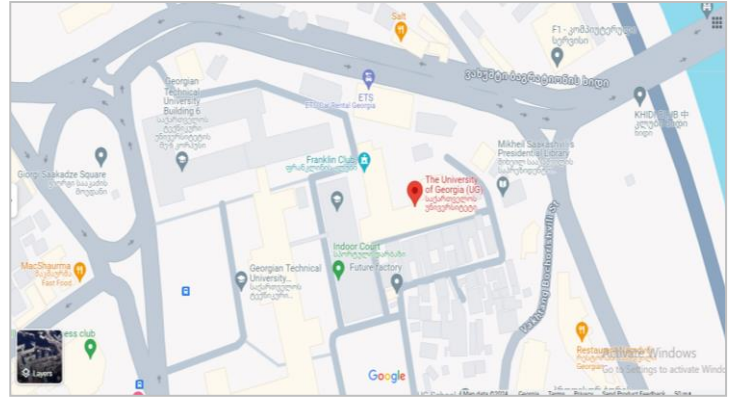


# CSIT CONFERENCE

## Workshop on Data Analytics and Mathematical Modeling

The University of Georgia, address: Tbilisi, 0171, Georgia, 77a, Kostava ave., IV Building, 5-th floor, Room 519



Wednesday, June 26, 2024

09<sup>00</sup>–16<sup>00</sup> **Registration**

10<sup>00</sup>–11<sup>00</sup> **Opening and Plenary Session**

**Moderators:** Hrachya Atsatryan, Konstantine Topuria

10<sup>00</sup>–10<sup>20</sup> Welcome Messages

10<sup>20</sup>–11<sup>00</sup> Plenary Session

11<sup>00</sup>– 11<sup>40</sup> **Coffee Break**

11<sup>40</sup>– 14<sup>00</sup> **Session 1**

**Moderator:** Vladimir Sahakyan

11<sup>40</sup> Levon Aslanyan, Hasmik Sahakyan

“Graph theoretical resolution of a state-agent-environment model”

12<sup>00</sup> Tigran Petrosyan, Petros Petrosyan

“Vertex-distinguishing edge coloring of Lucas cubes”

12<sup>20</sup> Tatiana Kosovskaya, Zhou Juan

“Algorithm for extraction common properties of objects described in the predicate calculus language with several predicate symbols”

12<sup>40</sup> Tatiana Kosovskaya

“Fuzzy Neural Networks that Change their Configuration”

13<sup>00</sup> Nikoloz Katsitadze, Zurab Chachava

“Optimizing the Mid-Size Microservice Architecture Ecosystem”

13<sup>20</sup> Hasmik Sahakyan, Levon Aslanyan

“Input Data Generation for Solving Discrete Tomography Problems with Machine Learning”

13<sup>40</sup> Konstantin Bulatov

“Indirect error difference approximation for selecting the best anytime algorithm for tasks with unrecognizable quality”

14<sup>00</sup>– 15<sup>00</sup> **Free Time / Lunch**

15<sup>00</sup>– 17<sup>20</sup> **Session 2**

**Moderator:** Tinatin Davitashvili

15<sup>00</sup> Sergo Tsiramua, Hamlet Meladze, Tinatin Davitashvili, Aleksandre Benashvili, Lazare Kvirtia, Irakli Basheleishvili

“Combinatorial Analysis of the Reliability of Multi-core Processors”

15<sup>20</sup> Revaz Kakubava, Nani Salia

“Analysis of Time Measures for the M/G/1 System in a Random Environment”

15<sup>40</sup> Vladimir Sahakyan, Artur Vardanyan

“The Steady-State Probabilities for a Queuing System with Multiprocessor Servicing Tasks”

- 16<sup>00</sup> Ketevan Kutkhashvili, Neli Kilasonia  
“Scheduling theory problem with a unfixed start time”
- 16<sup>20</sup> Merab Pkhovelishvili, Zaza Tsiramua, Natela Archvadze, Mariam Pkhovelishvili  
“Overview of Sufficient Forecasting Models”
- 16<sup>40</sup> Rita Abrahamyan, Hayk Grigoryan, Artur Gevorgyan, Hasmik Panyan, Hrachya Astsatryan  
“Evaluating Satellite-Based Precipitation Estimates: A Case Study in Armenia Across Temporal Scales, Altitudes, and Terrain Complexities”
- 17<sup>00</sup> Agit Atashyan, Artyom Lazyan, Davit Hayrapetyan, Hrachya Astsatryan, Vahagn Poghosyan, Suren Poghosyan  
“Mission Preparation for Self-Organizing UAV Swarms on Multi-User Platform”

### 18<sup>00</sup> - 22<sup>00</sup> Social Program & Welcome Reception

Meeting point: UG School parking territory

Assembly time 17:30

Restaurant: Funicular (Mtatsminda plateau, 0114 Tbilisi, 9 Kakutsa Cholokashvili Street, Tbilisi 0114)

## Thursday, June 27, 2024

### 10<sup>00</sup> – 11<sup>30</sup> Session 3

**Moderator:** Levon Aslanyan

- 10<sup>00</sup> Nikoloz Katsitadze, Adeyinka Olanrewaju Ajagbe  
“Privacy-Preservation and Data-Sharing Security Issues in Banking Applications”
- 10<sup>20</sup> Mariam Haroutunian, Arsen Margaryan, Karen Mastoyan  
“Secure Online Voting Scheme Using Steganography”
- 10<sup>40</sup> Romik Sargsyan, Roman Sahakyan, Emil Gazazyan, Sevak Sargsyan, Hrachya Astsatryan  
“Neural Networks vs. Traditional Techniques: Differential Equation Approaches in Quantum Gate Analysis”
- 11<sup>00</sup> Kartlos Kachiashvili, Joseph Kachiashvili, Vakhtang Kvaratskhelia  
“Artificial intelligence methods for testing human psychological state”
- 11<sup>20</sup> Givi Qiria , Sulkhan Sulkhanishvili , Nikoloz Katsitadze  
“Development of examination software for the Faculty of Medicine”

### 11<sup>40</sup> – 12<sup>00</sup> Coffee Break

### 12<sup>00</sup> – 13<sup>40</sup> Session 4

**Moderator:** Sergo Tsiramua

- 12<sup>00</sup> George Giorgobiani, Vakhtang Kvaratskhelia, Vazha Tarieladze  
“On Sub-Gaussianity in Banach Spaces”
- 12<sup>20</sup> Mikhail Doryshin, Elena Zamyatina  
“Robots interaction algorithms: the results of simulation experiments”
- 12<sup>40</sup> Elisabed Asabashvili  
“Comparative Analysis of Ruby Language Libraries in the Field of Data Science”
- 13<sup>00</sup> Giorgi Baghaturia, Marine Menteshashvili  
“On the Numerical Solution of the Characteristic Problem for one Quasi-Linear Equation”
- 13<sup>20</sup> Simon Razmadze  
“Scoring the Outcomes of 1-3-3 Multistage Model of Computerized Adaptive Testing”

13<sup>30</sup>–14<sup>00</sup> Final Session

### 14<sup>00</sup> – 15<sup>00</sup> Free Time / Lunch

### 18<sup>00</sup>–21<sup>00</sup> – Excursion:

Old Tbilisi, Metekhi, Abanotubani, Leghvtakhevi gorge

View tour *“Walking in Old Tbilisi”* on Android/iOS free mobile application *Biliki* or generate Old Tbilisi tour on web application [www.biliki.ai](http://www.biliki.ai)





Friday, June 28, 2024

10:00-12:30 – Work of the program committee  
Simultaneous discussions

12:30: closing of the workshop

13:00-14:00 - lunch

15:00-20:00 Excursion:

Mtskheta: Jvari, Svetitskhoveli, Samtavro, Shiomghvime

View tour "[Cultural Trip to Mtskheta](#)" on Android/iOS free mobile application [Biliki](#) or generate Mtskheta tour on web application [www.biliki.ai](http://www.biliki.ai)

Meeting point: UG School parking territory

Assembly time: 14:30

Restaurant: Marani Hall (156 Agmashenebeli street, Mtskheta)

