. Atabekyan

- 16²⁰-16⁴⁰ Alexander Guterman, Matrix majorizations: their properties and applications
- 16⁴⁰-17⁰⁰ Nikolai Adrianov, On conservative polynomials over Q
- 17¹⁰-17³⁰ Alexei Galatenko, Efficient verification of some properties of finite quasigroups
- 17³⁰-17⁵⁰ Davit Harutyunyan, Yuri Movsisyan, On linearity of universal algebras with second order formulas
- 18⁰⁰-18²⁰ Albert Gevorgyan, Majorana representations of 3-transposition groups

Section B – Chairman: K. Keryan

- 16²⁰-16⁴⁰ Petr Borodin, Density of quantized approximations
- 16⁴⁰-17⁰⁰ Stepan Sargsyan, Levon Galoyan, On the uniform convergence of Fourier series in the double Walsh system by spheres
- 17¹⁰-17³⁰ Lusine Simonyan, Convergence of Fourier-Walsh double series in weighted $L^p_\mu[0; 1]^2$ spaces
- 17³⁰-17⁵⁰ Levon Hakobyan, Karen Keryan, Periodic orthonormal spline systems as bases and unconditional bases in $H^1(\mathbf{T})$

4 JULY

PLENARY LECTURES – Chairman: A. Sahakian

- 10⁰⁰-10⁴⁰ Akram Aldroubi, Dynamical Sampling and Frames
- 10⁵⁰-11³⁰ Gady Kozma, Irreducibility of random polynomials
- 11³⁰-12⁰⁰ *Coffee Break*

PLENARY LECTURE – Chairman: D. Gomes

12⁰⁰-12⁴⁰ Robert Mnatsakanov, Nonparametric Estimation in Some Statistical Inverse Problems

12⁴⁰-14³⁰ *Lunch*

Section A – Chairman: Hrant Hakobyan

14³⁰-14⁵⁰ Armenak Babayan, On a Dirichlet Problem for Higher Order Properly Elliptic Equation in the Class of Continuous Functions

14⁵⁰-15¹⁰ Hayk Mikayelyan, New monotonicity formulas for the curve shortening flow in \mathbb{R}^3

15²⁰-15⁴⁰ Irina Astashova, On qualitative properties and asymptotic equivalence of quasi-linear differential equations with power-law nonlinearities

15⁴⁰-16⁰⁰ Vahagn Nersesyan, Approximate controllability of PDEs using only a few Fourier modes

Section B – Chairman: B. Kashin

14³⁰-14⁵⁰ Eva Kopecka, Convergence of remote projections onto convex sets

14⁵⁰-15¹⁰ Elena Lebedeva, Density of refinement masks for framelets

15²⁰-15⁴⁰ Armen Vagharshakyan, Uniqueness theorems in analysis

15⁴⁰-16⁰⁰ Gevorg Mnatsakanyan, Qualitative estimates for the Carleson operator of the scattering transform

16⁰⁰-16²⁰ *Coffee Break*

Section A – Chairman: A. Babayan

16²⁰-16⁴⁰ Besiki Tabatadze, Temur Jangveladze, On one nonlinear fourth-order integro-differential parabolic equation

16⁴⁰-17⁰⁰ Mikheil Gagoshidze, Temur Jangveladze, On two systems of nonlinear partial differential equations

17¹⁰-17³⁰ Ani Tumanyan, On the Fredholm solvability of regular hypoelliptic operators

17³⁰-17⁵⁰ Mikayel Khachatryan, On correct solvability of Dirichlet problem in a half-space for regular equations with non-homogeneous boundary conditions

Section B – Chairman: V. Ohanyan

- 16²⁰-16⁴⁰ Mariam Haroutunian, Information-theoretic investigation of some security systems
- 16⁴⁰-17⁰⁰ Vartan Choulakian, Visualization of extremely sparse contingency tables by taxicab correspondence analysis: A case study
- 17¹⁰-17³⁰ Dmitry Kamzolov, Accelerated Adaptive Cubic Regularized Quasi-Newton Methods
- 17³⁰-17⁵⁰ Davit Martirosyan, Covariogram of a Quadrilateral Prism

5 JULY

PLENARY LECTURES – Chairman: A. Dalalyan

- 10⁰⁰-10⁴⁰ Peter Richtarik, On the 5th generation of local training methods in federated learning
- 10⁵⁰-11³⁰ Diogo Gomes, Machine learning architectures for price formation models with common noise
- 11³⁰-12⁰⁰ *Coffee Break*

PLENARY LECTURE – Chairman: B. Melnikov

- 12⁰⁰-12⁴⁰ Sos Aghaian, Single-Image Quality Assessment: Recent Developments and Future Trends
- 12⁴⁰-14³⁰ *Lunch*

Section A – Chairman: S. Aghaian

- 14³⁰-14⁵⁰ Boris Melnikov, Various problems arising when restoring a partially filled matrix of distances between DNA chains
- 14⁵⁰-15¹⁰ Levon Khachatryan, Controllable Video Generation with Diffusion Models
- 15²⁰-15⁴⁰ Abdurakhmon Sadiev, High-Probability Bounds for Stochastic Optimization and Variational Inequalities: the Case of Unbounded Variance
- 15⁴⁰-16⁰⁰ Kseniya Darovskaya, Deviation Identities on Solutions for a Class of the Obstacle Problems

Section B – Chairman: V. Mikayelyan

- 14³⁰-14⁵⁰ Victor Zvonilov, Chambers and walls in the spaces of real algebraic curves of small degree on a hyperboloid
- 14⁵⁰-15¹⁰ Natalia Denisova, On the Dynamics of Systems with Two Degrees of Freedom: the Case of Integrability
- 15²⁰-15⁴⁰ Linda Khachatryan, Duality of Energy and Probability in Models of Statistical Physics
- 15⁴⁰-16⁰⁰ Armen Bagdasaryan, Optimization and control of transport flows on Wardrop optimal networks: An evolutionary game dynamics approach
- 16⁰⁰-16²⁰ *Coffee Break*

Section A – Chairman: P. Richtarik

- 16²⁰-16⁴⁰ Egor Shulgin, Towards a Better Theoretical Understanding of Independent Subnetwork Training
- 16⁴⁰-17⁰⁰ Slavomir Hanzely, A Second-Order Optimization Method with Low-Rank Updates and Global $O\left(\frac{1}{k^2}\right)$ Convergence Rate
- 17¹⁰-17³⁰ Avetik Karagulyan, ELF: Federated Langevin Algorithms with Primal, Dual and Bidirectional Compression
- 17³⁰-17⁵⁰ Grigorii Malinovskii, Can 5th Generation Local Training Methods Support Client Sampling? Yes!
- 18⁰⁰-18²⁰ Artavazd Maranjyan, GradSkip: Communication-Accelerated Local Gradient Methods with Better Computational Complexity

Section B – Chairman: V. Zvonilov

- 16²⁰-16⁴⁰ Anton Pankratiev, Alexei Galatenko, Proper families of functions and fixed point networks
- 16⁴⁰-17⁰⁰ Sergey Davidov, Yuri Movsisyan, The Structure of Distributive d-algebras
- 17¹⁰-17³⁰ Elena Melnikova, A study of the union of semilattices on the set of subsets of grids of Waterloo language

6 JULY

PLENARY LECTURES – Chairman: A. Aldroubi

- 10⁰⁰-10⁴⁰ Markus Reiss, Nonparametric Statistics for SPDEs
- 10⁵⁰-11³⁰ Naira Hovakimyan, Safe Learning and Control with L₁ Adaptation
- 11³⁰-12⁰⁰ *Coffee Break*
- 12⁰⁰ Conference Photo in front of the YSU main building
- 12¹⁰ *Sightseeing tour to Garni and Geghard with a Lunch break*
- 19³⁰ *Banquet at the Restaurant “Felice” (address: 110 Bagrevand, Yerevan)*

7 JULY

PLENARY LECTURES – Chairman: P. Wojtaszczyk

- 10⁰⁰-10⁴⁰ Michael Ruzhansky, Pseudo-differential operators on groups
- 10⁵⁰-11³⁰ Grigori Karagulyan, On bounded oscillation operators
- 11³⁰-12⁰⁰ *Coffee Break*
- PLENARY LECTURE** – Chairman: V. Spokoiny
- 12⁰⁰-12⁴⁰ Alexandre Tsybakov, Gradient-free optimization from noisy data and nonparametric regression
- 12⁴⁰-14³⁰ *Lunch*

Section A – Chairman: E. Lebedeva

- 14³⁰-14⁵⁰ Ushangi Goginava, On the Boundedness and Convergence Properties of some Operator Sequences Associated with Walsh System
- 14⁵⁰-15¹⁰ Martin Grigoryan, Universal functions with respect to the trigonometric system
- 15²⁰-15⁴⁰ Boris Kashin, On absolute convergence of double trigonometric series
- 15⁴⁰-16⁰⁰ Sergo Episkoposian, On the L^p - greedy universal functions with respect to the generalized Walsh system

Section B – Chairman: Linda Khachatryan

- 14³⁰-14⁵⁰ Alexandr Zubkov, Blocks of representations of periplectic supergroups in positive characteristic
- 14⁵⁰-15¹⁰ Mamikon Ginovyan, On the Prediction Error for Singular Stationary Processes
- 15²⁰-15⁴⁰ Karen Gasparian, Some Question on the Theory of Optional Martingales
- 15⁴⁰-16⁰⁰ Rafik Khachatryan. On continuous and Lipschitz selections of multivalued mappings for a systems of inequalities for systems
- 16⁰⁰-16²⁰ *Coffee Break*

Section A – Chairman: H. Mikayelyan

- 16²⁰-16⁴⁰ Karen Avetisyan, Some extensions of Marcinkiewicz–Zygmund inequalities in the real ball
- 16⁴⁰-17⁰⁰ Arman Karapetyan, On weighted integral representations of holomorphic functions in tube domains over real Siegel domains
- 17¹⁰-17³⁰ Hrant Hakobyan, Quasisymmetric Uniformization of countably connected Metric Surfaces
- 17³⁰-17⁵⁰ Kanat Tulenov, On Fourier multipliers on non-commutative torus
- 18⁰⁰-18²⁰ Aleksandr Mkrtychyan, Multiple power series continuability into sectorial domain

Section B – Chairman: M. Reiss

- 16²⁰-16⁴⁰ Victor Ohanyan, Reconstruction of bodies in \mathbb{R}^n using tomographic methods of Stochastic Geometry
- 16⁴⁰-17⁰⁰ Rafik Aramyan, On the injectivity of the circular Radon transform, centered on a curve, on $C(\mathbb{R}^2)$
- 17¹⁰-17³⁰ Hayk Sukiasyan, Piecewise linear approximation of the solutions of boundary value problem
- 17³⁰-17⁵⁰ Karen Tatalyan, Monotone Programming: Moments Method for non parametric classes of distributions