



*2012 6<sup>th</sup> International Conference on*  
APPLICATION of INFORMATION and  
COMMUNICATION TECHNOLOGIES (AICT)

**AICT2012**

**CONFERENCE PROGRAM**

*17-19 October 2012, Tbilisi, Georgia*

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## 17 October 2012

**Location:** SHERATON METECHI PALACE HOTEL and  
TBILISI STATE UNIVERSITY (TSU)

<b>09:00 – 12:30</b>	<b>Events at the Sheraton Metechi Palace Hotel</b>
<b>09:00 – 10:00</b>	<b>Registration</b>
<b>10:00 – 10:30</b>	<b>Welcoming and Opening Ceremony</b>
<b>10:30 – 12:00</b>	<b>Keynote Session</b>
<b>12:00 – 12:30</b>	<b>Coffee Break and Networking</b>
<b>12:30 – 12:50</b>	<b>Transport to TSU</b>
<b>13:00 – 17:00</b>	<b>Events at the Tbilisi State University</b>
<b>13:00 – 14:00</b>	<b>Lunch</b>
<b>14:00 – 15:00</b>	<b>Keynote Session</b>
<b>15:00 – 15:30</b>	<b>Coffee Break and Networking</b>
<b>15:30 – 17:30</b>	<b>Concurrent Technical Sessions</b>
<b>18:00</b>	<b>City Tour / Dinner</b>

## 18 October 2012

**Location:** INTERNATIONAL BLACK SEA UNIVERSITY

<b>09:00 – 10:00</b>	<b>Registration</b>
<b>10:00 – 11:00</b>	<b>Keynote Session</b>
<b>11:00 – 11:30</b>	<b>Coffee Break and Networking</b>
<b>11:30 – 13:00</b>	<b>Concurrent Technical Sessions</b>
<b>13:00 – 14:00</b>	<b>Lunch</b>
<b>14:00 – 15:00</b>	<b>Tutorial Session</b>
<b>14:00 – 17:30</b>	<b>Concurrent Technical Sessions</b>
<b>15:00 – 15:30</b>	<b>Coffee Break and Networking</b>
<b>19:00</b>	<b>Banquet Dinner</b>

## 19 October 2012

**Location:** GEORGIAN TECHNICAL UNIVERSITY

<b>10:00 – 11:00</b>	<b>Keynote Session</b>
<b>11:00 – 11:30</b>	<b>Coffee Break and Networking</b>
<b>11:30 – 13:30</b>	<b>Workshop Sessions</b>
<b>13:30 – 14:30</b>	<b>Lunch</b>
<b>14:30 – 15:30</b>	<b>Closing Ceremony</b>
<b>16:00</b>	<b>Social Program</b>

## 17 October 2012

**Location: SHERATON METECHI PALACE HOTEL**

**10:00–10:30**  
**Hall: Main**

**WELCOMING AND OPENING CEREMONY**

**Professor Ercan TUNC,**  
*International Black Sea University Rector, Georgia*

**Mr. Nodar SURGULADZE,**  
*Deputy Minister of Education and Science of Georgia*

**Professor Ahmet SANICH,**  
*Qafqaz University Rector, Azerbaijan*

**Professor Alexander KVITASHVILI,**  
*Tbilisi State University Rector, Georgia*

**Professor Archil PRANGISHVILI**  
*Georgian Technical University Rector, Georgia*

**Mr. Mehmet HASEKI**  
*IEEE Regional Representative, Turkey*

**Mr. Osman TURAN**  
*President of Geocell LLC, Georgia*

**Mr. Levan BUCHUKURI**  
*President of Silknet, Georgia*

**10:30–12:00**  
**Hall: Main**

**KEYNOTE SESSION**

**Speaker: Professor Adnan YAZICI**  
*Chair of Department of Computer Engineering,  
Middle East Technical University, Turkey*

**Title:** "Multimedia Data Management"

**Speaker: Professor Alexander GAMKRELIDZE**  
*Tbilisi State University, Georgia*

**Title:** Algorithms in Low-Dimensional Topology

**Speaker: Mr. Ali KURALKAN**  
*Vice President for International Sales of NETAS,  
Turkey*

**Title:** NETAS as a Regional System Integrator

**Speaker: Assoc.Prof. Abzetdin Adamov**  
*Chair of Department of Computer Engineering,  
Qafqaz University / IEEE Computer Society Chapter  
Chair, Azerbaijan*

**Title:** IEEE Contribution for Academic Excellence and Research

**12:00–12:30** **Coffee Break and Networking**

12:30 Transport to the Tbilisi State University

## 17 October 2012 (afternoon)

Location: TBILISI STATE UNIVERSITY

13:00–14:00 Lunch

14:00–15:00

Hall: Main

### KEYNOTE SESSION

**Speaker:** Professor Ramaz Botchorishvili

*Dean of Faculty of Exact and Natural Sciences at the  
Tbilisi State University, Georgia*

**Title:** "Welcome Address. Faculty short overview "

**Speaker:** Professor Iurii Krak

*Dept. of Intellectual Information Technologies  
V.M. Glushkov Institute of Cybernetics, Ukraine*

**Title:** Interactive Systems For Sign Language Learning

**Speaker:** Professor Gia Sirbiladze

*Department of Computer Sciences at the Tbilisi State  
University, Georgia*

**Title:** New Possibilistic Aggregations in the Problems of the  
Strategic Management

15:00–15:30 Coffee Break and Networking

15:30–17:00

Hall: Main

### TUTORIAL SESSION

**Speaker:** Professor M. Ufuk Caglayan

*Computer Engineering Department, Bogazici  
Universitesi, Turkey*

**Title:** Formal Modeling of Trust and Mobility from  
Computer Security Point of View

15:30–17:30

### CONCURRENT SESSIONS:

**SESSION 1.1.  
INFORMATION SCIENCE AND APPLICATION**

**Session Co-Chairs: Prof.Dr. Adnan Yazici, Dr. Giorgi Ghlonti,  
Grigory Baramidze**

**Time: 15:30–17:30**

**Hall: A**

**11:00–11:30 Coffee Break and Networking**

- 1. Ontology Creation for an Educational Center**  
*by Selma DILEK, Hacer KARACAN, Nesa JAHANGIRI, Shima AFZALI  
Gazi University Faculty of Engineering, Dept. of Computer Engineering  
Ankara, Turkey*
- 2. New novel idea for Cloud Computing: How can we use Kalman filter in security of Cloud Computing**  
*by Mehdi Darbandi, Iran University of Science and Technology (IUST),  
Pariya Shahbazi, Ole-Christoffer Granmo, University of Agder (UiA);  
Grimstad, Norway; (corresponding author: Paria Shahbazi)  
Saeed Setayesh, International Branch of Ferdowsi University of Mashhad;  
Mashhad, Iran*
- 3. Particle Swarm Intelligence as a New Heuristic for the Optimization of Distributed Database Queries**  
*by Tansel Dokeroglu, Umut Tosun, Ahmet Cosar, Department of Computer  
Engineering Middle East Technical University Inonu Bulvari, 06800, Ankara,  
Turkey*
- 4. Realization of Direct Series of Discussions in the Face of Conflicting Set of Production Rules**  
*by Roman SAMKHARADZE, Lia GACHECHILADZE, Department of  
Computer Engineering Georgian Technical University Tbilisi, Georgia.  
Davit CHIKOVANI, Faculty of Computer, Technologies and Engineering  
International Black Sea University, Tbilisi, Georgia*
- 5. Towards Remote Security Monitoring in Cloud Services Utilizing Security Metrics**  
*by Reijo M. Savola, Jukka Ahola VTT Technical Research Centre of Finland  
Oulu, Finland*
- 6. Real Time Decision Support Systems for Mobile Users in Intelligent Cities**  
*by Alfio Costanzo, Alberto Faro, Department of Electrical, Electronics and  
Computer Engineering, University of Catania, Italy*
- 7. Lip reading using fuzzy logic network with memory**  
*by Stefan Badura, Martin Klimo, Ondrej Skvarek, Faculty of management  
science and informatics .University of Zilina, Itall s.r.o. Zilina, Slovakia*



8. **Analysis of a Novel Audio Hash Function Based upon Stationary Wavelet Transform**  
*by Mahdi Nouri, Zahra Zeinolabedini, Nooshin Farhangian, Nasim Fekri, Department of Electrical Engineering Ghiasodin Institute of Higher Education Abeyk, Iran*
9. **Application of geometrical algebra to neural computations.**  
*by Irakli Rodonaia, Vakhtang Rodonaia, Faculty of Computer Technologies and Engineering International Black Sea University Tbilisi, Georgia*
10. **The adaptive method of decision making in problems of motion terminal control**  
*by Vakhtang Rodonaia, Faculty of Computer Technologies and Engineering International Black Sea University Tbilisi, Georgia*

**SESSION 2.1.**  
**COMMUNICATION, NETWORK AND HARDWARE**

**Session Co-Chairs: Prof.Dr. Alexander Gamkrelidze, Dr. Davit Chikovani, Medhat Mousa**

**Time: 15:30–17:30**

**Hall: B**

1. **Web based system for the bee colony remote monitoring**  
*by Aleksejs Zacepins, Toms Karasha, Latvia University of Agriculture*
2. **High Speed Digital Filter Design using Register Minimization Retiming and Parallel Prefix Adders**  
*by Deepa Yagain, Dr. Vijaya Krishna A. Department of E&C (VLSI Design & Embedded Systems) People's Education Society Institute of Technology Bangalore-560 085, Karnataka, INDIA*
3. **Cloud Security Tactics: Virtualization and the VMM**  
*by Panagiotis Kalagiakos, Margarita Bora, Hellenic American University, United States*
4. **Designing an active band-pass filter with tunable transversal element at 4-GHz using 0.2um GaAs technology**  
*by Saeed Soleimany, Islamic Azad University, Qazvin branch Mohammad Reza Salehifar, Islamic Azad University, Science and Research Branch Hassan Karbalaee, Shahed University, Tehran – Iran*
5. **Determination of QoS Metrics in Wireless Sensor Networks by Using Queuing Theory**  
*by Anar Rustamov, Institute of Cybernetics, Baku, Azerbaijan , Qafqaz University, Baku, Azerbaijan*
6. **Coded OFDM Wireless Systems with Generalized Prefix**

*by Hakan Dogan, Istanbul University, Hakan Yildiz, Graduate Member, IEEE, Todor Cooklev, Senior Member, IEEE, Indiana Purdue University - Purdue University Forte Wayne, Yusuf Acar, Istanbul Kultur University*

- 7. Evolution Mobile Wireless Communication And LTE Networks**  
*by Tinatin Mshvidobadze, Tech. doctor of science- Professor -Gori University, Georgia*
- 8. Conceptual Discrete Wavelet Transformation Speech Hashing for Content Authentication**  
*by Mahdi Nouri, Nooshin Farhangian, Zahra Zeinolabedini, Nasim Fekri, Department of Electrical Engineering Ghiasodin Institute of Higher Education Abeyk, Iran*
- 9. Cloud Service for Comprehensive Project Management Software**  
*by Ahmad Khan, MESCOE, Pune, India, Gundeep Singh Bindra, Department of Computer Science, Columbia University, New York, U.S.A, Rohan Arora, Darshan Jain, SKNCOE, Pune, India Nishant Raj, HCL Technologies Limited, Noida, India Dhrupad Shrivastava, Birla Institute of Technology, Mesra, India*

### **SESSION 3. ICT IN BUSINESS ADMINISTRATION, FINANCE AND ECONOMY**

**Session Co-Chairs: Prof.Dr. Gia Sirbiladze, Assoc.Prof. Robert Karayev,  
Mariam Dedabrishvili**

**Time: 15:30–17:30**

**Hall: C**

- 1. Genetic Algorithm Approach for the Prediction of Business Risks' Dynamics of Enterprise**  
*by Gia Sirbiladze, Mikheil Kapanadze, Department of Computer Sciences IV.Javakhishvili Tbilisi State University*
- 2. An Empirical Study of Tracking Strategies of E-commerce Websites**  
*by Wasin Treesinthuros, Graduate School of Computer and Engineering Management Assumption University of Thailand*
- 3. Automation of Business-Processes of an Election System**  
*by Gia Surguladze, Ekaterine Turkia, Nino Topuria, George Basiladze Dept. of Management Information Systems of Georgian Technical University Tbilisi, Georgia*
- 4. On the new multistage Fuzzy Technology to Investment Decisions**  
*by Gia Sirbiladze, Irina Khutsishvili, Bezhan Ghvaberidze, Department of Computer Sciences, Iv.Javakhishvili Tbilisi State University*

*Tbilisi, Georgia*

- 5. Maximization of Firm's profit Taking into Account Quality Criteria and Shelf Life of a Product**  
*by Shorena Okujava, Georgian Technical University, 77 Kostava st., Tbilisi, Georgia*
- 6. An Approach To Solving Some Management Problems Under Uncertainty**  
*by Teimuraz Tsabadze, dept. of computer sciences Iv. Javakhishvili Tbilisi State University ,Tengiz Tsamalashvili, dept. of social sciences and business ,Tbilisi Teaching University "Gorgasali"*
- 7. Social CRM: a New Solution for Relationship with Bank's Customers**  
*by Mehrpooya Ahmadali Nejad, Faculty of Electrical, IT, and Computer Engineering Qazvin Islamic Azad University Qazvin, Iran  
Seyyed Mohsen Hashemi, Assistant Professor, Computer Engineering Department Science and Research Branch, IAU University, Tehran, Iran*
- 8. Problems and Prospects of Electronic Shops Development in Georgia**  
*by David Zautashvili, Akaki Girgvliani, Akaki Tsereteli State University, Georgia*
- 9. Information Access in the Globalised World**  
*by Mariam Paposhvili, Aleksandra Suladze IV.Javakhishvili Tbilisi State University Field of study: International Relations, 3rd year Tbilisi, Georgia*
- 11. Genetic algorithm approach in the minimization of the risk of financial portfolio**  
*by P. Dvalishvili, B. Midodashvili, Department of Computer Sciences, IV. Javakhishvili Tbilisi State University*
- 12. Intellectual Support System of EIA (Environmental Impact Assessment) Procedure in Region of Caspian Sea**  
*by R.A. Karayev, K.A. Aliyev, M.A. Nagiev, N.E. Kazimova, Institute of Cybernetics NASA, Oceaneering International Services LTD, "USTAD" LLC*
- 13. Cloud computing for business**  
*by Khayyam H. MASIYEV, Ilkin QASYMOV, Vusale BAKHISHOVA, Mammad BAHRI, Qafqaz University, Baku, Azerbaijan*

#### SESSION 4.1.

#### ICT IN EDUCATION, RESEARCH AND SCIENCE

Session Co-Chairs: Assoc.Prof. Stefan Badura, Dr. Vakhtang Rodonaia,  
Davit Datuashvili

**Time: 15:30–17:30**

**Hall: D**

**13:00–14:00 Lunch**

1. **Open-Access Journals (Free Valuable Information on the Web)**  
*by Aref Riahi, MA in Information Science, University of Tehran, Iran*  
*Samaneh Khakmardan, MA in Publishing Management, University of Imam Reza, Mashhad, Iran*
2. **The Role of Teacher in the Multimedia-based Foreign Language Classes**  
*by Ketevan Gochitashvili, Language Centre Ivane Javakhishvili Tbilisi State University Tbilisi, Georgia*
3. **Cognitive methodology to develop a recovery strategy for the sturgeon stocks of the Caspian Sea**  
*by R.A. Karayev, N.Y. Sadikhova, Institute of Cybernetics of the National Academy of Sciences of Azerbaijan, Baku, Azerbaijan, A.I.L. Payne, The Centre for Environment, Fisheries and Aquaculture Science (CEFAS), United Kingdom, K.A. Aliyev, Oceaneering International Services LTD, United Kingdom, A.N. Gasimli, Azerbaijan State Oil Academy, Baku, Azerbaijan*
4. **Support Vector Domain Description for non-stationary data**  
*by Foued Theljani, Kaouther Laabidi, Moufida Ksouri, LACS, ENIT, BP 37, le Belvdre 1002 Tunis, Tunisia, Salah Zidi, LAGIS, USTL, Villeneuve d'Ascq, 59650, Lille, France*
5. **Use of Informational Technologies in Study of the Spatial Structure of Glyprolines**  
*by L.I.Ismailova, R.M.Abbasli, S.R.Akhmedova, N.A.Akhmedov Institute for Physical Problems, Baku State University,*
6. **ZIPPER: The Holistic Spell Checker**  
*by Lina Alhusaini , School of Informatics The University of Edinburgh EH8 9AB Edinburgh, United Kingdom.*
7. **Analysis of the Relation between Turkish Twitter Messages and Stock Market Index**  
*by Mehmet Ulvi Şimşek, Suat Özdemir Computer Engineering Department Faculty of Engineering, Gazi University Ankara, TURKEY*
8. **Computer Determination of Preferred Conformations of Human Hemokinin-1**  
*by U.T.Agaeva , Institute for Physical Problems, Baku State University , G.A. Agaeva, N.M.Godjaev, Qafqaz University,*
9. **A Web Application Tamper Proof Method Based on Text and Image Watermarking**  
*by Zetao Jiang, Hongwu Zhang, School of Information Engineering, Nanchang Hangkong University, Jiangxi, China*
10. **Quantum Concepts in Information Retrieval**  
*by M.Archuadze, G.Besiashvili, M.Khachidze, P.Kervalishvili Faculty of Exact and Natural Sciences I.Javakhishvili Tbilisi State University, Tbilisi, Georgia*
11. **Recognition of the Patterns Represented as the Field Structures**

*by A.O. Chechel, The Bonch-Bruевич Saint-Petersburg State University of Telecommunications, 61 Naberezhnaya reki Moyki, Saint-Petersburg, 191186 Russia*

**12. Analyzing Reflector Effect on SAR Imaging System with a Proposed Functional Model**

*by Mojtaba Behzad Fallahpour, Young Researcher Club of Lahijan Islamic Azad University, Iran Hamid Deghani, Islamic Azad University of Busher, Iran, Sudan*

**13. Educational and pedagogical design of a software tool for learning postero-anterior cephalometric landmarking.**

*by Francesco Maiorana, Department of Electrical, Electronics and Computer Engineering, Rosalia Leonardi, Department of Orthodontics, University of Catania, Viale Andrea Doria, Italy*

**19:00**

**Dinner**

**18 October 2012**

**Location: INTERNATIONAL BLACK SEA UNIVERSITY**

**10:00–11:00**  
**Hall: Main**

**KEYNOTE SESSION**

**Speaker: Professor Eshref ADALI**

*Dean of Computer Engineering and Informatics  
Faculty, Istanbul Technical University, Turkey*

**Title:** Natural Language Processing and Translation  
Technics

**Speaker: Dr. Akintunde Akinnola NATHANIEL**

*Department Chair and Doctoral Program Director,  
International Black Sea University*

**Title:** IT in Biological Sciences

**Speaker: Professor Giorgi Ghvedashvili**

*Head of Department of Scientific Research and  
Development / IEEE EDS/AP/MTT Georgian Chapter  
Chairman, Tbilisi State University*

**Title:** TSU Research Overview & IEEE AP/EDS/MTT  
Georgian Chapter Activity

**Speaker: Professor Revaz Svanidze**

*Power Engineering and Telecommunications Faculty,  
Georgian Technical University*

**Title:** Infotelecommunications Development and Regulation  
Strategy, Key Priorities for Development

**11:00–11:30**

**Coffee Break and Networking**

**11:30–13:00**  
**Hall: Main**

**TUTORIAL SESSION**

**Speaker: Prof. Valeri SKLIAROV, Iouliia SKLIAROVA**

*Department of Electronics, Telecommunications and  
Informatics/IEETA at the University of Aveiro,  
Portugal*

**Title:** Data Processing in FPGA-based Systems

13:00–14:00 Lunch

11:30–17:30 CONCURRENT SESSIONS

**SESSION 1.2.  
INFORMATION SCIENCE AND APPLICATION**

**Session Co-Chairs: Prof.Dr. Mehmet Ufuk Caglayan, Assoc.Prof. Jozef Kapusta, Prof.Dr. Irakli Rodonaia**

**Time: 11:30–17:30**

**Hall: A**

13:00–14:00 Lunch

- 1. BSS parameters and their influences in GSM mobile networks**  
*by Mohammad ad Reza Salehifar, Islamic Azad University Science and Research Branch Tehran – IRAN*  
*Saeed Soleimany, Islamic Azad University Qazvin Branch Qazvin – IRAN*  
*Hassan Karbalaee, Shahed University Tehran – IRAN*
- 2. Feature Based Iris Recognition System Functioning on Extraction of 2D Features**  
*by Arjun Agrawal, Systems Engineer Infosys Limited Bangalore, India*  
*Gundeep Singh Bindra, Department of Computer Science SRM University New Delhi, India*  
*Priyanka Sharma, Department of Computer Science Global Institute of Technology, Jaipur, India*
- 3. Structuring of Normative-Technical Documents in Information and Computing Environment Taking into Account Ageing of Information**  
*by V.G. Lim, I.G. Voevodin, Astrakhan State University, Astrakhan, Russia*  
*N.B. Tashpulatova, Tashkent University of Information Technologies, Tashkent, Uzbekistan*  
*B.T. Kabulov, UzNeftegazinformatika, Tashkent, Uzbekistan,*
- 4. Labeled Protection of Project Tasks in Collaborative Designing of Software Intensive Systems**  
*by P. Sosnin, V. Maklaev, S. Zhukov, Ulyanovsk state technical university 32, Severny Venetc*
- 5. Integrated Analytical Information Resource Management System**  
*by Giorgi Ghlonti, Dept. of Informatics and Programming*  
*N. Muskhelishvili Institute of Computational Mathematics of the Georgian Technical University Faculty of Information Technologies and Engineering*  
*International Black Sea University Tbilisi, Georgia*

6. **NFC : Smart Recording Of Traffic Violation System**  
*by Omid Nejati, Member Of Young Researchers Club, Islamic Azad University Qaemshahr Branch, Qaemshahr, Iran*  
*Mohsen Yaghoubi Suraki, Department of Computer Engineering Islamic Azad University, Qazvin Branch, Qazvin, Iran*
7. **Rule Scheduling Methods in Active Database Systems: A Brief Survey**  
*by Hamid-Reza Firoozy-Najafabadi, Ahmad Habibizad Navin, Department of Computer Engineering Science and Research Branch, Islamic Azad University, Tabriz, Iran*
8. **Analysis of Inbound and Outbound Email Traffic and its SPAM Impact**  
*by Seema Khanna, National Informatics Center New Delhi, India*  
*Harish Chaudhry, Department of Management Studies Indian Institute of Technology New Delhi, India*
9. **Research on Evaluation Techniques for Immersive Multimedia**  
*by Aslinda Md. Hashim, Fakaruddin Fahmi Romli, Zosipha Zainal Osman*  
*Product Quality & Reliability Engineering, MIMOS Berhad, Kuala Lumpur, Malaysia*
10. **Collision Avatar (CA): Adding collision objects for human body in augmented reality using Kinect**  
*by Kairat Aitpayev Computer Science Department Center for Energy Research and University of Technology of Belfort-Montbeliard Astana , Kazakhstan and Belford, France*  
*Jaafar Gaber Computer Science Department University of Technology of Belfort-Montbeliard Belford, France*

### **SESSION 1.3.** **INFORMATION SCIENCE AND APPLICATION**

**Session Co-Chairs: Prof.Dr. Manana Khachidze, Assoc.Prof. Mehdi Mostofi,  
Dr. Okan Eray**

**Time: 11:30–17:30**

**Hall: B**

**13:00–14:00 Lunch**

1. **A Comparative Study on Feature Selection in Chinese Spam Filtering**  
*by Yan Xu , Beijing Language And Culture University ,Beijing, China*  
*Institute of Computing Technology, Chinese Academy of Sciences*
2. **Web Content Reauthoring for Large Screens**



*by Ms. Neetu Narwal Asst. Prof., Maharaja Surajmal Institute, Affiliate College of GGSIP University New Delhi  
Dr. Saba Hilal, Research Supervisor, HOD, Department of Computer Applications, Lingaya's University, Faridabad*

- 3. Feature Based Iris Recognition System Functioning on Extraction of 2D Features**  
*by Arjun Agrawal, Systems Engineer Infosys Limited, Bangalore, India  
Gundeep Singh Bindra, Department of Computer Science SRM University, New Delhi, India  
Priyanka Sharma, Department of Computer Science Global Institute of Technology, Jaipur, India*
- 4. The Bus Arrival Time Service Based on Dynamic Traffic Information**  
*by Tongyu Zhu, Jian Dong, Jian Huang, Songsong Pang, BoWen Du  
State Key Laboratory of Software Development Environment  
Beihang University Beijing, China*
- 5. Application Test Process in Product Life Cycle**  
*by Oner Tekin, Technology Leader Netas, Istanbul, Turkey  
Gulsah Bayram Cetin, R&D ICT Test and Automation Netas, Istanbul, Turkey*
- 6. Distributed File System as a basis of Data-Intensive Computing**  
*by Assoc. Prof. Abzetedin Adamov, Chair, Computer Engineering Department, Qafqaz University, Baku, Azerbaijan*
- 7. Direct Robust Non-Negative Matrix Factorization And Its Application On Image Processing**  
*by Bin Shen, Zhanibek Datbayev, Department of Computer Science  
Purdue University, West Lafayette, IN, 47907, USA  
Olzhas Makhambetov, Department of Computer Science Center for Energy Research Astana, Kazakhstan*
- 8. Electronic Health Card: Opportunities and Challenges**  
*by Hamid-Reza Firoozy-Najafabadi, Ahmad Habibizad Navin  
Department of Computer Engineering Science and Research Branch, Islamic Azad University Tabriz, Iran*
- 9. Application of Functional State Modelling Approach for Yeast *Sacharomyces cerevisiae* Fed-batch Fermentation Modelling**  
*by Sandis Vilums, Valters Brusbardis, Biosystems Group, Faculty of Information Technology, Latvia University of Agriculture Lielā iela 2, LV-3001 Jelgava, Latvia  
Emils Kozlinskis, Faculty of Food Technology, Latvia University of Agriculture Lielā iela 2, LV-3001 Jelgava, Latvia*
- 10. Fetal Ecg Representation Using Recurrence Plot Analysis**  
*by Eliř Tuba Celik, Bogdan Hurezeanu, Polytechnic University of Bucharest, Romania*

*Angela Digulescu, Madalina Mazilu* Military Technical Academy, Bucharest, Romania

## SESSION 2.2. COMMUNICATION, NETWORK AND HARDWARE

Session Co-Chairs: Prof. Dr. Avtandil Bakhtadze, Assoc. Prof. Suleyman Tosun,  
Assoc. Prof. Hacer Karacan

**Time: 11:30–17:30**

**Hall: C**

**13:00–14:00 Lunch**

- 1. Research on Forecasting Call Center Traffic through PCA and BP Artificial Neural Network**  
*by Tao Liu, Lieli Liu, School of Economics and Management Beijing University of Aeronautics and Astronautics, China*
- 2. High SoR based Request Routing for Future CDN**  
*by Janaka Wijekoon, Erwin Harahap, Hiroaki Nishi, Nishi Laboratory, Graduate School of Science and Technology, Keio University, Japan*
- 3. Cognitive Radio for Adaptive Modulation and Coding**  
*by Sami H. O. Salih, Abbas Mohammed, Blekinge Institute of Technology, Karlskrona, Sweden, Mamoun Suliman, Sudan University of Science and Technology, Khartoum, Sudan*
- 4. SaPM: Switch-aware Process Mapping Model for Parallel Computing**  
*by Yufei Lin, Yuhua Tang, Xinhai Xu, State Key Laboratory of High Performance Computing, School of Computer Science, National University of Defense Technology, ChangSha, Hunan, China.*
- 5. New Procedure for Discrimination of Model Parameter and Noise Variance Changes**  
*by Theodor D. Popescu, National Institute for Research and Development in Informatics, Bucharest, Romania*
- 6. With attackers wearing many hats, Prevent your “Identity Theft”**  
*by Gundeep Singh Bindra, Computer Science Department SRM University Delhi, India, Dhruvad Shrivastava, Computer Science Department Birla Institute of Technology, Mesra Rajasthan, India, Richa Seth, Infosys Technologies Limited Maharashtra, India*
- 7. Fully distributed certificate authority based on polynomial over elliptic curve for MANET**  
*by Ahmad Alomari, Faculty of Mathematics and Computer Science, University of Bucharest, Bucharest, Romania*

8. **Cut-off Time Calculation for User Session Identification by Reference Length**  
*by Jozef Kapusta, Michal Munk, Martin Drlik, Department of Informatics Faculty of Natural Sciences, Constantine the Philosopher University in Nitra Nitra, Slovakia*
9. **Secure Data Aggregation in Wireless Multimedia Sensor Networks via Watermarking**  
*by Ersin Elbasi, TUBITAK, Ankara, TURKEY, Suat Özdemir, Computer Engineering Department Faculty of Engineering, Gazi University, Ankara, TURKEY*

### SESSION 2.3. COMMUNICATION, NETWORK AND HARDWARE

Session Co-Chairs: Prof.Dr. Koba Gelashvili, Dr. Vakhtang Rodonaia,  
Dr. Akinnola Akintunde

**Time: 11:30–17:30**

**Hall: D**

**13:00–14:00 Lunch**

1. **Embedded Solution for Road Condition Monitoring Using Vehicular Sensor Networks**  
*by Artis Mednis, Atis Elsts, Leo Selavo, Cyber-Physical Systems Laboratory Institute of Electronics and Computer Science Faculty of Computing University of Latvia, Riga, Latvia*
2. **Microstrip Patch Antenna Based on Photonic Crystal Substrate with Heterostructures at Terahertz Frequency**  
*by Farhad Alizadeh, Alireza maleki javan and Manoochehr kamyab hesari, communication Engineering Dep. Islamic azad university of Tehran south, Tehran, Iran*
3. **Designing Yagi-Uda Antenna Fed by Microstrip Line and Simulated by HFSS**  
*by Hassan Karbalaee, Shahed University Tehran – Iran, Mohammad Reza Salehifar, Islamic Azad University, Science and Research Branch Tehran – Iran, Saeed Soleimany, Islamic Azad University, Qazvin Branch Qazvin - Iran*
4. **Multipurpose Smart SIM Card Based on Mobile Database and Location Dependent Query**  
*by Hamid-Reza Firoozy-Najafabadi, Department of Computer Engineering Science and Research Branch, Islamic Azad University, Tabriz, Iran Mohammad-Reza Feizi-Derakhshi, Department of Computer Science University of Tabriz, Tabriz, Iran.*

5. **Estimation models of competition and complementarity within communication technologies**  
*by Nurilla Mahamatov, Department of mathematical and natural science, Turin Polytechnic University in Tashkent, Tashkent, Uzbekistan, Department of Mechanical and Aerospace Engineering, Seoul National University, Suk Won Chab, Department of Mechanical and Aerospace Engineering, Seoul National University,*
6. **Power-Aware Topology Generation for Application Specific NoC Design**  
*by Suleyman Tosun, Yilmaz Ar, Ankara University, Faculty of Engineering, Computer Engineering Dept. Ankara, Turkey.  
Suat Ozdemir, Gazi University, Faculty of Engineering, Computer Engineering Dept. Ankara, Turkey.*
7. **Wireless Platform for Multi-Channel RTD Measurements**  
*by Amer Atta Yaseen, College of Electrical and Electronic Techniques Foundation of Technical Education Baghdad, Iraq*
8. **Weight-Based Fair Rate Allocation in Resilient Packet Ring**  
*by Elyas Mohamadzadeh Kosari, Department of Computer, Ferdowsi University of Mashhad, Mashhad, Iran  
Mohammad Hossein Yaghmaee Moghaddam, Associate Professor Department of Computer, Ferdowsi University of Mashhad  
Computer Department, Faculty of engineering, Ferdowsi University of Mashhad, Azadi Square Mashhad, Iran  
Faculty of Natural Sciences, Constantine the Philosopher University in Nitra Nitra, Slovakia*
9. **Data Processing in FPGA-based Systems**  
*by Valery Sklyarov, Iouliia Skliarova, University of Aveiro, Department of Electronics, Telecommunications and Informatics/IEETA, Aveiro, Portugal*

## SESSION 4.2.

### ICT IN EDUCATION, RESEARCH AND SCIENCE

Session Co-Chairs: Prof.Dr. Nodar Momtselidze, Assoc.Prof. Hakan Dogan

**Time: 11:30–17:30**

**Hall: E**

**13:00–14:00 Lunch**

1. **Investigation of the Spatial Structure of Myomodulin E Molecule by Computer Modeling**  
*by N.A.Akhmedov, R.M.Abbasli, L.I.Ismailova, Institute for Physical Problems, Baku State University, L.N.Agaeva, N.M.Godjajev, Qafqaz University, , Baku, Azerbaijan*

- 2. Multi-objective Evolutionary Algorithm Based on Decomposition for Efficient Coverage Control in Mobile Sensor Networks**  
*by Bara'a Ali ATTEA Computer Eng. Dept. University of Baghdad Baghdad / IRAQ, Feyza Yildirim OKAY Computer Eng. Dept. Gazi University Ankara/TURKEY, Suat ÖZDEMİR, M. Ali AKCAYOL, Computer Eng. Dept. Gazi University, Ankara/TURKEY*
- 3. Modelling, simulation and monitoring the use of labVIEW.**  
*by Štefan Koprda, Milan Turčani, Zoltán Balogh, Department of Informatics, Faculty of Natural Sciences, Constantine the Philosopher University in Nitra Nitra, Slovakia*
- 4. Underwater Scene Characterization Using Wavelet Packet Denoising and Adaptive Contrast Stretching**  
*by Zhengmao Ye, Habib Mohamadian College of Engineering, Southern University Baton Rouge, Louisiana 70813, USA  
Yongmao Ye, Broadcasting Department, Liaoning TV Station ShenYang, 110004, China*
- 5. Computational Study of the Conformational Flexibility of the Amphibian Tachykinin Neuropeptides**  
*by G.A.Agaeva, Institute for Physical Problems, Baku State University, Azerbaijan*
- 6. Application of Computer Technologies in Investigation of Spatial Structure of Peptide Molecules**  
*by G.A.Akverdieva, Institute for Physical Problems, Baku State University, Baku, Azerbaijan*
- 7. Imitation modeling of competitive market equilibrium**  
*by Khatuna Bardavelidze, Department of Computer Engineering, Georgian Technical University, Tbilisi, Georgia, Avtandil Bardavelidze, Department of Computer Technologies, Akaki Tsereteli State University, Kutaisi, Georgia*
- 8. Methods of evaluating students In different countries**  
*by Mehdi H.Soltani, Alovzat Q.Aliyev Institute of Information Technology of ANAS, Baku, Azerbaijan*
- 9. Examining characteristics, obstacles, reasons and process of smart schools' establishment**  
*by Mehdi H.Soltani, Alovzat Q.Aliyev Institute of Information Technology of ANAS, Baku, Azerbaijan*
- 10. Teacher's Role in the Process of CALL in Language Teaching**  
*Ali Sahintas, Qafqaz University, Azerbaijan, Mehmet Sahiner, International Black Sea University, Georgia*
- 11. The Usage of Malay Technological Terminologies in Malaysian Youth Institutions for Skills: Interests and Challenges**  
*by Adenan Ayob, Sultan Idris Education University, 35900 Tanjung Malim, Perak, MALAYSIA*

**12. Key Component Extraction Method Based on HMM and Dependency Parsing**

*by Jianchu Kang, Songsong Pang, Jian Dong, Bowen Du, Jian Huang  
State Key Laboratory of Software Development Environment Beihang  
University Beijing, China.*

**13. The Usage of Malay Technological Terminologies in Malaysian Youth Institutions for Skills: Interests and Challenges**

*by Adenan Ayob, Sultan Idris Education University Tanjung Malim Perak,  
MALAYSIA*

**14. Analytical Solution of an Electrokinetic Flow in a Nano-Channel with Variable Physical Properties**

*by Mehdi Mostofi, Department of Mechanical Engineering East Tehran  
Branch, Islamic Azad University, Tehran, Iran*

**SESSION 4.3.**

**ICT IN EDUCATION, RESEARCH AND SCIENCE**

**Session Co-Chairs: Prof. Suat Ozdemir, Assoc.Prof. Victoria Baramidze**

**Time: 11:30–17:30**

**Hall: F**

**13:00–14:00 Lunch**

**1. Interactive Teaching Methods of Mathematical Physics by the methods of Computer Visualization**

*by S.T.Huseynov, N.V.Ibadov, A.A.Aslanov Ganja State University, Ganja,  
Azerbaijan*

**2. Decision Support System For Crisis Management Using Temporal Fuzzy Logic**

*by Eng. Ammar Alnahhas, Assist.Prof. Bassel Alkhatib, Faculty of Information  
Technology, Damascus University, Damascus - Syria*

**3. Implementation of eLearning in Azerbaijan**

*by Leyla Muradkhanli, Khazar University, Baku, Azerbaijan, Bahram Atabeyli,  
Qafqaz University, Baku, Azerbaijan*

**4. Factor Analysis of Factors Affecting E-Learning Success from the Viewpoint of Virtual Students (Case Study of Islamic Republic of Iran)**

*by Aref Riahi, MA in Information Science, University of Tehran, Iran  
Corresponding Author, Hasan Khosravi, MA in Educational Management,  
University of Tarbiat Moaalem, Tehran, Iran, Samaneh Khakmardan, MA in  
Publishing Management, University of Imam Reza, Mashhad, Iran*

**5. I Did Not Know Its Prohibited - Academic Dishonesty in Online Courses**

*by Yovav Eshet, Yehuda Peled, Keren Grinautski, University of Haifa & Zefat  
Academic College, Israel*

6. **Solving the Quadratic Assignment Problem with the Modified Hybrid PSO Algorithm**  
by Ali Safari Mamaghani, Department of Computer Engineering Bonab Branch Islamic Azad University, Bonab, Iran, Mohammad Reza Meybodi, Department of Computer Engineering and Information Technology, AmirKabir University of Technology, Tehran, Iran,
7. **Computing Infrastructure and Services Deployment for Research Community of Moldova**  
by P. Bogatencov, G. Secieru, N. Iliuha, RENAM Association and Institute of Mathematics and Computer Science of ASM 5, Academiei, Chisinau, Moldova
8. **On the method of sustainable use of soils by regulation of purchase orders for agricultural products**  
by Eyubova Svetlana, Institute of Soil Science and Agrochemistry of ANAS, Baku, Azerbaijan , Pashayev Adalat, Cybernetics Institute of ANAS, Baku, Azerbaijan, Sabziyev Elkhan, Kiber Ltd Company, Baku, Azerbaijan
9. **Comparison of the Efficiency of Principal Component Analysis and Multiple Linear Regression to Determine Students' Academic Achievement**  
by MSc. Mehtap Erguven, Computer Technologies and Engineering Faculty International Black Sea University, Tbilisi, Georgia
10. **The Educational Communities' social network**  
by Khayyam H. Masiyev, Nargiz Bayramova, Elvira Siraczade, Qafqaz University, Baku, Azerbaijan
11. **Interactive Systems For Sign Language Learning**  
by Iurii Krak, Iurii Kryvonos, Dept. of Intellectual Information Technologies V.M. Glushkov Institute of Cybernetics Kyiv, Ukraine  
Waldemar Wojcik, Dept. Electrical Engineering and Informatics Lublin University of Technology Lublin, Poland
12. **Computer Modeling of Hemokinins using Molecular Dynamics Method: Hemokinin 1 (human)**  
by N.M. Qodjayeve, B.M. Qasimov Qafqaz University, U.T. Agayeva Baku State University, Baku / Azerbaijan
13. **Using of Information and Communication Technologies in Learning and Teaching of Physics in Universities: Few Parametric Model for the Dynamics of Vibrations of Diatomic Molecules**  
by R. Qadmaliyev Baku State University, B.M. Qasimov, N.M. Qodjayeve Qafqaz University Baku / Azerbaijan





## 19 October 2012

Location: GEORGIAN TECHNICAL UNIVERSITY

### 10:00–11:00 INVITED TALKS

**Hall: Main**    **Speaker: Professor Zurab Gasitashvili**  
*Deputy Rector for Science, Georgian Technical University, Georgia*

**Title:**    The Georgian Technical University and its Scientific and Technological Potential

**Speaker: Dr. Guenter Podlacha**  
*Head of "E-Academy", GIZ GmbH - German Development Cooperation, Germany*

**Title:**    From Learning 1.0 to Learning 3.0

**Speaker: Professor Krasimir Simonski**  
*Chair of Central and Eastern Europe Networking Association - CEENet, Chair of Bulgarian NREN (BREN), Bulgaria*

**Title:**    The status and short term challenges for e-Infrastructures in Caucasus (2013-2015)

### 11:00–11:30 Coffee Break and Networking

### 11:30–13:30 WORKSHOP SESSIONS

#### e-Learning Workshop – Draft Program

- Hall: Main**
- Introduction to the GIZ E-Learning Caucasus project and the regional E-Learning Caucasus network by Elke Wemhoff, Project Manager GIZ E-Academy
  - Presentations from Caucasus countries' E-Learning Network by representatives of the networks: Information on the networks' activities and experiences as well a insights into pilot projects
  - Panel-Discussion (Panelists: Günter Podlacha and representatives from the national networks; Panel moderation by Andreas Hörfurter of common sense elearning training & consultants)

**CEENet Workshop on eInfrastructures – Draft Program**

**Hall: A**

Chair: Michał Przybylski, Secretary General of Central and Eastern European Networking Association, Manager of CEENGINE project.

The idea of the discussion pannel is to demonstrate some good examples of infrastructures in Caucasus and beyond and invite the audience to share their views and problems related to einfrastructures, their availability, operations, state of the art, funding.

Panelist 1: Ramaz Kvatadze, GRENA

Panelist 2: Other research infrastructure from Caucasus

Panelist 3: Other research infrastructure from Caucasus

Panelist 4: Reference infrastructure from neighbouring region

Panelist 5: Ministry of Education, Georgia

Questions and answers...

**13:30–14:30 LUNCH**

**14:30–15:30 CLOSING CEREMONY**

**16:00 SOCIAL PROGRAM**