

Quantum Theory and Symmetries

Conference program

28.08.2025

Main Building 5th floor

Opening ceremony

Plenary session

10:00-10:45

A Unified Algebraic Framework for Generalized Quantum Statistics

Neli Stoilova (Bulgaria)

11:15-12:00

Free field construction the 4-dimensional Heterotic string compactified on Calabi-Yau manifolds of Berglund-Hubsch type

Alexander Belavin (Russia)

12:00-12:45

A Z3-symmetric Quantum Chromodynamics with Asymptotic Confinement

Richard Kerner Online (France)

Main Building 5th floor

Section A

14:00-14:30

Applying a computational algebra and data science pipeline to Clifford algebra and cluster algebra data

Pierre-Philippe Dechant (Leeds)

14:30-15:00

Integrable dissipative Bose-Hubbard model

Junpeng Cao (China)

15:00-15:30

Super invariants and super Plücker relations

Barrena Maria Antonia Lledo (Spain)

15:30-16:00

WKB approximation to boson dark matter

L.C.Rohana Wijewardhana (United States)

Online

16:30-17:00

Non-relativistic Approximation for a Spin 3/2 Particle, in Presence of Electromagnetic and Gravitational Fields

Alina Ivashkevich (Belarus)

17:00-17:30

Algebraic methods to solve the Yang-Baxter and higher simplex equations

Pramod Padmanabhan (India)

17:30-18:00	Homological properties of Quantum Heisenberg Algebras Hector Suarez (Colombia)
18:00-18:30	Duality for contractions of Lie algebras Eyal Subag (Israel) Online
	YSU Hall after Palyan Section B
14:00-14:30	Refined Painleve/gauge theory correspondence and quantum tau functions Anton Shchepochkin (Italy)
14:30-15:00	Quantum Miniatures: Quantum Theories with Restricted Sets of Observables Stefan Weigert (United Kingdom)
15:00-15:30	Semiclassical approach to form factors in integrable models of quantum field theory Michael Lashkevich (Russia)
15:30-16:00	Two-time physics, Carroll symmetry and Jordan algebras Alexander Kamenshchik (Italy)
16:30-17:00	Instabilities of near-extremal black branes Alex Buchel (Canada)
17:00-17:30	Cnoidal black holes and integrable symmetries in AdS_3 gravity Francisco Correa (Chile)
17:30-18:00	Modular bootstrap for BPS black holes Sergey Alexandrov (France)
18:00-18:30	Unification of Conformal and Fuzzy Gravities with Internal Interactions George Zoupanos (Greece) Online

29.08.2025

	Main Building 5th floor Plenary session
9:00-9:45	Quantization of the Theory of Topological Insulators Armen Sergeev (Russia) Online

9:45-10:30	N = 2 Higher Spins by Harmonic Superspace Methods Evgeny Ivanov (Dubna)
11:00-11:45	On various aspects of S-move matrix in N=1 super Liouville field theory Gor Sarkissian (Armenia, Dubna)
11:45-12:30	Entanglement entropy production in deep inelastic scattering Vladimir Korepin (United States) Online
	Main Building 5th floor Section A
14:00-14:30	Self-Confined Quarks: A General Relativistic Perspective on Strong Nuclear Forces Yousef Sobouti (Iran)
14:30-15:00	Coulomb-Stark problem for classical spinning particle Dmitry Kaparulin (Russia)
15:00-15:30	Landau Levels and Newton-Hooke Dualities Todor Popov (Bulgaria)
15:30-16:00	Inhomogeneous Abstract Evolution Equations in Besov Spaces Yoritaka Iwata (Japan) Online
16:30-17:00	Separation of variables for the Schroedinger equation with vector and scalar potentials Giovanni Rastelli (Italy) Online
17:00-17:30	Stability for poset representation Robinson Serna (Colombia)
17:30-18:00	On the imaginary gauge in Zernike system and Higgs oscillator Vahagn Abgaryan (Armenia)
18:00-18:30	Zernike system on hyperboloids Alexander Yakhno (Mexico) Online
	YSU Hall after Palyan Section B

14:00-14:30	Quadratic Dunkl algebras and symmetries of rational Calogero models Tigran Hakobyan (Armenia)
14:30-15:00	Definitional and Computational Formulas in Quantum Mechanics Paolo Rocchii (Italy)
15:00-15:30	R-matrix valued Lax pair for elliptic Calogero systems and related integrable long-range spin chains Maria Matushko (Russia)
15:30-16:00	Interpolating trigonometric R-matrices for adjoint representations Bruce Westbury (United Kingdom)
16:30-17:00	Equations and recursive relation for the S-matrix of Liouville theory George Jorjadze (Georgia) Online
17:00-17:30	Exact expressions for the 5-Point Liouville conformal block with a level-two degenerate field insertion Hasmik Poghosyan (Armenia)
17:30-18:00	Lie-Poisson electrodynamics Maxim Kurkov (Italy)
18:00-18:30	Root-TT Deformations on Causal Self-Dual Electrodynamic Theories Hossin Babaei Aghbolagh (China) Online

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10:00-17:00	Khor Virap, Noravank, Areni Excursion
18:30-23:00	Banquet – 7Qar, Garni Banquet

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	Main Building 5th floor Plenary session
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9:00-9:45	Invariants of knots with a flat connection in the complement Nicolai Reshetikhin (China) Online
9:45-10:30	Representations of the Poincare Group and Relativistic Fields Alexey Isaev (Dubna) Online
11:00-11:45	Quantum Integrability in Finite Hilbert Spaces Emil Yuzbashyan (United States)
11:45-12:30	Interacting spinning black holes and massive higher spin fields Mirian Tsulaia (Japan) Online
Main Building 5th floor Section A	
14:00-14:30	Generalized relativistic second-order dissipative hydrodynamics: coupling different rank tensors Arus Harutyunyan (Armenia)
14:30-15:00	Propagators for Negative-energy and Tachyonic Solutions of Relativistic Equations Valeriy Dvoeglazov (Mexico) Online
15:00-15:30	Capturing magic angles in twisted bilayer graphene from information theory markers Alberto Mayorgas (Spain)
15:30-16:00	On the registration of massless Bose particle-hion: A new mechanism of vacuum polarization Grigor Movsesyan (Armenia)
16:30-17:00	C N -Smorodinsky-Winternitz system and CP N -Rosochatius system Hovhannes Shmavonyan (Armenia)
17:00-17:30	OPE and Thermal Holography Andrei Parnachev (Ireland)
17:30-18:00	New equation for a spin 1/2 particle with three additional characteristics in presence of electromagnetic and gravitational fields Viktor Red'kov (Belarus)

18:00-18:30	Invariant classes of framed meromorphic functions on foliations Alexander Zuevsky (Czech Republic) Online
	YSU Hall after Palyan Section B
14:00-14:30	Resolution of singularities in infinite-derivative gravity theories Alexey Koshelev (China)
14:30-15:00	Casimir effect for the Proca field Aram Saharian (Armenia)
15:00-15:30	Democracy in field theory Karapet Mkrtchyan (United Kingdom)
15:30-16:00	Uncertainty Relation for Retarded Gravity Asher Yahalom (Israel) Online
16:30-17:00	New slow-roll approximations for modified gravity inflationary models Sergey Vernov (Russia)
17:00-17:30	On beta-function of supersymmetric sigma models Mikhail Alfimov (Russia)
17:30-18:00	Gravitational Edge Modes in 3d gravity Sejin Kim (South Korea)
18:00-18:30	Adapting the Kontsevich graph calculus to the class of NambuPoisson brackets: when the invisible becomes crucial Mollie Susan Jagoe Brown (The Netherlands) Online

01.09.2025

	Main Building 5th floor Plenary session
09:00-09:45	On A Unified Derivation of Internal and Relativistic Symmetries from Projective Geometry Rolf Dahm (Germany)
09:45-10:30	Solitons in Quantum Field Theory

Jarah Evslin (China)

11:00-11:45 **Supersymmetry without fermions: the Nicolai map**
Olaf Lechtenfeld (Germany)

11:45-12:30 **Langlands Duality and Invariant Differential Operators**
Vladimir Dobrev (Bulgaria)
Online

Main Building 5th floor
Section A

14:00-14:30 **(Anti-)Stokes Scattering on the Domain Wall String**
Hui Liu (Armenia)

14:30-15:00 **Reshetikhins Condition Implies Quantum Integrability**
Zhao Zhang (Norway)

15:00-15:30 **Hybrid Integrable Systems**
Ivan Sechin (China)

15:30-16:00 **Generalized classical and quantum Zernike Hamiltonians**
Francisco J. Herranz (Spain)

16:30-17:00 **Schwarzian Integrals and Decomposition of Wiener Measure on Orbits of Group
Diffeomorphisms Action**
Evgeniy Shavgulidze (Russia)

17:00-17:30 **Exploring X-states entanglement/separability and the sign-definiteness of the
Wigner functions of a pair of qubits**
Astghik Torosyan (Armenia, Dubna)

17:30-18:00 **N-bein formalism for the parameter space of quantum geometry**
Carlos Andres Velasquez Escamilla (Mexico)

18:00-18:30 **Bogoliubov method in desription of nuclear rotation**
Elena Kolganova (Dubna)

YSU Hall after Palyan
Section B

14:00-14:30 **The cosmological dynamics of $f(R+\mu G)$ models**
Ekaterina Pozdeeva (Russia)

14:30-15:00

Interrelations among Solvable Problems in Quantum Mechanics and Quantization
Rules related to Classical Orthogonal Polynomials
Yuta Nasuda (Japan)

15:00-15:30 **Bridging Gauge Theories and Spin Models**
Mustafa Mullahasanoglu (Turkey)
Online

15:30-16:00 **Identities with determinants: Jacobians and Wronskians**
Arthemy Kiselev (The Netherlands)
Online

16:30-17:00 **High-spin measurements in an arbitrary two-qudit state**
Christian Louis Hanotel (Russia)

17:00-17:30 **Supersymmetric 1D sigma models via spin chains**
Dmitri Bykov (Russia)

17:30-18:00 **Integrable chiral deformation of the Heisenberg spin chain**
Chenan Wei (Armenia)

18:00-18:30 **Quantum motion of a single photon and the probability of its transition to one of the Bell states**
Ashot Gevorkyan (Armenia)

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