

Georgian Mathematical Union
Batumi Shota Rustaveli State University

**XVI INTERNATIONAL CONFERENCE
OF THE GEORGIAN MATHEMATICAL UNION**

PROGRAM

Batumi, August 31 - September 5
2026

Sponsors

- ☞ **Batumi Shota Rustaveli State University**
- ☞ **Ministry of Education and Sports of the Autonomous Republic of Adjara**
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Conference Thematic Sessions and Organizers

- Algebra and Number Theory (Emzar Khmaladze, Bachuki Mesablishvili, Ketevan Shavgulidze)
- Differential and Integral Equations, and Their Applications (Otar Chkadua, Roland Duduchava, Nugzar Shavlakadze)
- Geometry and Topology (Malkhaz Bakuradze, Vladimir Baladze, George Khimshiashvili)
- Logic, Language, Artificial Intelligence (Besik Dundua, Konstantine Pkhakadze, Mikheil Rukhaia)
- Mathematical Education and History of Mathematics (Guram Gogishvili, Teimuraz Vepkhvadze)
- Mathematical Logic and Discrete Mathematics (Alexander Kharazishvili, Aleks Kirtadze, Roland Omanadze)
- Mathematical Modeling and Numerical Analysis (Temur Chilachava, Temur Jangveladze, Hamlet Meladze)
- Theoretical Physics (Alexander Kvinikhidze)
- Probability Theory and Statistics, Financial Mathematics (Vakhtang Kvaratskhelia, Omar Purtukhia, Vaja Tarieladze)
- Real and Complex Analysis (Lasha Ephremidze, Giorgi Oniani, George Tephnadze)
- Mini symposium: Formal groups, cobordism and related structures (Organizer: Malkhaz Bakuradze)
- Mini symposium: Algebraic Geometry and Model Theory of Groups and Rings (Organizers: Mikheil Amaglobeli, Tengiz Bokelavadze)
- Mini symposium: Computer Science, Data Science and Artificial Intelligence: Theory, Practice, and Education (Organizer: Magda Tsintsadze)

Editors: Guram Gogishvili, Tinatin Davitashvili

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Schedule of the Conference

August 30, Sunday (Arrival Day to Batumi)

August 31, Monday

$9^{00} : 9^{30}$	Registration
$9^{30} : 10^{00}$	Opening of the Conference Greetings: Alexander Meskhi - Chair of the Organizing Committee, President of the Georgian Mathematical Union; Maia Khajishvili - Minister of Education and Sports of the Autonomous Republic of Adjara; Tite Aroshidze - Rector of Batumi Shota Rustaveli State University
Plenary Room	Chairman: Alexander Meskhi
$10^{00} : 10^{50}$	Efim Zelmanov. Growth and complexity functions
$10^{50} : 11^{40}$	Joachim Toft. Orlicz convolutions in qha with applications to Orlicz Schatten properties for Toeplitz operators
$11^{40} : 12^{20}$	Coffee break
$12^{20} : 13^{10}$	Michael Ruzhansky. Evolution PDEs with strong singularities
$13^{10} : 14^{00}$	Gabriel R. Barrenechea, Philip L. Lederer, <u>Andreas Rupp</u>. A bound-preserving and conservative enriched Galerkin method for elliptic problems
$14^{00} : 14^{30}$	Information Lecture: Ketevan Tsertsvadze
Room 2	Chairman: Anzor Beridze
$13^{10} : 14^{00}$	Alexei Miasnikov. Diophantine problem in groups and rings

14 ³⁰ : 16 ⁰⁰	Lunch
16 ⁰⁰ : 17 ¹⁵	Parallel Sessions
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 19 ⁰⁰	Parallel Sessions

September 1, Tuesday

Plenary Room	Chairman: Giorgi Oniani
10 ⁰⁰ : 10 ⁵⁰	Ilya Spitkovsky. On the current state of Gau-Wang-Wu conjecture
10 ⁵⁰ : 11 ⁴⁰	<u>Olga Kharlampovich</u>, Alina Vdovina. Equations in products of free groups and 3-manifold groups
11 ⁴⁰ : 12 ²⁰	Coffee break
12 ²⁰ : 13 ¹⁰	<u>Sergey Tikhonov</u>, Miquel Suacedo. Revisiting Fourier inequalities
13 ¹⁰ : 14 ⁰⁰	Guillermo P. Curbera. On the Söhlgen problem for the finite Hilbert transform
Room 2	Chairman: Tengiz Bokelavadze
12 ²⁰ : 13 ¹⁰	<u>Giovanni Falcone</u>, Alfonso Di Bartolo, Kıvanc Ersoy. Riemann–Roch bases in Kummer extensions
13 ¹⁰ : 14 ⁰⁰	Jerzy Kąkol. About Banach-Mazur’s problem from the 1930s. Classical and new results
14 ³⁰ : 16 ⁰⁰	Lunch
16 ⁰⁰ : 17 ¹⁵	Parallel Sessions
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 19 ⁰⁰	Parallel Sessions
Online	Chairman: Lasha Ephremidze
19 ⁰⁰ : 19 ⁵⁰	Yuri Movsisyan. Hyperidentities in action

September 2, Wednesday

Plenary Room	Chairman: Lasha Ephremidze
10 ⁰⁰ : 10 ⁵⁰	Mieczysław Mastyło. Maximal regularity for abstract Cauchy problems
10 ⁵⁰ : 11 ⁴⁰	Vyacheslav Futorny. Twisted localization in Representation theory
11 ⁴⁰ : 12 ²⁰	Coffee break
12 ²⁰ : 13 ¹⁰	Ivan Shestakov. The tangent Lie algebras of automorphism groups of free algebras
13 ¹⁰ : 14 ⁰⁰	Berikbol Torebek. Sharp Lee-Ni estimates for the semilinear parabolic problems
Room 2	Chairman: Vaja Tarieladze
13 ¹⁰ : 14 ⁰⁰	Delfim F. M. Torres. The Jacobi Last Multiplier and the SIR Model
14 ⁰⁰ : 16 ⁰⁰	Lunch
14 ⁰⁰ : 16 ⁰⁰	Council of the GMU, Elections
The evening	Conference Dinner

September 3, Thursday

Plenary Room	Chairman: Alexander Meskhi / Giorgi Tephnadze
10 ⁰⁰ : 10 ⁵⁰	Alexandre Almeida. A Stein–Weiss inequality with nonstandard power weights and applications
10 ⁵⁰ : 11 ⁴⁰	Valentin A. Zagrebnov. Trotter product formula for nonlinear affine semigroups on Hilbert space
11 ⁴⁰ : 12 ²⁰	Coffee break
12 ²⁰ : 13 ¹⁰	Lars-Erik Persson. Convexity and continuous forms of inequalities as a source of inspiration for new research
13 ¹⁰ : 14 ⁰⁰	Józef H. Przytycki. Skein modules of 3-manifolds: the personal perspective
14 ⁰⁰ : 14 ³⁰	Information Lecture: Konstantine Pkhakadze

14 ³⁰ : 16 ⁰⁰	Lunch
16 ⁰⁰ : 17 ¹⁵	Parallel Sessions
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 19 ⁰⁰	Parallel Sessions

September 4, Friday

Plenary Room	Chairman: Besik Dundua /Tengiz Bokelavadze
10 ⁰⁰ : 10 ⁵⁰	Bakhadyr M. Khoussainov. The Bergstra-Tucker problem: a c.e. algebra with no finitely presented expansion
10 ⁵⁰ : 11 ⁴⁰	Furio Honsell. Two views on unification: Terms as strategies
11 ⁴⁰ : 12 ²⁰	Coffee break
12 ²⁰ : 13 ¹⁰	Elena Bunina. Model theory of Chevalley groups and their extensions
13 ¹⁰ : 14 ⁰⁰	Mariangiola Dezani-Ciancaglini. Intersection type Galore
14 ⁰⁰ : 15 ⁰⁰	Lunch
Room 2	Chairman: David Natroshvili
15 ⁰⁰ : 15 ⁵⁰	Massimo Lanza de Cristoforis. Integral identities and inequalities for the equations of the electromagnetism in a nonvariational setting
16 ⁰⁰ : 17 ¹⁵	Parallel Sessions
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 19 ⁰⁰	Parallel Sessions

September 5, Saturday

10 ⁰⁰ : 12 ⁰⁰	Parallel Sessions
Plenary Room	
12 ⁰⁰ -14 ⁰⁰	Closing

Thematic Sessions

Algebra and Number Theory

August 31, Monday

Room 2	Chairman: Markus Neuhauser
$16^{00} : 16^{25}$	<u>Celil Nebiyev</u> , Hasan Hseyin Okten. $\oplus$ -r-supplemented modules
$16^{25} : 16^{50}$	<u>Bernhard Heim</u> , Markus Neuhauser. Dominant zeros of Nekrasov–Okounkov polynomials
$16^{50} : 17^{15}$	Engin Kaynar, <u>Celil Nebiyev</u> . On beta G-star supplemented modules
$17^{15} : 17^{45}$	Coffee break
$17^{45} : 18^{10}$	<u>Elena Cojuhari</u> , Barry Gardner. On q-central idempotents and radical classes of rings

September 1, Tuesday

Room 2	Chairman: Alex Patchkoria
$16^{00} : 16^{25}$	<u>Elena Cojuhari</u> , Barry Gardner. Matrix representations of D-structures and generalized monoid rings
$16^{25} : 16^{50}$	<u>Chandan Bhaumik</u> , Manoj K Keshari, Husney Parvez Sarwar. Symplectic modules over geometric subrings and monoid algebras
$16^{50} : 17^{15}$	Tariel Kemoklidze. The group of rational points on a cubic curve
$17^{15} : 17^{45}$	Coffee break
$17^{45} : 18^{10}$	Markus Neuhauser. Polynomization of a conjecture by Sun
$18^{10} : 18^{35}$	Nika Logua. Minimal universal crossed extensions of superperfect groups

September 3, Thursday

Room 2	Chairman: Bachuki Mesablashvili
$16^{00} : 16^{25}$	Vakhtang Lomadze. Quot schemes on the projective line
$16^{25} : 16^{50}$	Alex Patchkoria. On homology monoids of simplicial Abelian monoids
$16^{50} : 17^{15}$	Giorgi Rakviashvili. A generalization of Artin's theorem on characters of finite groups for separable Hopf algebras
$17^{15} : 17^{45}$	Coffee break
$17^{45} : 18^{10}$ (Online)	<u>Bakur Kochlamazashvili</u>, Lela Turmanidze. Cotriple cohomology and two term extensions of Lie superalgebras
$18^{10} : 18^{35}$ (Online)	<u>Jonnalagadda Venkateswara Rao</u>, <u>Patrick Kanyi Wamuyu</u>. Pre- A^* -algebraic framework for formal reasoning under uncertainty in networked systems
$18^{35} : 19^{00}$ (Online)	AmirHossein Mokhtari. Properties of linear mappings on some algebras without a unity

Differential and Integral Equations and their Applications

August 31, Monday

Room 3	Chairman: Nugzar Shavlakadze
16 ⁰⁰ : 16 ²⁵	David Natroshvili. Iteration method for the Neumann type problem of the elasticity theory
16 ²⁵ : 16 ⁵⁰	Maia Mrevlishvili. Application of an alternative potential method to mixed initial-boundary value problems of the elasticity theory
16 ⁵⁰ :17 ¹⁵	Yousef Jafarzadeh. A Hybrid Numerical Framework for Higher-Order Linear Volterra–Fredholm Integro- Differential Equations via Taylor Series and Block Pulse Functions
17 ¹⁵ : 17 ⁴⁵	Coffee break

September 1, Tuesday

Room 3	Chairman: David Natroshvili
16 ⁰⁰ : 16 ²⁵	Roland Duduchava. Boundary value problems for the generic Laplace equation
16 ²⁵ : 16 ⁵⁰	Nino Partsvania. On nonlocal boundary value problems for first order differential equations with a deviating argument
16 ⁵⁰ :17 ¹⁵	Nugzar Shavlakadze. Singular integro-differential equations with fixed singularities and their applications
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ :18 ¹⁰	Parviz Darania. Multi-step Collocation Methods for 3- kind delay integral quations
18 ¹⁰ :18 ³⁵	Nestan Kekelia. On the existence of bounded solutions for systems of linear difference equations

September 3, Thursday

Room 3	Chairman: Roland Duduchava
16 ⁰⁰ : 16 ²⁵	Otar Chkadua. Development of the localized boundary-domain integral equations method for the dynamical Dirichlet problem of the theory of inhomogeneous generalized thermo-electro-magnetic elastic solids
16 ²⁵ : 16 ⁵⁰	Sergei Grudsky. Eigenvalues of non-Hermitian banded Toeplitz matrices. Approaching simple points of the limiting set
16 ⁵⁰ : 17 ¹⁵	Yousef Jafarzadeh. A novel approach for testing the equality of multiple coefficients of variation
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 18 ¹⁰	Yagub Aliyev, Narmin Aliyeva. Minimality of root functions of Sturm–Liouville problems with linear eigenparameter boundary conditions
18 ¹⁰ : 18 ³⁵	Mon Bahadur Rai. A physics-informed finite-difference-based constrained convolutional neural network framework for 2D stationary convection diffusion model with boundary enforcement

September 4, Friday

Room 3	Chairman: Massimo Lanza de Cristoforis
16 ⁰⁰ : 16 ²⁵ (Online)	Victor Kovtunenکو. Semi-smooth optimization methods for solution of contact and dynamic problems
16 ²⁵ : 16 ⁵⁰ (Online)	Prem Chand Saw. Problem of Love Waves
16 ⁵⁰ : 17 ¹⁵ (Online)	Boulakhras Gherbal. Sufficient optimality conditions for a control problem driven by McKean-Vlasov FBDSDEs
17 ¹⁵ : 17 ⁴⁰ (Online)	Vladimir Sharafutdinov. Geometry of ideal fluid

September 5, Saturday

Room 3	Chairman: Otar Chkadua
$16^{00} : 16^{25}$	Sergei Grudsky. Asymptotics of eigenvalues of Toeplitz Matrices: non-self-adjoint case
$16^{25} : 16^{50}$	Vijay Vyas. A comprehensive study of Fourier series for the generalized I-function

Geometry and Topology

August 31, Monday

Room 4	Chairman: Malkhaz Bakuradze
$16^{00} : 16^{50}$	Anzor Beridze, <u>Irakli Patchkoria</u>. On the homotopical invariants of the Braid groups modulo the centre
$16^{50} : 17^{15}$ (Online)	Nino Melitauri. Topological foundations of Tariff Wars
$17^{15} : 17^{45}$	Coffee break
$17^{45} : 18^{35}$	<u>Anzor Beridze</u>, Paweł Traczyk. Burau representation for $n = 4$: The problem of faithfulness - algebraic vs topological approach
$18^{35} : 19^{25}$	Ralf Meyer, <u>George Nadareishvili</u>. Universal coefficient theorems for noncommutative spaces

September 1, Tuesday

Room 4	Chairman: George Nadareishvili
$16^{00} : 16^{25}$	<u>Kursat Akbulut</u>, Cagri Karaman. Some special structures on Walker-4 manifolds
$16^{25} : 16^{50}$	<u>Alexander Dunaykin</u>, Vyacheslav Zhukov. Transition polynomial as a weight system
$16^{50} : 17^{15}$	Sedat Temel. 2-grupoid actions and liftings of crossed modules over groupoids
$17^{15} : 17^{45}$	Coffee break
$17^{45} : 18^{10}$	Teimuraz Aliashvili, <u>Mariami Mtivlisvili</u>. Topological invariants of random polynomials

September 3, Thursday

Room 4	Chairman: Kursat Akbulut
$16^{00} : 16^{25}$	Ainura Bairamovi. On the analytical solution of the Pursuit problem for a moving target
$16^{25} : 16^{50}$	Agil Islamov. On quasi-convex functions and their applications
$16^{50} : 17^{15}$ (Online)	Hasitha Geekiyanage. An algebraic extension lemma for locally free sheaves
$17^{15} : 17^{45}$	Coffee break
$17^{45} : 18^{10}$ (Online)	Meshach Ndlovu. Symplectic structures on projectivised tangent bundles over complex projective spaces

Logic, Language, Artificial Intelligence

The session is dedicated to the 80-th anniversary of **Khimur Rukhaia**, in honor of his outstanding contributions and achievements in the field of Computational Logic and their applications.

August 31, Monday

Room 5	Chairman: Mikheil Rukhaia
16 ⁰⁰ : 16 ²⁵	Mikheil Rukhaia. Quantale-based automated reasoning for symbolic AI
16 ²⁵ : 16 ⁵⁰	Besik Dundua, Georg Ehling, Santiago Escobar, Maribel Fernández, and Temur Kutsia. Combining quantitative computation and deduction
16 ⁵⁰ : 17 ¹⁵	Tatia Dundua. Design and implementation of a proximity-based probabilistic logic programming language
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 18 ¹⁰	<u>Besik Dundua</u>, Furio Honsell, and Temur Kutsia. Pattern calculus with similarity relations
18 ¹⁰ : 18 ³⁵	Besik Dundua, Furio Honsell, <u>Mariam Katamashvili</u>, David Maisuradze. Fuzzifying derivatives of regular expressions
18 ³⁵ : 19 ⁰⁰	Demetre Labadze. A Formal framework for synchronized drone swarms with Belief-based reinforcement

September 1, Tuesday

Room 5	Chairman: Lia Kurtanidze
16 ⁰⁰ : 16 ²⁵	Irfan Işık, <u>Ibrahim Karahan</u>. q-Derivative and Artificial Neural Network Learning Algorithms
16 ²⁵ : 16 ⁵⁰	<u>Yuksel Ekinci</u>, Mariam Dedabrishvili, Tamta Lekishvili, Ketevan Dundua, and Tatia Dundua. Artificial Intelligence approaches for smart city planning: a case study of Tbilisi
16 ⁵⁰ : 17 ¹⁵	Paata Gogishvili. Assessment That Survives AI: Designing mathematics assignments on graphs, functions, limits, and derivatives for AI-permitted learning
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 18 ¹⁰	David Zarnadze, <u>Soso Tsotniashvili</u>. Applying a grammatical, set-theoretic and circuit framework to LLM logical validation: detecting logical inconsistencies in generated text
18 ¹⁰ : 18 ³⁵	<u>Dali Magrakvelidze</u>, Mariam Chkhaidze, Sophio Barnovi. Design and implementation of an adaptive neuro-fuzzy controller for nonlinear dynamic systems

September 3, Thursday

Room 5	Chairman: Mikheil Rukhaia
16 ⁰⁰ : 16 ²⁵	Lia Kurtanidze. Development of a monitoring dataset for logic-based electromagnetic field risk assessment

16 ²⁵ : 16 ⁵⁰	Liana Lortkipanidze, <u>Anna Chutkerashvili</u>, Nino Javashvili. A multi-layer architecture for the georgian language: from natural language processing to formal knowledge representation
16 ⁵⁰ :17 ¹⁵	Levan Tsinadze. Infomorphisms in lattice-theoretic contexts
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ :18 ¹⁰	<u>Ketevan Davitadze</u>, Elza Jintcharadze. flight delay prediction using a multilayer neural network
18 ¹⁰ : 18 ³⁵	Lali Tibua. Using τ SR logic methods in programming languages
18 ³⁵ : 19 ⁰⁰	Greg Cousins. On architectures definable in O-minimal structures

September 4, Friday

Room 5	Chairman: Konstantine Pkhakadze
16 ⁰⁰ : 16 ²⁵	<u>Konstantine Pkhakadze</u>, David Gegia, Aleksandre Maskharashvili. Declension of nouns and conjugation of verbs according Konstantine Pkhkadze's Logical Grammar of Georgian language
16 ²⁵ : 16 ⁵⁰	<u>Luka Pkhkadze</u>, Shalva Malidze, David Kurtskhalia, Konstantine Pkhakadze, David Gegia, David Kurtskhalia, Aleksandre Maskharashvili. One more step toward semi self developing Georgian-Abkhazian terminological portal
16 ⁵⁰ :17 ¹⁵	<u>David Gegia</u>, Mikheil Rukhaia, Besik Dundua, Konstantine Pkhakadze. The isomorphic mathematical theory of the Georgian language and thinking as main aim of the todays Georgian schools of the computer sciences and mathematical logic

17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 18 ¹⁰	<u>Rita Margania</u>, Bidzina Lemonjava, David Gegia, Konstantine Pkhakadze. First results of researches for developing a mathematical theory of Abkhazian language and thinking: declarative sentences and 1-place and 2-place conjugation in natural Abkhazian language system
18 ¹⁰ : 18 ³⁵	Gregory Cousins. Some results around Feed-Forward Networks definable in O-minimal expansions of R

Mathematical Education and History of Mathematics

August 31, Monday

Room 6	Chairman: Guram Gogishvili
16 ⁰⁰ : 16 ²⁵	Guram Gogishvili. On the importance and applications of asymptotic analysis in mathematics
16 ²⁵ : 16 ⁵⁰	Gagik Nikoghosyan, <u>Vardan Manukyan</u>. Bezout's theorem as an effective tool for preventing typical errors
16 ⁵⁰ : 17 ¹⁵	Gagik Nikoghosyan, <u>Vardan Manukyan</u>. The backward induction method as an effective means for developing students' creative thinking
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 18 ¹⁰	Alberto Elias Castejon Lafuente, <u>Vaja Tarieladze</u>. On Hadwiger's problem
18 ¹⁰ : 18 ³⁵	Nikoloz Gunia. A decimal theory of real numbers based on the Dirichlet box principle

September 1, Tuesday

Room 6	Chairman: Teimuraz Vepkhvadze
$16^{00} : 16^{25}$	Teimuraz Vepkhvadze. Analogy and its use in the educational process
$16^{25} : 16^{50}$	<u>Davit Tsamalashvili</u>, Lamara Kurchishvili. Theoretical and practical aspects of the unified mathematics curriculum
$16^{50} : 17^{15}$	<u>Manana Deisadze</u>, Shalva Kirtadze. The role of puzzle problems in the development of mathematical thinking
$17^{15} : 17^{45}$	Coffee break
$17^{45} : 18^{10}$	<u>Ivane Gokadze</u>, Vladimer Adeishvili. Application of Dirichlet's principle in solving mathematical olympiad problems
$18^{10} : 18^{35}$	<u>Teimuraz Giorgadze</u>, Mamuli Buchukhishvili. On the expected value of a random variable
$18^{35} : 19^{00}$	Manana Zivzivadze. Principles for developing a formative assessment rubric

Mathematical Logic and Discrete Mathematics

The session is dedicated to the **Revaz Grigolia**, in recognition of his contributions and achievements in the field of Mathematical Logic and Discrete Mathematics, and their applications.

September 3, Thursday

Room 6	Chairman: Aleks Kirtadze
$16^{00} : 16^{25}$	<u>Revaz Grigolia</u>, <u>Ramaz Liparteliani</u>, Johan Gielis. R-Functions and 3-valued Łukasiewicz Logic with constants
$16^{25} : 16^{50}$	Phridon Alshibaia. Free Temporal Gödel Algebras generated by constant elements
$16^{50} : 17^{15}$	Mariam Beriashvili, <u>Marika Khachidze</u>. Sierpiński topological spaces and Hamel bases
$17^{15} : 17^{45}$	Coffee break
$17^{45} : 18^{10}$	Emek Demirci Akarsu. A unified difference-distribution framework for cyclotomic difference sets and almost difference sets
$18^{10} : 18^{35}$	<u>Evgeny Kuznetsov</u>, Konstantine Razmadze, Levan Uridia. Craig interpolation in the logic of temporal linear structures
$18^{35} : 19^{00}$	Shalva Beriashvili, Vertex enumeration and structural properties of k-isosceles simplexes in Euclidean space

September 4, Friday

Room 6	Chairman: Evgeny Kuznetsov
$16^{00} : 16^{25}$	Aleksi Kirtadze. On one application of Hamel basis

16 ²⁵ : 16 ⁵⁰	Lika Beraia. Some remarks on the intersections of Mazurkiewicz type sets with plane algebraic curves
16 ⁵⁰ : 17 ¹⁵	Ketevan Kutkhashvili. Multi-criteria problem of optimal service center location
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 18 ¹⁰	<u>Yerlan Nurlibayev</u>, Ainur Basheyeva. Bipartite digraphs with modular concept lattices
18 ¹⁰ : 18 ³⁵	Nurgissa Tlegenov. On bipartite graphs with concept lattices
18 ³⁵ : 19 ⁰⁰	Dina Zhamagat. On finitely generated quasivarieties

Mathematical Modeling and Numerical Analysis

The session is dedicated to the 130th anniversary of **Shalva Mikeladze**, in recognition of his outstanding contributions and achievements in the field of numerical methods and their applications.

August 31, Monday

Room 7	Chairman: Hamlet Meladze
15 ⁵⁰ : 16 ⁰⁰	Hamlet Meladze. On the life and work of Professor Shalva Mikeladze
16 ⁰⁰ : 16 ²⁵	<u>Temur Chilachava</u>, Gia Kvashilava, George Pochkhua. A partial differential model describing the dynamics of the Kartvelian - speaking population
16 ²⁵ : 16 ⁵⁰	<u>Temur Chilachava</u>, Rusudan Zedashidze. On the asymptotic solution on the explosion problem of a triaxial rotating homogeneous self-gravitating gaseous ellipsoid

16 ⁵⁰ : 17 ¹⁵	Nugzar Kereselidze. Models of asymmetric confrontation with disinformation
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 18 ¹⁰	<u>Sergo Tsiramua</u>, <u>Hamlet Meladze</u>, <u>Tinatin Davitashvili</u>. Dynamic metahypergraphs: a new mathematical model for reconfigurable systems based on multifunctional elements
18 ¹⁰ : 18 ³⁵	<u>David Devadze</u>, <u>Vakhtang Beridze</u>. Optimal control problem for a contact problem with nonlocal boundary conditions
18 ³⁵ : 19 ⁰⁰	<u>Giorgi Baghaturia</u>, <u>Marina Menteshashvili</u>. A characteristic finite-difference method to solve a nonlinear Goursat problem
19 ⁰⁰ : 19 ²⁵	<u>Tinatin Davitashvili</u>, <u>Hamlet Meladze</u>, <u>Sergo Tsiramua</u>, <u>Mamuli Zakradze</u>. On one nonstationary problem in the theory of elasticity with periodic initial conditions

September 1, Tuesday

The session is dedicated to the 80th anniversary of **Jemal Rogava**, in recognition of his contributions and achievements in the field of numerical methods and their applications.

Room 7	Chairman: Temur Jangveladze
15 ⁵⁰ : 16 ⁰⁰	Temur Jangveladze. On the life and work of Professor Jemal Rogava
16 ⁰⁰ : 16 ²⁵	<u>Jemal Rogava</u>, <u>Zurab Vashakidze</u>. A combined numerical approach for solving a nonlinear dynamic Timoshenko beam system

16 ²⁵ : 16 ⁵⁰	Teimuraz Chkhikvadze, <u>Mikheil Gagoshidze</u>, Temur Jangveladze. Numerical solution of a fourth order nonlinear parabolic type integro-differential equations using machine learning
16 ⁵⁰ : 17 ¹⁵	Mikheil Gagoshidze, Temur Jangveladze, <u>Besiki Tabatadze</u>. Machine learning approaches for solving a system of Nolinear two-dimensional partial differential equations
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 18 ¹⁰	Nino Mzhavanadze. Hopf bifurcation and convergence analysis of a finite-difference scheme for a nonlinear diffusion mode
18 ¹⁰ : 18 ³⁵	Tamar Paikidze. Investigation and numerical solution of a fourth-order nonlinear integro-differential system
18 ³⁵ : 19 ⁰⁰	Giorgi Baghaturia, Zviad Kalichava, Mikheil Nikoleishvili, <u>Vaja Tarieladze</u>. On subset sum problem

September 3, Thursday

Room 7	Chairman: Temur Chilachava
16 ⁰⁰ : 16 ²⁵	<u>Michal Demetrian</u>, Rudolf Zimka. On Hopf bifurcation in predator-prey models with prey's self-defence
16 ²⁵ : 16 ⁵⁰	Tamaz Vashakmadze. On the extension and realization of the (P) - (Q) apparatus for some differential equations
16 ⁵⁰ : 17 ¹⁵	David Zarnadze. On the concept of countable error measurement theory
17 ¹⁵ : 17 ⁴⁵	Coffee break

17 ⁴⁵ : 18 ¹⁰	Besarion Shanshiashvili. Construction of a mathematical model of one class of nonlinear dynamic systems with feedback
18 ¹⁰ : 18 ³⁵	<u>Mariam Gogilashvili</u>, Nino Topuridze. Generalized Curacao–predator–prey model
18 ³⁵ : 19 ⁰⁰	Merab Akhobadze, <u>Elguja Kurtskhalia</u>. Optimal algorithm for designing and reconstructing urban systems
19 ⁰⁰ : 19 ²⁵	<u>Nino Khatiashvili</u>, David Kaladze, Irene Khatiashvili. On the discrete model of tumor growth in connection with the Warburg effect

September 4, Friday

Room 7	Chairman: Sergo Tsiramua
15 ⁴⁰ : 16 ⁰⁵	<u>Elizaveta Kalinina</u>, Alexei Uteshev, Marina Goncharova. On some nearest matrix problems
16 ⁰⁵ : 16 ³⁰	Aleksandr Oleinikov, <u>Tatiana Kuzmina</u>. Two-scale mathematical modeling of failure composite laminates
16 ³⁰ : 16 ⁵⁵ (Online)	Sigurður Freyr Hafstein. Asserting stability for switched systems using optimization and Lyapunov functions
16 ⁵⁵ : 17 ²⁰ (Online)	Alexander Slabospitsky. About the second recurrent form of representation for parameter estimate by the method of least squares of relative errors under non-classical assumptions for systems in the presence of uncertainties
17 ²⁰ : 17 ⁴⁵	Coffee break

17 ⁴⁵ : 18 ¹⁰ (Online)	Jemal Peradze, <u>Nikoloz Kachakhidze</u>. Some methods for constructing approximate solutions to generalized Kirchhoff-type equations.
18 ¹⁰ : 18 ³⁵ (Online)	<u>Archil Papukashvili</u>, Giorgi Geladze, Meri Sharikadze, Manana Tevdoradze. On the numerical solution of the J. Ball'S thermo-viscous-elastic dynamic beam equation in the case of external damping
18 ³⁵ : 19 ⁰⁰ (Online)	<u>Giorgi Geladze</u>, Archil Papukashvili, Meri Sharikadze, Manana Tevdoradze. Numerical modeling of the influence of background fields on humid and ecological processes in the mesoscale atmospheric boundary layer

Probability Theory and Statistics, Financial Mathematics

August 31, Monday

Room 8	Chairman: Kartlos Kachiashvili
16 ⁰⁰ : 16 ²⁵	<u>Kartlos Kachiashvili</u>, Ioseb Kachiashvili, Ashis SenGupta. The comparison of a set of normal samples with given reliability
16 ²⁵ : 16 ⁵⁰	George Giorgobiani, Vakhtang Kvaratskhelia, <u>Vaja Tarieladze</u>. On one example of a sub-Gaussian random variable
16 ⁵⁰ : 17 ¹⁵	Christian Bayer, <u>Davit Gogolashvili</u>, Luca Pelizzari. Local regression on path spaces with signature metrics
17 ¹⁵ : 17 ⁴⁵	Coffee break

17 ⁴⁵ : 18 ¹⁰	<u>Ignas Gasparavičius</u>, <u>Andrius Grigutis</u> . Generalizing Mean–Variance Portfolio Optimization with a Quadratic Risk Measure
18 ¹⁰ : 18 ³⁵ (Online)	<u>Elizbar Nadaraya</u>, <u>Petre Babilua</u> . On testing the equality of two poisson regression functions
18 ³⁵ : 19 ⁰⁰ (Online)	<u>Yurii Kikhaiev</u>, <u>Hanna Livinska</u> . Window-Lag bias in the activity interval citation index and a maturity rule for longitudinal comparisons

September 1, Tuesday

Room 8	Chairman: Vakhtang Kvaratskhelia
16 ⁰⁰ : 16 ²⁵	<u>Ekaterine Namgalauri</u>, <u>Omar Purtukhia</u> . Integral representation of non-smooth functional of the Brownian motion and its running maximum
16 ²⁵ : 16 ⁵⁰	<u>Zurab Kvatadze</u>, <u>Beqnu Pharjiani</u>, <u>Tsiala Kvatadze</u> . On the convergence of a series of random variables with a chain dependence
16 ⁵⁰ : 17 ¹⁵	<u>Davit Gondauri</u> . Regional economic Birch–Swinerton–Dyer modelling: A Local-to-Global framework for structural rank formation, corridor stress and world-economy calibration
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 18 ¹⁰ (online)	<u>Beqnu Pharjiani</u> . The Gini index in Markov chains: Asymptotic analysis of socio-economic dynamics
18 ¹⁰ : 18 ³⁵	<u>Kartlos Kachiashvili</u>, <u>Vakhtang Kvaratskhelia</u>, <u>Marina Menteshashvili</u> . Application of a characteristic of the Sylvester matrix in digital image processing
18 ³⁵ : 19 ⁰⁰	<u>Burcu Uzuzner</u>, <u>Aslı Bektaş</u>, <u>Kamişlik</u> . Extreme value domains of iterated equilibrium distributions and their connection to stop-loss moments

September 4, Friday

Room 8	Chairman: Omar Purtukhia
16 ⁰⁰ : 16 ²⁵	Anastasis Kratsios. A simple closed-form formula for Optimal Neural Network Regression on metric spaces

Real and Complex Analysis

The session is dedicated to the 100th anniversary of Academician **Otar Tsereteli** (1926–1991), in honor of his outstanding contributions and achievements in the field of real and complex analysis and its applications.

August 31, Monday

Room 1	Chairman: Lasha Ephremidze
16 ⁰⁰ : 16 ²⁵	Alexander Meskhi. Trace and Olsen's sharp inequalities: diagonal case
16 ²⁵ : 16 ⁵⁰	Giorgi Oniani. Counterexamples to Zygmund's differentiation conjecture for Córdoba-type bases
16 ⁵⁰ : 17 ¹⁵	<u>Seyma Çetin</u>, David Cruz-Uribe, Scott Rodney. On $H = W$ in Banach function spaces
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 18 ¹⁰	Ahmed I. Zayed. On the relationship between the offset and the coupled fractional Fourier transforms: continuous and discrete models
18 ¹⁰ : 18 ³⁵	<u>Dali Makharadze</u>, Alexander Meskhi. Hardy-Littlewood inequalities for fractional integrals in classical Morrey spaces
18 ³⁵ : 19 ⁰⁰	Alexander Meskhi, <u>Lazare Natelashvili</u>. On Multilinear Rellich Inequalities

September 1, Tuesday

Room 1	Chairman: Alexander Meskhi
16 ⁰⁰ : 16 ²⁵	<u>Rovshan A. Bandaliyev</u> , Konul K. Omarova. On boundedness and compactness of the positive linear integral operators in weighted Lebesgue spaces
16 ²⁵ : 16 ⁵⁰	<u>Elman J. Ibrahimov</u> , <u>Saadat A. Jafarova</u> . Characterization of G-Lipschitz spaces via commutators of the G-fractional maximal function on G-Morrey spaces
16 ⁵⁰ : 17 ¹⁵	<u>Yagub Aliyev</u> , Zamina Guliyeva, Narmin Aliyeva. On generalization of Mitev's inequalities
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 18 ¹⁰	Nikhil Khanna. Quadratic-phase Boas transforms
18 ¹⁰ : 18 ³⁵	<u>Sumit Kumar Sharma</u> , Shiv Kumar Kaushik, Anu Kapoor. Quaternionic Banach frames and their localization
18 ³⁵ : 19 ⁰⁰	<u>Sumit Kumar Sharma</u> , Nikhil Khanna, <u>Ramananda Singh Mayanglambam</u> . A frame-theoretic framework for comparative analysis of FTIR spectra
19 ⁰⁰ : 19 ²⁵	<u>Dinara Sarsenaly</u> , Ainur Temirkhanova, Nazerke Zhanabergenova. Application of inequalities to the non-oscillatory properties of a class of high-order difference equations

September 3, Thursday

Room 1	Chairman: Giorgi Oniani
16 ⁰⁰ : 16 ²⁵	Nino Anakidze, Lars-Erik Persson, Mamuka Stepania, <u>George Tephnadze</u> . Norm and almost everywhere convergence of subsequences of

	Vilenkin-Nörlund means with non-increasing sequences
$16^{25} : 16^{50}$	<u>Levon Galoyan</u>, Martin Grigoryan. On the convergence of negative-order Cesaro means of Fourier and Fourier-Vilenkin series
$16^{50} : 17^{15}$	Vakhtang Tsagareishvili, <u>Giorgi Tutberidze</u>. Some new sharp boundedness result concerning linear functionals on Banach spaces
$17^{15} : 17^{45}$	Coffee break
$17^{45} : 18^{10}$	Davit Baramidze, Nata Gogolashvili, <u>Nato Nadirashvili</u>. Norm, pointwise, and almost everywhere convergence of T means of Vilenkin-Fourier series
$18^{10} : 18^{35}$	Hacer Bilgin Ellidokuzoğlu. An extension of Narayana difference sequence spaces
$18^{35} : 19^{00}$	Tengiz Kopaliani, <u>Giorgi Machitidze</u>. Franklin system in variable exponent spaces

September 4, Friday

Room 1	Chairman: George Tephnadze
$16^{00} : 16^{25}$	<u>David Zarnadze</u>, Duglas Ugulava. Strongly best approximation and Moore-Penrose generalized solution
$16^{25} : 16^{50}$	Ekrem Savas. Double almost statistical convergence of order α with respect to seminorm
$16^{50} : 17^{15}$	<u>Giorgi Makatsaria</u>, <u>Nino Mandjavidze</u>. Elliptic systems in the plane
$17^{15} : 17^{45}$	Coffee break
$17^{45} : 18^{10}$	Aditi Lal. On Sawyer duality principle in function spaces

$18^{10} : 18^{35}$	Mzevinar Bakuridze, <u>Vaja Tarieladze</u>. On Garsia's conjecture
$18^{35} : 19^{00}$	Giorgi Tetvadze. Analyticity of the Djerbashyan canonical product on the boundary of the unit circle

September 5, Saturday

Room 1	Chairman: Lasha Ephremidze
$12^{00} : 12^{25}$ (Online)	Vasili Prokhorov. Products of best rational approximation errors and meromorphic continuation
$12^{25} : 12^{50}$ (Online)	Dorin Dutkay. Plancherel identities for unbounded subsets of $\mathbb{R}^d$

Theoretical Physics

September 3, Thursday

Room 8	Chairman: Alexander Kvinikhidze
$16^{00} : 16^{25}$	Vitali Kavlashvili. Investigation of short-term periodic anomalies in solar activity and galactic cosmic ray time series via the kinematic model of the weighted center of solar activity centers
$16^{25} : 16^{50}$	<u>George Jorjadze</u>, Dipterka Das, Stefan Theisen. Equations and their solution for the S-matrix of integrable 2d CFT's
$16^{50} : 17^{15}$	<u>Badri Tsutskiridze</u>, Levan Jikidze, Mari Tsutskiridze, Eka Elerdashvili. The conducting liquid flow between porous walls with heat transfer
$17^{15} : 17^{45}$	Coffee break
$17^{45} : 18^{10}$ (Online)	<u>Luka Megrelidze</u>, George Jorjadze. Equations for the S-matrix of Liouville theory and its functional integral representation.

18 ¹⁰ : 18 ³⁵	David Nishnianidze. Two-dimensional Dirac equation with matrix potential: solvable models of Graphene in external electromagnetic field
18 ³⁵ : 19 ⁰⁰ (Online)	Badri Magradze. QCD-motivated causal model for the heavy quark potential

Mini-Symposium: Algebraic Geometry and Model Theory of Groups and Rings

August 31, Monday

Room 9	Chairman: Alexander Treyer
16 ⁰⁰ : 16 ²⁵	Ivan Shestakov. Representations of Grassmann Poisson superalgebras
16 ²⁵ : 16 ⁵⁰	Bakhadyr M. Khoussainov. Word structures and their automatic presentations
16 ⁵⁰ : 17 ¹⁵	Elena Aladova Chestakov. Equivalences of algebras in universal algebraic geometry
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 18 ¹⁰	Evelina Daniyarova. Theory of interpretations and geometry of constructions with a compass and straight edge
18 ¹⁰ : 18 ³⁵	Alexander Treyer. Equational noethericity for graphs, groups and algebras and Kotov's lemma
18 ³⁵ : 19 ⁰⁰	Alexander Treyer, Ivan Chesnokov. Algebraic complexity of computations over Baumslag-Solitar metabelian groups

September 1, Tuesday

Room	Chairman: Tengiz Bokelavadze
$16^{00} : 16^{25}$	Efim Zelmanov. Infinite-dimensional superalgebras.
$16^{25} : 16^{50}$	Olga Kharlampovich, Alexei Miasnikov, <u>Andrey Nikolaev</u>. Nonstandard free groups and exponential completions
$16^{50} : 17^{15}$	Grigory Mashevitzky. Inclusive (universal positive) theory of Abelian groups
$17^{15} : 17^{45}$	Coffee break
$17^{45} : 18^{10}$	Vyacheslav Futorny. Gelfand-Graev problem for infinite-dimensional representations of Lie algebras
$18^{10} : 18^{35}$	Liudmila Sabinina. On Moufang loops with certain automorphisms
$18^{35} : 19^{00}$	Ivan Buchinskiy. Centroids of partially commutative two-step Nilpotent Groups
$19^{00} : 19^{25}$	Vladimir Shpilrain. Potentially positive and partially positive elements of a free group

September 3, Thursday

Room 9	Chairman: Andrei Nikolaev
$16^{00} : 16^{25}$	Alexei Miasnikov. Centroids and exponentiation in groups
$16^{25} : 16^{50}$	Olga Kharlampovich. On the first-order genus of wreath products and their central extensions
$16^{50} : 17^{15}$	Alfonso Di Bartolo, Kıvanc Ersoy, <u>Giovanni Falcone</u>. Riemann–Roch bases in Kummer extensions I
$17^{15} : 17^{45}$	Coffee break

17 ⁴⁵ : 18 ¹⁰	<u>Mikheil Amaglobeli</u> , <u>Alexei Miasnikov</u> . On the R-structure of tensor R-completions of Torsion-Free Nilpotent groups
18 ¹⁰ : 18 ³⁵	<u>Tengiz Bokelavadze</u> , <u>Alexander Lashkhi</u> , <u>Tamar Kvirikashvili</u> . Lattice isomorphisms of Nilpotent Lie rings
18 ³⁵ : 19 ⁰⁰	<u>Elena Bunina</u> . Sha-Rigidity of Chevalley Groups over Rings
19 ⁰⁰ : 19 ²⁵	<u>Teona Nadiradze</u> . Varieties of exponential MR -groups

Mini-Symposium: Computer Science, Data Science and Artificial Intelligence: Theory, Practice, and Education

September 3, Thursday

Room 10	Chairman: Magda Tsintsadze
16 ⁰⁰ : 16 ²⁵	<u>Fikriye Kabakci</u> . Robust Gaussian mixture modeling under cellwise contamination
16 ²⁵ : 16 ⁵⁰	<u>Samia Bensmail</u> , <u>Samia Chafiaa Serir</u> , <u>Djamila Rekioua</u> , <u>Talit Belhoul</u> , <u>Zahra Mokrani</u> , <u>Radia Abdelli</u> . Modelling and optimisation of the photovoltaic chain: an approach using fuzzy logic MPPT control with dynamic adaptation of the output gain
16 ⁵⁰ : 17 ¹⁵	<u>Archil Elzibarashvili</u> , <u>Magda Tsintsadze</u> . From data to algorithms: practical approaches to machine learning model selection
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 18 ¹⁰	<u>Julieta Gagloshvili</u> . Solving screening and ranking problems of innovative ideas using multi-criteria methods and artificial intelligence: a two-cycle

	integrated model from problem formulation to outcome
18 ¹⁰ : 18 ³⁵	<u>Elisabed Asabashvili</u> . Integrating adaptive machine learning with stochastic risk models for software input security
18 ³⁵ : 19 ⁰⁰	<u>Lia Baiadze</u>, <u>Gela Besiashvili</u> . Startup evaluation system using AI

September 4, Friday

Room 10	Chairman: Magda Tsintsadze
16 ⁰⁰ : 16 ²⁵	<u>Liana Lortkipanidze</u>, <u>Natela Archvadze</u>, <u>Merab Pkhovelishvili</u>, <u>Levan Makrakhidze</u> . An intelligent computational framework for developing an AI-driven educational platform for the Georgian language
16 ²⁵ : 16 ⁵⁰	<u>Merab Pkhovelishvili</u>, <u>Natela Archvadze</u>, <u>Lia Shetsiruli</u> . Parallel processing of augmented transition networks using functional programming in Haskell
16 ⁵⁰ : 17 ¹⁵	<u>Irina Khutsishvili</u> . Fuzzy VIKOR Approach for Multiple criteria group decision making
17 ¹⁵ : 17 ⁴⁵	Coffee break
17 ⁴⁵ : 18 ¹⁰ (Online)	<u>Hanna Livinska</u>, <u>Iryna Rozora</u> . Bridging data science and social research in higher education
18 ¹⁰ : 18 ³⁵	<u>Maia Archuadze</u>, <u>Apolon Rostomashvili</u> . Impact of statistics updates and index optimization on cardinality estimation accuracy and query performance in Microsoft SQL Server 2022
18 ³⁵ : 19 ⁰⁰	<u>Magda Tsintsadze</u>, <u>Manana Khachidze</u> . Artificial intelligence and quality assurance in higher education

Mini-Symposium: Formal groups, cobordism and related structures

September 1, Tuesday

Room 11	Chairman: Malkhaz Bakuradze
$16^{00} : 17^{45}$	Victor M. Buchstaber, Two-Valued Groups and the Bielliptic Genus
$16^{50} : 17^{15}$	Coffee break
$17^{45} : 18^{10}$	Discussions

September 3, Thursday

Room 11	Chairman: Malkhaz Bakuradze
$16^{00} : 16^{50}$	Irakli Patchkoria, Chromatic Euler characteristics and duality for infinite groups
$16^{50} : 17^{15}$	Coffee break
$17^{15} : 18^{05}$	Dimitrios Georgiou. π -regular spaces, continuous mappings and their universality problem
$18^{05} : 18^{30}$	Discussions

September 4, Friday

Room 11	Chairman: Bachuki Mesablashvili
$16^{00} : 17^{45}$	Taras. Panov. Geometric representatives in SU-bordism classes
$16^{50} : 17^{15}$	Coffee break
$17^{45} : 18^{10}$	Discussions

September 5, Saturday

Room 11	Chairman: Malkhaz Bakuradze
$16^{00} : 17^{45}$	Elena Bunkova. Universal formal group for elliptic genus of level N
$16^{50} : 17^{15}$	Coffee break
$17^{45} : 18^{35}$	Georgii Chernykh. On bordism classes of symmetric powers of surfaces

September 6, Sunday

Room 11	Chairman: Alex Patchkoria
$16^{00} : 16^{50}$	Bachuki Mesablishvili. On completeness and cocompleteness of categories of mixed bimodules
$16^{50} : 17^{15}$	Coffee break
$17^{15} : 18^{10}$	Malkhaz Bakuradze. Real K-Theory of bounded rank
$18^{10} : 18^{35}$	Discussions

Regional Summer School “Mathematics for AI” ([MAI 2026](#))

September 1-5, Batumi, BSU, Georgia

September 7-9, Kutaisi, Georgia

September 1, Tuesday

Room 12	Speaker: Alexei Miasnikov
10 ⁰⁰ : 11 ³⁰	Lecture 1: AI and Search in Math Problems
12 ⁰⁰ : 13 ³⁰	Lecture 2: Experimental Math - new approach to math problems
17 ⁰⁰ : 19 ⁰⁰	Problem Session

September 2, Wednesday

Room 12	Speaker: Greg Cousins
10 ⁰⁰ : 11 ³⁰	Lecture 1: Automated Deduction and Constraint Solving in AI (Tentative)
12 ⁰⁰ : 13 ³⁰	Lecture 2: Bridging Logic and Probability in Machine Learning (Tentative)
17 ⁰⁰ : 19 ⁰⁰	Problem Session

September 3, Thursday

Room 12	Speaker: Anastasis Kratsios
10 ⁰⁰ : 11 ³⁰	Lecture 1: Neural networks as computers
12 ⁰⁰ : 13 ³⁰	Lecture 2: Universal Computation Theorems
17 ⁰⁰ : 19 ⁰⁰	Problem Session

September 4, Friday

Room 10	Speaker: Davit Gogolashvili
10 ⁰⁰ : 11 ³⁰	Lecture 1: Statistical Learning Theory: From Generalization to Learning Rates
12 ⁰⁰ : 13 ³⁰	Lecture 2: Minimax Rates and Optimality in Modern Machine Learning
17 ⁰⁰ : 19 ⁰⁰	Problem Session

September 5, Saturday

Room 10	Speaker: Elena Bunina
10 ⁰⁰ : 11 ³⁰	Lecture 1: Introduction to Lean
12 ⁰⁰ : 13 ³⁰	Lecture 2: Some mathematics in Lean
17 ⁰⁰ : 19 ⁰⁰	Problem Session

September 6, Sunday -- Transfer to Kutaisi

September 7, Monday

Room 10	Speaker: François-Xavier Vialard
10 ⁰⁰ : 11 ³⁰	Lecture 1: Optimal transport, Gromov-Wasserstein distances, gradient flows
12 ⁰⁰ : 13 ³⁰	Lecture 2: Optimization and Learning dynamics of residual networks; contextual sample complexity of attention
17 ⁰⁰ : 19 ⁰⁰	Problem and Puzzles Session

September 8, Tuesday

Room 10	Speaker: Furio Honsell
10 ⁰⁰ : 11 ³⁰	Lecture 1: Propositions as Types and Proof checking
12 ⁰⁰ : 13 ³⁰	Lecture 2: Homotopy Type Theory
17 ⁰⁰ : 19 ⁰⁰	Problem Session

September 9, Wednesday

Room 10	Speaker: Mariangiola Dezani
10 ⁰⁰ : 11 ³⁰	Lecture 1: Process calculi and their types
12 ⁰⁰ : 13 ³⁰	Lecture 2: Session types for communication-based programming
17 ⁰⁰ : 19 ⁰⁰	Problem Session

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