

Technical Program

Thursday, June 11, 2026

14:30 - 15:30 Registration of participants

Transilvania University Hall – *Iuliu Maniu Street, no 41A*

15:30 - 15:45 Opening Ceremony and group photo

Transilvania University Hall

16:00-16:50 Plenary session - *Transilvania University Hall*

Geometric aspects of integrally closed Noetherian domains

Keynote Speaker: Giulio Peruginelli

University of Padova, Italy

Chair: Vicențiu Pașol

Simion Stoilow Institute of Mathematics of the Romanian Academy,
Bucharest, Romania

16:50-17:00 Coffee Break

17:00-17:50 Plenary session - *Transilvania University Hall*

The Physical Meaning of Geometry: From Einstein to Modern Gravity

Keynote Speaker: Aneta Wojnar

University of Wrocław, Poland

Chair: Nicoleta Voicu

Transilvania University of Brașov, Romania

18:00-18:40
Room UI2 **Algebra, number theory and discrete mathematics**

Chair: Elif Tan - Ankara University, Turkey

18:00-18:20 Minimal (just) non-sequeneable groups
Iulia - Cătălina Plesca - Alexandru Ioan Cuza University, Iași, Romania
(joint work with Marius Tărnăuceanu - Alexandru Ioan Cuza University, Iași, Romania)

18:20-18:40 m-nil-clean nonderogatory matrices
Andrada Pojar - Technical University of Cluj-Napoca, Romania

18:00-19:00
Room UI3 **Computer Networks & Cyber Security**

Chair: Tudor Barbu - Institute of Computer Science of the Romanian Academy - Iași Branch, Romania

18:00-18:20 An Analysis of Existing Hash-Based Post-Quantum Signature Schemes
Cristina Maria Păcurar - Transilvania University of Brașov
(joint work with Răzvan Bocu - Transilvania University of Brașov, Romania and Maksim Iavich - Caucasus University, Georgia)

18:20-18:40 GPU Computation for AES
Nuț Manuela - Transilvania University of Brașov, Romania

18:40-19:00 Unified administrative hub for enterprise Third-Party tool Integration
Diana Rențea - Transilvania University of Brașov, Romania
(joint work with Silviu Dumitrescu - Transilvania University of Brașov, Romania)

18:00-19:00
Room UI6 **Mathematical Analysis**

Chair: Gülen Başcanbaz-Tunca - Ankara University, Turkey

18:00-18:20 Simultaneous approximation by the semi-exponential Post-Widder operators
Radu Păltănea - Transilvania University of Brașov, Romania
(joint work with Ulrich Abel - Technische Hochschule Mittelhessen, Friedberg, Germany)

18:20-18:40 Double weighted modulus of first order
Bianca Ioana Vasian - Transilvania University of Braşov, Romania

18:40-19:00 Exponential approximation operators
Ştefan Lucian Garoiu - Transilvania University of Braşov, Romania

18:00-19:00 **Dynamical Systems**
Room UI7

Chair: Ovidiu Popescu - Transilvania University of Braşov, Romania

18:00-18:20 Prescribed time stability results of time varying nonlinear impulsive system
Santwana Mukhopadhyay - Department of Mathematical Sciences IIT (BHU), India
(joint work with Anjali Srivastava - Department of Mathematical Sciences IIT (BHU), India)

18:20-18:40 Hopf bifurcation and oscillatory planar systems
Cristian Lăzureanu - Politehnica University Timișoara, Romania

18:40-19:00 Bifurcation of limit cycles from the zero-Hopf singularity of a jerk system
Jinyoung Cho - West University of Timișoara, Romania

19:00-19:30 Musical moment

19:30 Welcome Cocktail

Transilvania University Hall

June 12, 2026

9:00-9:50 Plenary session - *Transilvania University Hall*

An Evolution of the Transportation Problem: From Classical Models to Multi-Objective Optimization
Keynote Speaker: Petrică Pop Sitar

Technical University of Cluj-Napoca,

North University Center of Baia Mare, Romania

Chair: Adrian Deaconu

Transilvania University of Braşov, Romania

9:50-10:40 Plenary session - *Transilvania University Hall*

Depth-Parity Traces of Binary Search Trees: Combinatorics and Algorithms
Keynote Speaker: Cătălin Zara

University of Massachusetts Boston, United States of America

Chair: Adrian Diaconu

School of Mathematics, University of Minnesota, United States of America and
Simion Stoilow Institute of Mathematics of the Romanian Academy, Bucharest,
Romania

10:40-11:00 Coffee Break

11:00-12:40

Room UI2

Algebra, number theory and discrete mathematics

Chair: Giulio Peruginelli - University of Padova, Italy

11:00-11:20 Polynomial Transversals and the Geometry of Carries
Vicențiu Pașol - Simion Stoilow Institute of Mathematics of the Romanian Academy (IMAR)
(joint work with Mugurel Barcău - IMAR and George Cătălin Țurcaș - Babes-Bolyai University, Cluj-Napoca, Romania)

11:20-11:40 The second moment of L-functions and the non-vanishing of central values
Adrian Diaconu - School of Mathematics, University of Minnesota, United States of America and Simion Stoilow Institute of Mathematics of the Romanian Academy, Romania
(joint work with Bogdan Ion - University of Pittsburgh, United States of America, Vicențiu Pașol - IMAR, Romania and Alexandru Popa - IMAR, Romania)

11:40- 12:00 Geodesic-Based Structures in Graphs: Mutual Visibility and General Position Sets
Elif Tan - Ankara University, Turkey

Chair: Diana Savin - Transilvania University of Brașov, Romania

12:00-12:20 Quaternion Orders and Diophantine Equations
Adriana Cardoso - Faculdade de Ciências da Universidade do Porto, Portugal
(joint work with António Leite - Faculdade de Ciências da Universidade do Porto, Portugal, António Machiavelo - Faculdade de Ciências da Universidade do Porto, Portugal, Rafael Moreira - University of Bonn and Luís Roçadas - Universidade de Trás-os-Montes e Alto Douro, Portugal)

12:20-12:40 Solving Restricted Sums of Four Squares using Quaternions
António Leite - Faculdade de Ciências da Universidade do Porto, Portugal
(joint work with António Machiavelo - Faculdade de Ciências da Universidade do Porto, Portugal and Luís Roçadas - Universidade de Trás-os-Montes e Alto Douro, Portugal)

11:00-12:40
Room UI3 **Mathematical Analysis**

Chair: Radu Păltănea - Transilvania University of Braşov, Romania

11:00-11:20 About the speed of convergence of certain regular lacunary harmonic sequences
Andrei Vernescu - Valahia University of Targoviste, Romania

11:20-11:40 Multiplicative characteristic functions
Ileana Bucur - Technical University of Civil Engineering of Bucharest, Romania

11:40-12:00 Compactness în measure theory
Gheorghe Bucur - University of Bucharest, Romania

Chair: Andrei Vernescu - Valahia University of Targoviste, Romania

12:00-12:20 A generalization of Bernstein operators via coiflet kernels of arbitrary support
Gülen Başcanbaz-Tunca - Ankara University, Turkey
(joint work with Ali Mengilli - Ankara University, Turkey)

12:20-12:40 A generalization of Stancu operators via compactly supported coiflets
Ali Mengilli - Ankara University, Turkey
(joint work with Gülen Başcanbaz-Tunca - Ankara University, Turkey and Fatma Taşdelen Yeşildal - Ankara University, Turkey)

11:00-12:40
Room UI6 **Geometry**

Chair: Mircea Neagu - Transilvania University of Braşov, Romania

11:00-11:20 On special surfaces derived from rectifying curves
Ştefan-Cezar Broscăţeanu - Transilvania University of Braşov, Romania

11:20-11:40 On the Finsler variational nature of autoparallels in metric-affine geometry
Lehel Csillag - Transilvania University of Braşov, Romania
(joint work with Nicoleta Voicu - Transilvania University of Braşov, Romania, Christian Pfeifer - Zarm, University of Bremen, Germany and Salah Elgendi - Islamic University of Madinah, Benha University, Egypt)

Chair: Adela Mihai - Technical University of Civil Engineering of Bucharest, Romania and Transilvania University of Braşov, Romania

- 11:40-12:00 Lagrange-Hamilton Geometry applied to a Lotka- Volterra dynamical system
Ana-Maria Boldeanu - Transilvania University of Braşov, Romania
(joint work with Mircea Neagu - Transilvania University of Braşov, Romania)
- 12:00-12:20 On spherically symmetric non-Ricci-flat vacuum solutions in Finsler gravity
Diana Maria Bîrlă - Transilvania University of Braşov, Romania
(joint work with Nicoleta Voicu - Transilvania University of Braşov, Romania and Christian Pfeifer - Zarm, University of Bremen, Germany)
- 12:20-12:40 The Newtonian Limit of Finsler Gravity
Cosmin Bucătaru - Transilvania University of Braşov, Romania
(joint work with Nicoleta Voicu - Transilvania University of Braşov, Romania, Aliasghar Parvizi - Transilvania University of Braşov, Romania and Christian Pfeifer - Zarm, University of Bremen, Germany)

11:00-12:40 **Big Data & Machine Learning**
Room UI7

Chair: Anca Vasilescu - Transilvania University of Braşov, Romania

- 11:00-11:20 Deep Learning Frameworks for Image Segmentation based on Mathematical Models
Tudor Barbu - Institute of Computer Science of the Romanian Academy - Iasi Branch, Romania
(joint work with Lucian Murgu - Doctoral School of Mathematical Sciences and Informatics of SCOSAAR, Romanian Academy, Romania)
- 11:20-11:40 MUSE: a mobile deep learning system for artistic style recognition in paintings
Celia Ciurchil-Giurgiu - Transilvania University of Braşov, Romania
(joint work with Maria Nuţu - Transilvania University of Braşov, Romania)

- 11:40-12:00 A Cross-Lingual Transformer Framework for Automated Conceptual Metaphor Classification
Liana Luminița Boca - Transilvania University of Brașov, Technical University of Cluj-Napoca, Romania
(joint work with Vasile Teodor Dădârlat - Technical University of Cluj-Napoca, Romania)
- 12:00-12:20 Phyto-Vision: A Computational Approach to Global Historical Botanical Iconography
Guang Yang - University College Cork, Ireland
- 12:20-12:40 From Massive to Miniature: A Survey on the Emergence of Small Language Models vs. Large Language Models
Maria Nuțu - Transilvania University of Brașov, Romania
(joint work with Bianca Iacob - Transilvania University of Brașov, Romania)
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13:00-15:00 Lunch - Restaurant of Transilvania University of Brașov - Memorandului Street no. 39

15:00-15:50 Plenary session - Transilvania University Hall

Game Theory in Cybersecurity: From Theory to Practice
Keynote Speaker: Ioanna Kantzavelou

University of West Attica, Athens, Greece

Chair: Cătălin Zara

University of Massachusetts Boston, United States of America

16:00-16:40
Room UI7 **Probabilities & Statistics**

Chair: Eugen Păltănea - Transilvania University of Braşov,
Romania

- 16:00-16:20 The joint number operator of a finite family of random variables
Aurel Iulian Stan - The Ohio State University at Marion, United States of America
(joint work with Gabriela Popa - Department of Physics, Ohio University, United States of America and Ruma Dutta - Department of Physics, Astronomy & Material Science, Missouri State University, United States of America)
- 16:20-16:40 On the dependence of Shannon entropy on the choice of probability redistribution technique
Flavia-Corina Mitroi-Symeonidis - Academy of Economic Studies, Department of Applied Mathematics, Bucharest, Romania

16:00-17:20
Room UI2 **Dynamical Systems**

Chair: Cristian Lăzureanu - The Polytechnic University of Timișoara,
Romania

- 16:00-16:20 On Significant Pointwise Contractions and Annular Contractions
Ovidiu Popescu - Transilvania University of Braşov, Romania
- 16:20-16:40 On the Flip Bifurcation in a Family of Two-Dimensional Maps
Mădălina Sofia Paşca - Department of Mathematics, West University of Timișoara, Romania
- 16:40-17:00 Fold bifurcations in a class of two-dimensional maps
Ioan Viorel Naghi - Department of Mathematics, West University of Timișoara, Romania
- 17:00-17:20 Aspects of the study of two-dimensional gravitational systems with logarithmic potential
Daniel Paşca - University of Oradea, Romania
(joint work with Anna-Monika Muscaş - University of Oradea, Romania)

16:00-17:40
Room UI3 **Mathematical Analysis**

Chair: Aurelian Cernea - University of Bucharest, Romania

16:00-16:20 Systems of Bases for Generalized Harmonic Polynomials
Eleutherius Symeonidis - *Catholic University of Eichstaett-Ingolstadt, Bavaria, Germany*

16:20-16:40 A Generalized Integral Operator and a Family of Associated Classes of Analytic Functions
Maria Andreea Cuntan - *Babeş-Bolya University of Cluj-Napoca, Romania*
(joint work with Daniel Breaz - "1 Decembrie 1918" University of Alba-Iulia, Romania)

16:40-17:00 Numerical procedures for reckoning solutions to variational inequalities
Ariana Pitea - *National University of Science and Technology Politehnica Bucharest, Romania*

Chair: Ariana Pitea - National University of Science and Technology Politehnica Bucharest, Romania

17:00-17:20 On solutions of certain classes of differential inclusions of fractional order
Aurelian Cernea - *University of Bucharest, Romania*

17:20-17:40 On several Young-type inequalities for operators
Miruna-Daniela Roşu - *Transilvania University of Braşov, Romania*
(joint work with Nicuşor Minculete - Transilvania University of Braşov, Romania and Shigeru Furuichi - Department of Information Science, College of Humanities and Sciences, Nihon University, Setagaya-ku, Tokyo, Japan)

16:00-17:40
Room UI6 **Applied Mathematics**

Chair: Florin Isaia - Transilvania University of Braşov, Romania

- 16:00-16:20 Piezothermoelastic interaction of long rods induced by moving heat source with non locality under Dual phase lag heat conduction model
Anjali Srivastava - Indian Institute of Technology (BHU) Varanasi, India
(joint work with Santwana Mukhopadhyay - Indian Institute of Technology (BHU) Varanasi, India)
- 16:20-16:40 Wave propagation in dipolar thermoelastic bodies with hyperbolic two-temperature effects: a modified green-lindsay approach
Denisa Maria Neagu - Transilvania University of Braşov, Romania
(joint work with Marin Marin - Transilvania University of Braşov, Romania)
- 16:40-17:00 A Study Using Laplace-Domain Formulation for a Thermo-Electro-Micropolar Medium with a Spherical Cavity
Octavia-Maria Hapenciuc - Transilvania University of Braşov, Romania
(joint work with Marin Marin - Transilvania University of Braşov, Romania and Pîrlog Ştefan - Transilvania University of Braşov, România)
- 17:00-17:20 The Green's function method for neutral type second order two-point BVPs with deviating argument
Remus-Nicolae Pelle - Doctoral School of Engineering Sciences, University of Oradea, Romania
(joint work Alexandru Mihai Bica - Department of Mathematics and Informatics, University of Oradea, Romania)
- 17:20-17:40 A study of energy in thermoelastic diffusion theory for Cosserat media
Ştefan Pîrlog - Transilvania University of Braşov, Romania
(joint work with Marin Marin - Transilvania University of Braşov, Romania and Hapenciuc Octavia-Maria - Transilvania University of Braşov, Romania)

17:30-18:10
Room UI2 **Software and its engineering**

Chair: Silviu Dumitrescu - Transilvania University of Braşov,
Romania

17:30-17:50 A Modular DeCode C++ Pipeline for High-Quality Genomic
Analysis
Petre Mihai Bogdan - Transilvania University of Braşov, Roma-
nia
(joint work with Tudor Constantin Badea - Transilvania Uni-
versity of Braşov, Romania and Madalina Niţoi - Transilvania
University of Braşov, Romania)

17:50-18:10 Multi-criteria evaluation of automatically composed chess dia-
grams
Delia Monica Duca-Iliescu - Transilvania University of Braşov,
Romania

19:00 Festive Dinner - Honterus Cafeteria by *Bellman*

Piaţa Sfatului, no. 18; entrance from the Black Church side

June 13, 2026

09:00 - 16:00 Excursion and Lunch
Departure from Transilvania University Hall - Iuliu Maniu
Street, no 41A
