

EMS Conference  
**Emil Artin International Conference**



Dedicated to the 120<sup>th</sup> Anniversary of Emil Artin  
(03.07.1898-20.12.1962)

Yerevan, the Republic of Armenia,  
May 27-June 2, 2018.



**PROGRAM**



Supported by the European Mathematical Society and  
International Mathematical Union

Yerevan 2018

## Monday May 28, 2018. Morning Session

8:00 – 9:00	<b>Registration</b> (Yerevan State University, Alex Manoogian 1, Department of Mathematics and Mechanics, Room 106)
	<b>Room A</b>
9:00 – 9:15	<b>Opening</b> Chair: Yuri Movsisyan (Armenia)
9:15 – 9:45	<b>Efim Zelmanov</b> Groups satisfying polynomial identities
9:45 – 10:15	<b>Alexey Parshin</b> Reciprocity laws and zeta-functions (from Emil Artin to Robert Langlands)
10:15 – 10:45	<b>Jonathan Smith</b> Artin's Induction Theorem and quasigroup characters
10:45 – 11:15	<b>Coffee Break</b> Chair: Alexander Guterman (Russia)
11:15 – 11:45	<b>Mikhail Volkov</b> Local finiteness for Green's relations in semigroup varieties
11:45 – 12:15	<b>Aleksandar Krapež</b> Quadratic functional equations on quasigroups and related systems
12:15 – 12:45	<b>Tullio Ceccherini-Silberstein</b> Algebraic ideas in dynamical systems
12:45 – 14:15	<b>Lunch</b>

## Monday May 28, 2018. Afternoon Session

Room A	
	Chair: Lilya Budaghyan (Norway)
14:15 – 14:45	<b>Hanamantagouda Sankappanavar</b> Implication Zroupoids: An Abstraction from De Morgan Algebras
14:45 – 15:15	<b>Anna Romanowska</b> Barycentric algebras and beyond
15:15 – 15:45	<b>Armen Sergeev</b> Quantum calculus
15:45 – 16:00	<b>Coffee Break</b>
Room A	Room B
	Chair: László Szalay (Slovakia)
16:00 – 16:20	<b>Sevak Mkrtchyan</b> Rigidity, graphs and Hausdorff dimension
16:20 – 16:40	<b>Vijay Kumar Bhat</b> Matrix rings as one sided $\sigma - (S, 1)$ rings
16:40 – 17:00	<b>A. Admiralova, V. Beniash-Kryvets</b> On varieties of two dimensional representations of a family of one-relator groups
17:00 – 17:20	<b>Nikolay Kaleyski</b> Changing Points of APN Functions
	Chair: Mariam Haroutunian (Armenia)
	<b>Alexey Yashunsky</b> On subalgebras of probability distributions over finite rings with unity
	<b>Marwan Said Abualrub</b> Long range diffusion-reaction model on population dynamics
	<b>Doost Ali Mojdeh</b> An extension of Roman dominating function
	<b>Kamal Aghigh</b> A survey on residual transcendental extensions of valuations
	<b>Welcome party</b>
18:00 – 19:00	“Caucasus”

## Tuesday May 29, 2018. Morning Session

### Room A

	Chair: Daniele Mundici (Italy)
9:00 – 9:30	<b>Ivan Shestakov</b> Speciality problem for Malcev algebras
9:30 – 10:00	<b>Yuri Movsisyan</b> Varieties and hypervarieties of algebras and new discrete mathematical functions
10:00 – 10:30	<b>Alexander Guterman</b> Positive resolution of Krauter conjecture on permanents
10:30 – 11:00	<b>Victor Pambuccian</b> Can geometry be reduced to algebra?
11:00 – 11:30	<b>Coffee Break</b>
	Chair: Anna Romanowska (Poland)
11:30 – 12:00	<b>Ara Basmajian</b> The type problem and the geometry of Riemann surfaces
12:00 – 12:30	<b>Victor Shcherbacov</b> On Bol-Moufang type identities
12:30 – 13:00	<b>Lilya Budaghyan</b> On Optimal Cryptographic Functions
13:00 – 13:30	<b>Levon Beklaryan</b> Groups of homeomorphisms of the line and the circle. Criteria for almost nilpotency
13:30 – 15:00	<b>Lunch</b>

**Tuesday May 29, 2018. Afternoon Session**

<b>Room A</b>	
	Chair: Ara Basmajian (USA)
15:00 – 15:30	<b>Anatoly Vershik</b> Asymptotical properties of the random walks on the discrete groups: absolute and Poisson–Furstenberg boundaries
15:30 – 16:00	<b>Pavel Gevorgyan</b> Dimension of shape maps
16:00 – 16:30	<b>László Szalay</b> Algorithm for solving the equations $2^n \pm \alpha \cdot 2^m + \alpha^2 = x^2$
16:30 – 17:00	<b>Megerdich Toomanian</b> On symmetric product finsler spaces
17:00 – 17:30	<b>Coffee Break</b>

	<b>Room A</b>	<b>Room B</b>
	Chair: J. D.H. Smith (USA)	Chair: V. Arzumianian (Armenia)
17:30 – 17:50	<b>Arman Darbinyan</b> Word and conjugacy problems in finitely generated groups	<b>V. Byrdin</b> On new basis properties of regular and real functions: parity, antiholomorphy, abstract afinite <b>C</b> -tree and polyholomorphy
17:50 – 18:10	<b>Volodymyr Gavrylkiv</b> Automorphism groups of superextensions of semigroups	<b>Majid Erfanian</b> Using of 2D Haar wavelets for solving of mixed 2D nonlinear Fredholm Volterra integral equation
18:10 – 18:30	<b>Evgeny Gordon</b> Finite approximations of topological algebraic structures	<b>Nelly Ajabyan</b> Description of chaotic patterns in models of coupled oscillators in terms of mutual information
18:30 – 18:50	<b>Jaroslav Guričan</b> Distributive lattices with strong endomorphism kernel property as direct sums	<b>Artur Ishkhanyan</b> Generalized hypergeometric solutions of the heun equations
18:50 – 19:10	<b>Sergey Davidov</b> Parastrophically Uncancellable Equations with Division and Regular Operations	

## Wednesday May 30, 2018. Morning Session

### Room A

	Chair: Mikhail Volkov (Russia)
9:00 – 9:30	<b>Daniele Mundici</b> Artinian AF $C^*$ -algebras whose Murray-von Neumann order of projections is a lattice
9:30 – 10:00	<b>Aram Arutyunov</b> Properties of Surjective Real Quadratic Maps
10:00 – 10:30	<b>Anatolii Zhuchok</b> On free $k$ -nilpotent $n$ -tuple semigroups
10:30 – 11:00	<b>Nikolay Romanovskiy</b> Rigid solvable groups. Algebraic geometry and model theory
11:00 – 11:30	<b>Coffee Break</b>
	Chair: Victor Pambuccian (USA)
11:30 – 12:00	<b>Grigor Barsegian</b> On some trends and principles related to arbitrary meromorphic or analytic functions in a given domain
12:00 – 12:30	<b>Alexander Bufetov</b> Conditional measures of determinantal point processes: the gibbs property and the completeness of reproducing kernels
12:30 – 13:00	<b>Hayk Melikyan</b> Restricted simple Lie algebras
13:00 – 13:30	<b>Ashot Gevorkyan</b> Formation of Massless Bose Particles with Spins 1 as a Result of Random Fluctuations of Vacuum Fields
13:30 – 14:30	<b>Lunch</b>

**Wednesday May 30, 2018. Afternoon Session**

	<b>Room A</b>	<b>Room B</b>
	Chair: Denys Pommeret (France)	Chair: Chung-Chun Yang (China)
14:30 – 14:50	<b>Abdus Salam, Wajih Ashraf, Noor Mohammad Khan</b> On Sandwich Sets In Legal Semigroups	<b>Alla Kuznetsova</b> On a class of extensions by compact operators
14:50 – 15:10	<b>Mihran Papikian</b> Drinfeld-Stuhler modules	<b>Mahmood Parsamanesh</b> A discrete-time SIVS epidemic model with constant population size and standard incidence rate
15:10 – 15:30	<b>Joshua Zelinsky</b> Counting ray class characters and the artin primitive root conjecture	<b>Yuliya Zelenyuk</b> Counting Symmetric Bracelets
15:30 – 16:00	<b>Coffee Break</b>	

	<b>Room A</b>		<b>Room B</b>
	Chair: Sevak Mkrtchyan (USA)		Chair: Aram Arutyunov (Russia)
16:00 – 16:20	<b>Hrant Hakobyan</b> Extremal length and some applications in Teichmuller theory and Hyperbolic geometry	16:00 – 16:20	<b>Vadim Kaimanovich</b> Circular slider graphs
16:20 – 16:40	<b>Diana Davidova</b> Magic action of o-polynomials and EA-equivalence of Niho bent functions	16:20 – 16:40	<b>N. Aharonyan</b> Two random points in a convex domain
16:40 – 16:55	<b>Albert Gevorgyan</b> On Medial Structures	16:40 – 17:00	<b>Samvel Darbinyan</b> Some remarks on Manoussakis' conjecture for a digraph to be hamiltonian
16:55 – 17:10	<b>Davit Shahnazaryan</b> Invertible binary algebras isotopic to a group or an abelian group	17:00 – 17:20	<b>G. Petrosyan, L. Ter-Vardanyan, A. Gaboutchian</b> Description of the biometric identification process of teeth with the help of Colored Petri Nets
17:10 – 17:25	<b>G. Kirakosyan</b> Interassociativity via hyperidentities	17:20 – 17:40	<b>H. Aslanyan</b> On endomorphisms of CC groups
17:25 – 17:45	<b>R.Gevorgyan, N. Margaryan</b> Existence of Maximum Entropy Problem Solution in a General N-Dimensional Case		

## Thursday May 31, 2018. Excursion

9:00 – 17:00	<b>Echmiadzin, Matenadaran, Garni, Geghard</b>
19:00 – 22:00	<b>Conference dinner, “Caucasus”</b>

## Friday June 1, 2018. Morning Session

Room A	
	Chair: Ivan Shestakov (Brazil)
9:00 – 9:30	<b>Denys Pommeret</b> Gaussianity test for mixture component distribution
9:30 – 10:00	<b>Pavol Zlatoš</b> A Uniform Stability Principle for Dual Lattices
10:00 – 10:30	<b>Chung-Chun Yang</b> Nevanlinna’s value distribution theory and its applications
10:30 – 11:00	<b>Boris Vernikov</b> On modular and cancellable elements of the lattice of semigroup varieties
11:00 – 11:30	<b>Coffee Break</b>
	Chair: Armen Sergeev (Russia)
	Poster Presentation
11:30 – 11:50	<b>Robert Mnatsakanov</b> On recovering the compositions of two distributions from moments: Some applications
11:30 – 11:50	<b>Hakob Israyelyan</b> About medial pairs of continuous and strictly monotonic binary functions
11:50 – 12:10	<b>Semyon Nigiyan</b> On arithmetical functions with indeterminate values of arguments
11:50 – 12:10	<b>Shant Navasardyan</b> The Independence of Axioms of Hypergroup over Group
12:10 – 12:30	<b>Onise Surmanidze</b> Universal Topological Abelian Groups
12:10 – 12:30	<b>Heghine Ghumashyan</b> Hyperidentities of associativity in semigroups
12:30 – 12:50	<b>Hakop Hakopian, Vahagn Vardanyan</b> On the usage of lines in $GC_n$ -sets
12:30 – 12:50	<b>Gevorg Mnatsakanyan</b> Estimates for Strong-Sparse Operators
12:50 – 13:10	<b>Ara Alexanian, A. Minasyan</b> An Upper Bound for the Complexity of Coset Covering of Subsets in a Finite Field
12:50 – 13:10	<b>Liana Abrahamyan</b> Characterization of hyperidentities defined by the equalities $((x, y), u, v) = (x, (y, u), v)$ and $((x, y), u, v) = (x, y, (u, v))$
13:10 – 14:30	<b>Lunch</b>



## Friday June 1, 2018. Afternoon Session

### Room A

	Chair: Vadim Kaimanovich (Canada)	Poster Presentation
14:30 – 14:50	<b>Rafik Aramyan</b> The sine representation of a convex body	<b>Vazgen Mikayelyan</b> The Gibbs phenomenon for Stromberg systems
14:50 – 15:10	<b>Yuri Hakopian</b> Computation of the Moore-Penrose Inverse for Bidiagonal Matrices	<b>G. Sahakyan</b> About some bilinear forms on the linear spaces of matrices
15:10 – 15:30	<b>E. Haroutunian, P. Hakobyan, A. Yesayan, N. Harutyunyan</b> Multiple hypotheses optimal testing with rejection option for many objects	<b>E. Yeghiazaryan</b> Asymptotic estimates of the number of solutions of systems of equations with determinable partial boolean functions
15:30 – 15:50	<b>M. Haroutunian, K. Mkhitarian, J. Mothe</b> Divergence measures for community detection evaluation	<b>Armen Avagyan</b> New investigating method in the problems hall and sum of three cubes
15:50 – 16:10	<b>Samvel Haroutunian</b> On special class of submanifolds in Pseudoeuclidean Rashevsky space $E_n^{2n}$	
16:10 – 16:40	<b>Coffee Break</b>	
	Chair: Onise Surmanidze (Georgia)	
16:40 – 17:00	<b>Victor Arzumanian, Suren Grigoryan</b> Reduced $C^*$ -algebra of a group graded system	
17:00 – 17:20	<b>V. Mirzoyan</b> Geometry of a class of semisymmetric submanifolds	
17:20 – 17:40	<b>V. Ohanyan</b> Orientation-dependent distributions of cross-sections	
17:40 – 18:00	<b>T. Harutyunyan</b> About some problems for regular differential operators	
18:00 – 18:20	<b>M. Karakhanyan</b> About algebraic equation with coefficients from the $\beta$ -uniform algebra $C_\beta(\omega)$	
18:20 – 18:40	<b>Closing remarks</b>	