

International Online Conference
Algebraic and geometric methods of analysis

Odesa-Kyiv, Ukraine,
May 26 - 29, 2025

<http://imath.kiev.ua/~topology/conf/agma2025>

Monday - May 26, 2025

09:00-09:10 **Opening**

Morning session

Chair: Sergiy Maksymenko

09:10-09:40 - **Sinyukova Helena** - 100th anniversary of Sinyukov Mykola Stepanovych (1925-1992)

09:45-10:25 - **Klingenberg Wilhelm** - [On umbilic points of complete surfaces](#)

10:30-11:10 - **Correia Corentin** - [Isoperimetric profile and quantitative orbit equivalence for lamplighter-like groups](#)

11:15-11:35 - **Orzechowski Kamil** - [Translation length formula for two-generated groups acting on trees](#)

Chair: Wilhelm Klingenberg

11:40-12:20 - **Gallivanone Simone** - [Szegő and Poisson kernels on Grauert tubes and Lie group actions](#)

12:25-13:05 - **Maksymenko Sergiy** - [Differentialbe structures on one-dimensional non-Hausdorff manifolds](#)

Day session

Section A

Chair: Iryna Kuznietsova

14:00-14:20 - **Prishlyak Alexandr** - [Topological structure of pre-Hamiltonian flows on the projective plane](#)

14:25-14:45 - **Ovtsynov Illia** - [The structure of Morse and codimension one gradient flows on the sphere with holes](#)

14:50-15:10 - **Kitazawa Naoki** - [Reconstructing Morse functions with prescribed preimages of single points](#)

Chair: Illia Ovtsynov

15:15-15:35 - **Michalak Łukasz** - [Symplectic representation of surface mapping classes of algebraically finite type](#)

15:40-16:00 - **Feshchenko Bohdan** - [Normal forms of Morse-Bott functions without saddles on compact oriented surfaces](#)

16:05-16:25 - **Kuznietsova Iryna** - [Homotopy properties of Morse functions on non-orientable surfaces](#)

16:30-16:50 - **Jalled Abdessami** - [On the Brody hyperbolicity](#)

Section B

Chair: Enzo Bonacci

14:00-14:40 - **Pranav Pratyush** - [Testing cosmological principle via homology analysis of cosmic microwave background](#)

14:45-15:05 - **Obikhod Tetiana** - [Wilson loops as a device for studying phase transitions and conductivity](#)

Chair: Tetiana Obikhod

15:10-15:30 - **Bonacci Enzo** - [Seeding optimization in the batch crystallization of CAM](#)

15:35-15:55 - **Bulnes Francisco** - [Singularities, torsion, Cauchy integrals and their spectra on space-time III](#)

16:00-16:40 - **Ryabogin Dmitry** - [On floating bodies and related topics](#)

Tuesday - May 27, 2025

Morning session

Chair: Alexandr Prishlyak

09:00-09:40 - **Bezushchak Oksana** - Clifford algebras of infinite-dimensional vector spaces

09:45-10:05 - **Bolotov Dmitry** - Dual Thurston norm and Euler classes of foliations on closed 3-manifolds

10:10-10:50 - **Pratsiovytyi Mykola** - Тополого-метричний і фрактальний аналіз нескінченних згорток Бернуллі, керованих збіжними додатними рядами

Chair: Kaveh Eftekharinasab

10:55-11:35 - **Ustimenko Vasyl** - On geometries of Kac-Moody groups and symbolic computations

12:25-13:05 - **Gerasimenko Viktor** - Centenary of Quantum theory: What comes next?

Day session

Section A

Chair: Valerii Tarhonskyi

14:00-14:20 - **Sevast'yanov Evgeny** - On Koebe-Bloch theorem for mappings with inverse Poletsky inequality

14:25-14:45 - **Desyatka Victoria** - On boundary behavior of unclosed mappings with moduli inequality

14:50-15:10 - **Kovba Zarina** - On the prime ends extension of unclosed inverse mappings

15:15-15:35 - **Romash Denys** - On lower distance estimates for one class of homeomorphisms

Chair: Evgeny Sevast'yanov

15:35-15:55 - **Stefanchuk Mariia** - On the asymptotic behavior at infinity of solutions of the Beltrami equation with two characteristics

16:00-16:20 - **Tarhonskyi Valerii** - On convergence of homeomorphisms with inverse Poletsky inequality

16:25-16:45 - **von Dichter Katherina** - Minkowski chirality

16:50-17:10 - **Stokolos Alex** - Fejer's method in extremal problems of geometric complex analysis

17:15-17:35 - **Foka Marius Landry** - Schouten like metrics on five dimensional nilpotent Lie groups

Section B

14:00-14:40 - **Ando Naoya** - Surfaces with flat normal connection in 4-dimensional space forms

14:45-15:25 - **Chi Hanci** - Infinitely many non-collapsed steady Ricci solitons on complex line bundles

15:30-15:50 - **Havrylenko Ihor** - Stability of minimal surfaces in three-dimensional sub-Riemannian Lie groups

Chair: Ihor Havrylenko

15:55-16:15 - **Shugailo Olena** - On ruled affine submanifolds with two-dimensional base

16:20-16:40 - **Petrov Eugene** - Constant mean curvature surfaces with harmonic Gauss maps in three-dimensional Lie groups

Wednesday - May 28, 2025

Morning session

Chair: Iryna Kuznietsova

09:00-09:40 - **Amram Meirav** - Deformations, fundamental groups and Zariski pairs in classification of algebraic curves and surfaces

09:45-10:05 - **Mo Jia Li** - The arithmetic and geometric properties of rational surfaces

10:10-10:30 - **Watari Masahiro** - Motivic Hilbert zeta functions for curve singularities and related invariants

10:35-11:15 - **Diamantis Ioannis** - Bonded knots and bonded braids

Chair: Meirav Amram

11:20-11:40 - **Sakamoto Honami** - Minimal $SL_2\mathbb{Z}_p$ -representations and odd-th cyclic covers of genus one two-bridge knots

11:45-12:05 - **Ueki Jun** - Anabelian geometry in arithmetic topology

12:10-12:50 - **Eftekharinasab Kaveh** - Spray-invariant sets in infinite-dimensional manifolds

Day session

Section A

Chair: Ruslan Skuratovskii

13:30-13:50 - **Gabrielyan Saak** - A Banach space characterization of (sequentially) Ascoli spaces

13:55-14:15 - **Gutik Oleg** - On non-topologizable semigroups of the bicyclic monoid

14:20-14:40 - **Chornenka Adriana** - On topologization of subsemigroups of the bicyclic monoid

14:45-15:05 - **Penza Sher-Ali** - On E-endomorphisms of the upper subsemigroup of the bicyclic monoid

15:10-15:30 - **Atteya Mehsin** - Homogeneous homoderivations on graded associative rings

Chair: Mehsin Atteya

15:35-15:55 - **Paul Monika** - State space of compact quantum groups

16:00-16:40 - **Skuratovskii Ruslan** - Normal subgroups of iterated wreath products of symmetric groups and alternating with symmetric groups

16:45-17:05 - **Jaiyeola Temitope** - Analysis of weak associativity in some hyper-algebraic structures that represent dismutation reactions

17:10-17:30 - **Kopeliovich Yaacov** - Explicit moduli calculations on Hurwitz moduli spaces and applications to moduli dimension questions

17:35-17:55 - **Cuadros Jaime** - Local moduli of Sasaki-Einstein metrics of rational homology 7-spheres

Section B

Chair: Oleksandra Vinnichenko

13:30-14:10 - **Fardigola Larissa** - On controllability problems for the heat equation on a half-plane controlled by the Neumann boundary condition with a point-wise control

14:15-14:35 - **Nesterenko Maryna** - On realizations of Lie algebras

14:40-15:00 - **Pan-Collantes Antonio** - $\mathcal{C}^\infty$ -structures approach to travelling wave solutions of the gKdV equation

15:05-15:45 - **Popovych Roman** - Generalized symmetries of Burgers equation and related algebraic structures

Chair: Maryna Nesterenko

15:50-16:10 - **Bernatska Julia** - Thomae formulas in application to finding reality conditions for integrable hierarchies

16:15-16:35 - **Maniraguha Jean de Dieu** - Equivalence groupoids and group classification of (1+3)-dimensional nonlinear Schrödinger equations

16:40-17:00 - **Vinnichenko Oleksandra** - Hidden symmetry-like structures of dispersionless Nizhnik equation

17:05-17:25 - **Koval Serhii** - Weyl algebras and generalized symmetries

Thursday - May 29, 2025

Morning session

Chair: Omer Gok

09:00-09:40 - **Gogatishvili Amiran** - [Weighted inequalities for sub-monotone functionals](#)

09:45-10:05 - **Carfi David** - [From Maxwell's equations to relativistic Schrödinger equation via Schwartz linear algebra and Killing vector fields on the 2-sphere](#)

10:10-10:30 - **Skurikhin Roman** - [Categorical version of Shilov's theorem on closed equivalence relations](#)

Chair: Roman Skurikhin

10:35-10:55 - **Ivkovic Stefan** - [Dynamics of operators on the space of Radon measures](#)

11:00-11:20 - **Lopez-Martinez Antoni** - [The solution to a problem in linear chain recurrence](#)

11:25-11:45 - **Kobayashi Reo** - [On the p-adic class numbers of \$\mathbb{Z}\$ -covers of graphs](#)

Chair: David Carfi

11:50-12:10 - **Novosad Zoriana** - [Chaotic properties of weighted shifts](#)

12:15-12:35 - **Gok Omer** - [On collectively AM, b-AM, KB, quasi-KB sets of operators](#)

Chair: Zoriana Novosad

12:40-13:00 - **Radillo-Murguia Blanca** - [Directional maximal operators and Kakeya-type sets](#)

13:05-13:25 - **Mormul Piotr** - [Numerical moduli in the geometry of \[special\] multi-flags](#)

13:30-13:50 - **Braverman Maxim** - [The semi-classical Weyl law on complete manifolds](#)

13:50-14:00 **Closing**