

The Fifth International Conference on Applications of Mathematics and Informatics in Natural Sciences and Engineering

(AMINSE5, Tbilisi, Georgia, 2020+1, Virtual)

*Dedicated to the 25th Anniversary of Foundation of
Tbilisi International Centre of Mathematics and Informatics (TICMI)*

<http://www.viam.science.tsu.ge/aminse2020/>

PROGRAM

Because of the situation related to COVID-19
AMINSE5 will be conducted as a fully virtual conference

Join Zoom Meeting

<https://zoom.us/j/5190594538?pwd=ZUNLNmlRbmJicnl4cWxkNHh5Mzc1Zz09>

Meeting ID: 519 059 4538

Wednesday, June 16, 2021

14:00 (Tbilisi Local Time¹) **Opening**

George Jaiani, Natalia Chinchaladze (I. Vekua Institute of Applied Mathematics, I. Javakhishvili Tbilisi State University, Tbilisi, Georgia). 25 Years of TICMI (1995-2020)

Opening Lectures

14:30 – 15:10 **Holm Altenbach** (Otto-von-Guericke-Universität Magdeburg Fakultät für Maschinenbau Institut für Mechanik, Magdeburg, Germany). Rheological Modeling in Solid Mechanics from the Beginning up to Now

15:10 – 15:50 **Roberto Natalini** (Istituto per le Applicazioni del Calcolo "M. Picone" Consiglio Nazionale delle Ricerche, Rome, Italy). Recent Results on Differential Models of Cell Movements on Heterogeneous Structures

Invited Lectures

15:50 – 16:30 **Vakhtang Kokilashvili** (A. Razmadze Mathematical Institute of I. Javakhishvili Tbilisi State University, Tbilisi, Georgia). Singular Integrals and Boundary Value Problems

¹ Tbilisi Local Time = Central European Time (Summer CET)+2

16:30- 17:10 **Alice Fialowski** (Institute of Mathematics, Budapest, Hungary). On Lie Superalgebras and their Moduli Spaces

17:10 – 17:50 **Alberto Cialdea** (Department of Mathematics Computer Sciences and Economics University of Basilicata, Potenza, Italy). Functional Dissipativity of Second Order Differential Operators with Complex Coefficients

Communications:

17:50 – 18:10 **Tamar Mesablishvili** (I. Vekua Institute of Applied Mathematics of I. Javakhishvili Tbilisi State University, Tbilisi, Georgia). On Factorization of Monoids

18:10 – 18:30 **Mariam Rashoian** (Georgian Technical University, Tbilisi, Georgia). Some Boundary Value Problems for Maxwell Type System of Partial Differential Equations

Thursday, June 17, 2021

Invited Lectures

14:00-14:40 **Roland Duduchava** (University of Georgia, Tbilisi, Georgia). Convolution Equations on the Abelian Group $\mathcal{A}(-1; 1)$ and Their Applications

14:40 – 15:20 **Flavia Lanzara** (Università degli di Roma “La Sapienza”, Dipartimento di Matematica, Roma, Italy). Fast Computation of Elastic and Hydrodynamic Potentials Using Approximate Approximations

15:20 – 16:00 **Wilfried Becker** (Technische Universität Darmstadt Fachbereich Maschinenbau Fachgebiet Strukturmechanik, Darmstadt, Germany). Stress and Strength Analysis of a Circular Hole in an Orthotropic Plate with Finite Width

16:00 – 16:40 **Roland J. Etienne** (Lyée Mathias Adam Pétange & University of Siegen, Luxembourg). On the Zeroes and Extrema of Generalised Clausen Functions

16:40-17:20 **Paolo E. Ricci** (UniNettuno Telematic University, Rome, Italy), Diego Caratelli (Eindhoven University of Technology, Eindhoven, The Netherlands), Rekha Srivastava (University of Victoria - Victoria, British Columbia, Canada). Computing Matrix Roots by 2nd Kind pseudo-Chebyshev Functions and Dunford-Taylor Integral

17:20 – 18:00 Hamlet Meladze (N. Muskhelishvili Institute of Computational Mathematics, Georgian Technical University, Tbilisi, Georgia), **Tinatín Davitashvili** (Ivane Javakhishvili

Tbilisi State University, Tbilisi, Georgia). Non-local Contact Problem for Linear Differential Equations with Partial Derivatives of Parabolic Type with Constant and Variable Coefficients

Friday, June 18, 2021

Invited Lectures

14:00 – 14:40 **Omar Purtukhia**, E. Namgalauri (I. Javakhishvili Tbilisi State University, Tbilisi, Georgia). Stochastic Integral Representation of Past-Dependent non-smooth Brownian Functional

14:40 – 15:20 **Sara Khalil** (Institute of Mathematics, Jadara University, Irbid, Jordan). Jordan Boundary Value Problems on Corner Manifolds

15:20 – 16:00 **David Natroshvili** (Technical University of Georgia, Tbilisi, Georgia). Application of the Theory of Pseudodifferential Equations in the Multi-Field Mixed Problems for Composed Elastic Structures

16:00 – 16:40 **Petre Babilua** (I. Javakhishvili Tbilisi State University, Tbilisi, Georgia), Elizbar Nadaraya (I. Vekua Institute of Applied Mathematics, I. Javakhishvili Tbilisi State University, Tbilisi, Georgia). On the One Nonparametric Estimate of Poisson Regression Function

Communications:

16:40 – 17:00 **Teimurazi Davitashvili** (I. Vekua Institute of Applied Mathematics of I. Javakhishvili Tbilisi State University, Tbilisi, Georgia). Numerical Simulation of Glacier Adaptation to Regional Climate Alteration

17:00 – 17:20 **Temur Chilachava**, George Pochkhua (Sokhumi State University, Georgia). Research of a Three-Dimensional Dynamic System Describing the Process of Assimilation

Closing Lecture

17:20 – 18:00 **Philippe G. LeFloch** (Sorbonne University and CNRS, Paris, France). Einstein Spacetimes with Low Regularity or Slow Decay

18:00 – **Closing**