

International Online Conference
Algebraic and geometric methods of analysis

Odesa-Kyiv, Ukraine,
May 27 - 30, 2024

<http://imath.kiev.ua/~topology/conf/agma2024>

Monday - May 27, 2024

09:00-09:15 **Opening**

Morning session

Chairman: Alexandr Prishlyak

09:15-09:55 - **Nicolò Zava** - [Applications of dimension theory to embeddability problems in topological data analysis: the case study of the Gromov-Hausdorff distance](#)

10:05-10:45 - **Marek Golasinski** - [Octonionic Stiefel manifolds and vector bundles](#)

10:50-11:10 - **Dmitry Bolotov** - [On 2-convex embeddings of non-orientable surfaces in four-dimensional Euclidean space](#)

Chairman: Sergiy Maksymenko

11:15-11:35 - **Eugene Petrov** - [Stability of vertical surfaces in three-dimensional sub-Riemannian manifolds](#)

11:45-12:05 - **Masahiro Watari** - [Topology of the punctual Hilbert schemes of monomial plane curve singularities](#)

12:10-12:30 - **Manami Niijima** - [On Beloch's curve that appears when solving real cubic with origami](#)

12:35-12:55 - **Volodymyr Prokip** - [About square roots of matrices over factorial domains](#)

Day session

Chairman: Sergiy Maksymenko

14:00-14:40 - **Meirav Amram** - [On the connection between algebraic, geometric, and topological methods in the classification of algebraic surfaces and curves](#)

Section A

Chairman: Eugene Petrov

14:50-15:10 - **Ляна Лотарець** - [Reeb vector field as isometric embedding](#)

15:15-15:35 - **Valerii Dryuma** - [Multidimension riemannian metrics in theory of Navier-Stokes equations](#)

15:40-16:00 - **Jaime Cuadros Valle** - [Examples of irregular Sasaki manifolds with no extremal metrics](#)

Chairman: Valerii Dryuma

16:05-16:25 - **Olena Shugailo** - [On some properties of affine ruled submanifolds](#)

16:35-16:55 - **Illia Ovtsynov** - [N-foci balls in hyperbolic geometry](#)

17:00-17:40 - **Julieth Saavedra** - [Ricci flow of \$G_2\$ -type real flag manifolds](#)

17:50-18:10 - **Federico Rossi** - [Einstein solvmanifolds not based on nilsolitons](#)

Section B

Chairman: Meirav Amram

14:50-15:30 - **Damian Maingi** - [Vector bundle construction via monads on multiprojective spaces](#)

15:40-16:00 - **Chrystopher Nehaniv** - [Axiomatic development of complexity theory for finite groups](#)

16:10-16:50 - **Yuriy Drozd** - [Bäckström and nodal curves](#)

Tuesday - May 28, 2024

Morning session

Chairman: Tetiana Obikhod

09:00-09:40 - **Daniel Lehmann** - Ordinary differential operators and connections. Application to curvilinear webs.

09:50-10:10 - **Piotr Mormul** - Non-simple strongly nilpotent distribution germs

10:15-10:55 - **Truong Tuyen** - A new Newton-type method and connections to Schroder theorem, Voronoi's diagrams, Newton's flows and the Riemann hypothesis

Chairman: Piotr Mormul

11:05-11:25 - **Stefan Ivkovic** - Disjoint dynamical properties of wedge operators

11:30-11:50 - **Giovanni Molica Bisci** - Symmetries, invariances, and boundary value problems

12:00-12:20 - **José Gálvez-Rodríguez** - Riemann Integration on a space with a fractal structure

12:25-13:05 - **Masao Jinzenji** - Elliptic virtual structure constants and generalizations of BCOV-Zinger formula to projective Fano hypersurfaces

Day session

Chairman: David Carfi

14:00-14:20 - **Raffaella Servadei** - On some nonlocal critical equations

14:25-15:05 - **Ruslan Skuratovskii** - Subwreath product as structure of normal subgroups of permutational wreath products

Section A

Chairman: David Carfi

15:15-15:35 - **Yaofeng Su** - Open billiards, chaos and limit theorems

15:40-16:00 - **Enzo Bonacci** - Mixing optimization in the batch crystallization of CAM

Chairman: Enzo Bonacci

16:10-16:30 - **Tetiana Obikhod** - Application of the dynamical system theory for counting black hole entropy of microstates

16:35-16:55 - **David Carfi** - Geometric and algebraic-topological structures in Schwartz distribution spaces for relativistic quantum mechanics

17:00-17:20 - **Jian Liu** - Persistent interaction topology in data analysis

Section B

Chairman: Ruslan Skuratovskii

15:15-15:35 - **Adriana Chornenka** - On topologization of the bicyclic monoid

15:40-16:00 - **Oleg Gutik** - On nontopologizable semigroups

16:10-16:30 - **Inna Pozdniakova** - On the semigroup of non-injective monoid endomorphisms of some extension of the bicyclic monoid

Chairman: Oleg Gutik

16:35-16:55 - **Marko Serivka** - On the semigroup of injective monoid endomorphisms of a some extension of the bicyclic semigroup

17:00-17:20 - **Temitope Jaiyeola** - On semi-symmetric (α, β, γ) -inverse quasigroup

17:25-17:45 - **Mbekezeli Nxumalo** - On (i, j) -Baire Bilocales

Wednesday - May 29, 2024

Morning session

Chairman: Olena Karlova

09:00-09:20 - **Taras Banakh** - Algebra in fields extended by infinity

09:25-10:05 - **Ioannis Diamantis** - Bonded knots and applications

10:10-10:30 - **Atsuki Kuramoto** - The density of Borromean primes

10:35-10:55 - **Hirotsuka Tashiro** - Hasse norm theorem for 3-manifolds

Chairman: Stefan Ivkovic

11:05-11:25 - **Alexandr Prishlyak** - Structure of gradient bifurcations on compact 2-manifolds

11:35-11:55 - **Naoki Kitazawa** - On explicit reconstruction of real algebraic maps locally like moment maps

12:00-12:20 - **Bohdan Feshchenko** - Normal forms of functions with degenerate critical points on surfaces whose stabilizers are homotopically non-trivial

12:25-12:45 - **Igor Vlasenko** - Chain-regular and regular components of the wandering set of surface homeomorphisms

12:50-13:10 - **Mykola Lysynskiy** - Classification of smooth structures on line with two origins

Day session

Chairman: Mykola Lysynskiy

14:00-14:40 - **Sergiy Maksymenko** - Homotopy types of stabilizers of Morse-Bott functions on 3-manifolds

14:45-15:05 - **Łukasz Michalak** - Algebraic periods of surface homeomorphisms

Section A

Chairman: Mykola Lysynskiy

15:15-15:35 - **Ioannis Gkeneralis** - Topological rigidity of Quoric Manifolds

15:45-16:05 - **Bohdan Mazhar** - Deformational properties of smooth functions on Klein bottle

Chairman: Bohdan Mazhar

16:20-17:00 - **Kaveh Eftekharinasab** - Interplay of global implicit functions and critical point theory in infinite dimensional spaces

17:10-17:30 - **Volodymyr Mykhaylyuk** - Extending of partial metric

17:35-17:55 - **Mehsin Atteya** - Multiplicative b -homogeneralized derivations of associative rings

18:00-18:20 - **Olena Karlova** - About Rolewicz theorem on inversion of continuous bijection between F-spaces

18:25-18:45 - **Brahim El Alaoui** - Partitioning problem and defensive alliances in the context of zero-divisor graphs of rings

Section B

Chairman: Hakim Monaim

15:15-15:35 - **Akifumi Sako** - Solutions of N -body harmonic oscillators and Calogero model using Φ^4 matrix model

15:40-16:00 - **Maria Rosaria Formica** - Nonlinear interpolation of α -Holderian mappings with applications to quasilinear PDEs

16:10-16:30 - **Zoriana Novosad** - Hypercyclicity of symmetric composition operator

Chairman: Maria Rosaria Formica

16:35-16:55 - **Hakim Monaim** - Wigner-Ville distribution associated with quadratic Clifford-Fourier transform

17:05-17:25 - **Kateryna Khalina** - On boundary controllability problems for the heat equation with variable coefficients on a half-axis

17:30-17:50 - **Imane Labghail** - Ahlfors-David regular sets, point spectrum and Dirichlet spaces

17:55-18:15 - **Bruce Lietap Ndi** - Separability, linearization and Lax pair of $a_4^{(2)}$ Toda lattice

Thursday - May 30, 2024

Morning session

Chairman: Omer Gok

09:00-09:40 - **Naoya Ando** - Nilpotent structures of oriented neutral vector bundles

09:45-10:25 - **Katherina von Dichter** - Inequalities involving means in high-dimensional spaces

10:35-11:15 - **Hanci Chi** - Existence and non-existence of cohomogeneity one Einstein metrics

Chairman: Bohdan Feshchenko

11:20-11:40 - **Canan Vural** - Dynamics of influenza with the rates of vaccination and treatment

11:45-12:05 - **Omer Gok** - On the multiplicative order convergence on Banach lattice f -algebras

12:15-12:35 - **Anatoliy Petravchuk** - Action of derivations on polynomials and on Jacobian derivations

12:40-13:00 - **Oleksandra Vinnichenko** - Geometric and algebraic properties of dispersionless Nizhnik equation

Day session

Chairman: Valerii Tarhonskyi

14:00-14:40 - **Antti Rasila** - Results on boundary behavior of quasiregular and harmonic mappings

Section A

Chairman: Valerii Tarhonskyi

14:50-15:10 - **Mariia Serdiuk** - Fundamental solution of non-Archimedean pseudo-differential equation of p -adic argument

15:15-15:35 - **Evgeny Sevost'yanov** - On boundary estimates of mappings, acting onto domains with a locally quasiconformal boundary

15:40-16:20 - **Jan Lang** - Quality of non-compactness for optimal Sobolev embeddings

Chairman: Evgeny Sevost'yanov

16:25-16:45 - **Mariia Stefanchuk** - On the asymptotic behavior of solutions to nonlinear Beltrami equation

16:50-17:10 - **Valerii Tarhonskyi** - On the inverse Poletsky inequality with a cotangent dilatation

17:15-17:35 - **Victoria Desyatka** - On singularities of mappings with a Lebesgue integrable majorant

Section B

Chairman: Serhii Koval

14:50-15:10 - **Yevhenii Chapovskyi** - Lie subalgebras of $\mathfrak{sl}_3(\mathbb{R})$ revisited

15:20-15:40 - **Maryna Nesterenko** - Construction and application of quasicrystals

15:45-16:05 - **Murphy Egwe** - Spherical analysis on fuzzy Lie groups

Chairman: Maryna Nesterenko

16:10-16:30 - **Vasyl Fedorchuk** - On the construction and classification of the common invariant solutions for the $(1 + 3)$ -dimensional Euler-Lagrange-Born-Infeld and homogeneous Monge-Ampere equations

16:35-16:55 - **Serhii Koval** - Group classification of Kolmogorov backward equations with power diffusivity

17:40-17:50 **Closing**