ICICS 2026

International Conference on Informatics and Computer Science

The International Conference on Informatics and Computer Science (ICICS 2026) will bring together leading researchers, academicians, and industry experts to present the latest innovations, trends, and challenges in computer science, informatics, and interdisciplinary applications. The conference provides an international forum for exchanging ideas, fostering collaboration, and advancing knowledge in emerging domains of digital transformation, artificial intelligence, and computational sciences.

As part of the ICICS-2026 Conference, a **special symposium** will be held for doctoral students to present and discuss their research.

We invite high-quality submissions of original research papers, case studies, and review articles addressing theoretical foundations, innovative methodologies, and real-world applications.

Venue - University of Georgia (UG), Tbilisi, Georgia

Social Program & Cultural Heritage

The ICICS 2026 conference offers a rich social program including a welcome reception, gala dinner, and guided tours of the ancient city of Mtskheta cultural heritage sites.

Topics of Interest

- Machine Learning and Cognitive Modeling
- Information and Communication Technologies
- Blockchain and Distributed Ledger Technologies
- Computational Mathematics and Modeling
- Logic and Combinatorial Methods
- Adaptive and Reconfigurable Systems

- Reliability, Risk Analysis and Fault-Tolerant Design
- Bioinformatics and Computational Biology
- Cybersecurity and Privacy
- Interdisciplinary Applications Across Science, Engineering, Economics, Health Informatics

Conference Proceedings

Accepted articles will be published after conference with Digital Object Identifiers (DOIs) by The **University of Georgia Publishing House**, in the **Conference Section**.

High-quality papers presented at the ICICS 2026 after the conference will be selected for publication in the **Springer Nature** journal **"Computational Mathematics and Modeling"**, which is a research journal focusing on numerical and analytical methods of computational mathematics, mathematical modeling. Authors of selected papers will be invited to submit extended versions to the journal after the conference, accompanied by detailed publication guidelines.

Articles will be indexed in: Scopus, Google Scholar, Research Gate. Metrics of Journal: artificia h-index 18, SCImago Journal Rank (SJR) 0.168, Impact Score 0.49, ISSN 1046283X, Best Quartile Q4.
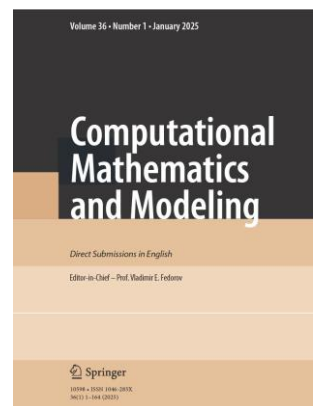
Paper Submission Guidelines

Full papers must present original and unpublished work. Submissions should be written in English and formatted according to the conference template. Authors are encouraged to use LaTeX to format their papers, using the style file and template below, you can also use MS Word. The formatted paper must be converted to PDF file and the number of pages should not exceed 4, please be careful that the paper size is set to A4. The template is based on the IEEE style.

Important dates

Conference Dates	June 18-20, 2026
Papers Submission	February 20, 2026
Notification of acceptance	March 20, 2026
Final Papers due	April 24, 2026
Registration Dates	May 29, 2026
Final Program Publication	June 5, 2026

Registration Fees

	Until May 1, 2026	After May 1, 2026
Regular (International/Local)	170€/170₾	200€/200₾
Student (Certificate required)	50€/50₾	75€/75₾
Online Participants	100€/100₾	150€/150₾
Accompanying person	70€/70₾	100€/100₾
Tour in ancient city of Mtskheta		50€/50₾

Registration fee includes: The possibility of submitting one presentation, access to all sessions of the conference program, documentation, lunches, coffee breaks, and Banquet.

Accompanying Person Registration fee includes: Lunches, coffee breaks, Banquet.

Participation in the conference is free for members of the program committee and plenary speakers.

Registration

ICICS-2026 Registration form

All participants are kindly requested to fill the Registration Form before May 29, 2026

Transfer type: *

Bank transfer (Requisites: GEL | EURO | USD)

Committees

ICICS 2026 Conference General Chair: Konstantine Topuria, Rector of UG

Co-chairs: Merab Topuria (Director of School of Science and Technologies)
             Sergo Tsiramua (Director of Institute of Informatics)

Program Committee:

Alexander Meskhi (Georgia)
Edward Pogossian (Armenia)
Elisabed Asabashvili (Georgia)
Elza Nikoleishvili (Georgia)
Emzar Khmaladze (Georgia)
Francisco Criado-Aldeanueva (Spain)
Hamlet Meladze (Georgia)
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Levon Aslanyan (Armenia)
Mamuka Kotetishvili (Georgia)
Mark Borodovsky (USA)
Michel Dayde (France)
Murad Taghiyev (Azerbaijan)
Paul de Souza (USA)

Roland Duduchava (Georgia)
Roman Chertovskikh (Portugal)
Sergo Tsiramua (Committee Chair, Georgia)
Soso Gogilidze (Georgia)
Stanisław Ambroszkiewicz (Polland)
Temur Chilachava (Georgia)
Temur Jangveladze (Georgia)
Tinatin Davitashvili (Georgia)
Vakhtang Kvaratskhelia (Georgia)
Vladimir Sahakyan (Armenia)
Yuri Shoukourian (Armenia)

Organizing Committee:

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Julieta Andguladze
Mariam Buzhgulashvili (Committee Secretary)
Merab Topuria (Committee Chair)
Nikoloz Katsitadze
Sergo Tsiramua (Deputy Chair)
Sulkhan Sulkhanishvili
Tinatin Endeladze
Zurab Tskiria (Deputy Chair)

Technical Committee:

George Gvazava
Guram Rukhadze
Temur Kiknadze
Tornike Tutarashvili
Tsotne Berishvili

Plenary Speakers

Dr. Paul de Souza is the founder of the Cyber Security Forum Initiative (CSFI). Dr. de Souza has over 25 years of cybersecurity experience. He is faculty at George Washington University; designed AT&T's Managed Security Services networks as Chief Security Engineer; engineered solutions for CSC and U.S. Robotics; consults for governments, militaries, and corporations worldwide; and served as Federal Director of Training and Education for Norman Data Defense Systems.

Dr. de Souza serves as a CENTRIC (Centre of Excellence in Terrorism, Resilience, Intelligence & Organized Crime Research) Visiting Researcher at Sheffield Hallam University, U.K., and as a Guest Lecturer at the Swedish Defence University (SEDU) Försvarshögskolanand; former Institute of World Politics Board of Advisors for the Cyber Intelligence Initiative (Ci2) in Washington, D.C.; and served as an Advisor for the MCPA (Military Cyber Professionals Association). He is a Cyber SME NATO Instructor and an Order of Thor Medal recipient.

He is a Negev Hi-Tech Faculty Startup Accelerator Advisor for Ben-Gurion University of the Negev, Israel, and an Advisory Board member at IntellCorp (Lisbon, Portugal – Counter-Terrorism / Counter-Intelligence / Cyber). He has been a Visiting Research Fellow at the National Security Studies, Tel Aviv University, Israel (INSS) – Cyber Security and Military & Strategic Affairs Programs. He has completed the Executive Program in Counter-Terrorism Studies from the Interdisciplinary Center (IDC) Herzliya in Israel. He is also a Cybersecurity Exec Ed alum at Harvard Kennedy School. He serves as an American Public University Ambassador, a Cybersecurity Programs Advisory Board Member at Capitol Technology University, a Cybersecurity Advisory Committee member for the Cybersecurity Risk Management Master's program at Georgetown University, Washington, D.C., a Professor of Cyber Threat Intelligence at The University of Georgia, Tbilisi, and an Executive in Residence at the Geneva Centre for Security Policy (GCSP), Geneva, Switzerland (CTI Information Sharing Policy Project Lead). Cyber Warfare Documentary Research Advisor for the documentary "Dawn of Cyber Warfare."

Dr. de Souza has a master's degree in National Security Studies (M.A.) with a concentration in Terrorism from American Military University, West Virginia, and a Ph.D. in Critical Infrastructure from Capitol Technology University, Maryland. Dr. de Souza is pursuing an LL.M. in Digital Law and Technology at Université catholique de Lyon, focused on European Cyber Law.

Mark Borodovsky is a Regents' Professor in the Georgia Tech and Emory Department of Biomedical Engineering in Atlanta, Georgia. His research focuses on computational genome analysis, particularly on developing accurate algorithms for whole-genome gene prediction — the fundamental first step in deciphering the multilayered functional information encoded in DNA sequences. This work led to the development of the GeneMark family of gene finders, widely used for the annotation of prokaryotic and eukaryotic genomes as well as metagenomes. He is the founder of the Georgia Tech graduate programs in Bioinformatics and an elected Fellow of the International Society for Computational Biology.

Michel Daydé – CNRS/IRIT - Toulouse Institute for Research in Computer Science, University of Toulouse, Toulouse INP - National Polytechnic Institute of Toulouse.

Exascale Computing and New Computing Paradigms

Abstract: The importance of calculus does not appear clearly to the general public, even though it is at the heart of changes in our societies for example with artificial intelligence that benefits from the huge data volumes and computing resources available nowadays. The talk is an attempt to cover the main topics related to exascale computing consequence of the growing application requirements. We enumerate some of the main exascale applications, and actually not only scientific, since they have a considerable impact at the societal (e.g. energy, health, environment, defense and security), economic and financial (e.g. industrial competitiveness) and ethical (e.g. biology) levels. Modeling, simulation and artificial intelligence are increasingly appearing as decision support tools for a number of critical situations such as natural disasters and climate change. We will also cover major issues such as energy consumption of supercomputers and have a look to some of the emerging computing paradigms: quantum, neuromorphic and molecular / DNA computing.

Dr. Levon Aslanyan began his scientific career in 1961 at the Institute of Energetics of the Armenian SSR Academy of Sciences, later studying at Yerevan State University and graduating with honors from Novosibirsk State University in 1968. From 1969 to 1972 he pursued postgraduate studies at the Computer Center of the USSR Academy of Sciences in Moscow. He earned his PhD in Physics and Mathematics in 1976 and his Doctoral degree in 1997. He was awarded the titles of Senior Researcher (1983) and Professor (2008), and in 2014 was elected a Corresponding Member of the National Academy of Sciences of Armenia. He leads the Department of Discrete Mathematics at the Institute of Informatics and Automation of the NAS RA.

His research spans discrete analysis, including local algorithm efficiency, complexity of weakly defined Boolean functions, logic-separation methods in pattern recognition, discrete isoperimetric problems, and associative rule mining. He has supervised the development of practical systems such as best-match search algorithms, cluster analysis software, seismic data preprocessing tools, enterprise information systems, the ArmReader OCR for Armenian characters, and a network intrusion detection system. Dr. Aslanyan has been active in scientific organization: co-founder of the Bulgarian Institute for Information Theories and Applications (2003), member of editorial boards of international journals, and participant in numerous international conference program committees. Since 1997, he has served as Armenia's National Contact Point for EU information and telecommunication research programs.

He is the author of about 200 scientific publications and has lectured at universities across Europe.

Monotone Boolean Reconstruction

Abstract. Monotone Boolean reconstruction refers to a process in the field of combinatorial optimization and information theory, where the goal is to recover a hidden binary function (a function that takes as input the values 0 or 1) based on limited information obtained from observations. The term "monotone" indicates that the function maintains the non-decreasing property: if one of the inputs is changed from 0 to 1, the output will not decrease. In applications such as data mining and network analysis, reconstructing the structure of monotone Boolean functions can help in understanding underlying relationships or dependencies within data. This reconstruction problem is significant in various fields including economics, bioinformatics, and machine learning. Key components of monotone Boolean reconstruction involve:

Observations: Limited data or samples that provide insights into the behavior of a Boolean function.

Reconstruction: The process of inferring the original function from the available observations, often requiring algorithms and techniques from combinatorial and optimization theory.

Applications: Implications for various practical scenarios where understanding monotonic relationships between variables is crucial.

The complexity of this problem can vary, and often involves algorithmic challenges, in particular, to determining the minimum set of observations required for accurate reconstruction. Researchers use different structural methods and mathematical frameworks to efficiently tackle such reconstruction tasks. Boolean functions form a descriptive model of compatibility of sets of independent constraints, but the class of all functions is unambiguously complex and it is of interest to find also relatively simple subclasses of monotone functions. In this survey, we summarize existing results in the area of monotone Boolean recognition, including those related to special classes of monotone Boolean functions. Results related to the multivalued domain are also briefly presented.

Roland Duduchava - Professor, Director of the V. Kupradze Institute of Mathematics, The University of Georgia, Head of a Department at A. Razmadze Mathematical Institute Ivane Javakhishvili Tbilisi State University, Former stipendiant of Humboldt Foundation and Professor-Merkator of DFG (Germany), roldud@gmail.com

Modelling of Shell Equation on a Hypersurface With Γ-Convergence

Abstract. We consider boundary value problems (BVPs) of bending elastic isotropic thin media Ωh: C ×[−h, h] around a surface C with the Lipshitz boundary $\Gamma := \partial C$, governed by the L´ame equation $L = -\mu\Delta\Omega h - (\lambda + \mu)\nabla\Omega h \, div\Omega h$. The object of the investigation is what happens with the boundary value problems when the thickness of the layer diminishes to zero $h\to 0$.
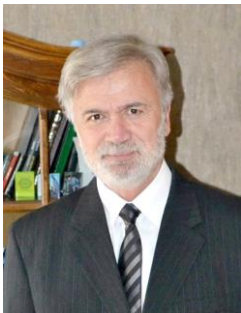
Sergo Tsiramua – Dr., professor at the University of Georgia, School of Science and Technologies, Department of Informatics, Director of Institute of Informatics
s.tsiramua@ug.edu.ge

George Tsiramua – Head of Business Technology Department, Toyota Caucasus; Founder, OptiCrew, georgetsiramua@opticrew.ai

Logical-Combinatorial Modeling of Reconfigurable Organizational Systems with Multifunctional Elements

Abstract. Organizations often focus on hiring highly skilled specialists—top engineers, designers, and project managers—assuming that individual expertise will naturally lead to project success. But in practice, such teams can become rigid and difficult to adapt.
McKinsey studies show that over 75% of teams without proper structural integration fail to meet key delivery goals — not due to a lack of talent, but due to fragile team design.
To challenge that we created OptiCrew – a platform that helps organizations build flexible, balanced and resilient teams based on multifunctional personnel.
Opticrew is built on logical-combinatorial and logical-probabilistic models, which helps in creating structurally reconfigurable teams. Structural reconfiguration is achieved through the multifunctionality of system elements, enabling interchangeability and replacement in cases of partial or complete failure.
Each team member is assessed across all potential roles, and optimization algorithms identify the best team configuration and role allocation.
Scenario-based simulations—unavailability, performance drops, and scope changes—evaluate team robustness under stress. Teams with interchangeable personnel demonstrate higher reliability and reduced need for external replacements. Additionally, AI and natural language processing convert behavioral data into quantitative indicators, while Generative AI identifies skill gaps and provides targeted recommendations to improve team adaptability and performance.

Recomended Hotels:

Holiday Inn, 1, 26 May Square, Tbilisi 0171 Georgia

Ameri Plaza Tbilisi, Kostava st. 76A, Tbilisi 0171 Georgia

Ibis budget Tbilisi Center, 22 Giorgiy Akhvediani st, 0108 Tbilisi, Georgia

Supporting organizations

Contact Us

For any inquiries, please contact the organizing committee at: **icics2026@ug.edu.ge**