◊ CONFERENCE OBJECTIVE

The CompSysTech’08 International Conference is organized by THE BULGARIAN ACADEMIC SOCIETY OF COMPUTER SYSTEMS AND INFORMATION TECHNOLOGIES and its OBJECTIVE is to intensify the information exchange of results in theoretical research and practical developments in this field.

CompSysTech’08 is organized under the patronage of:

• EUROPEAN COMMISSION - Directorate-General for Education and Culture;
• Bulgarian State Agency for Information Technologies and Communications;
• Bulgarian Ministry of Education and Science;
• Bulgarian Academy of Sciences;
• Bulgarian Union of Automation and Informatics;
• Bulgarian Chapter of the Association for Computing Machinery – acmbul;
• Bulgarian Chapter of IEEE Computer Society;
• Bulgarian Chapter of IEEE Communications Society.

◊ INTERNATIONAL PROGRAMME COMMITTEE

• Honorary Co-Chairs:
  Kiril Boyanov, Acad., DSc. – Bulgaria
  Vassil Sgurev, Acad., DSc. – Bulgaria

• Co-Chairs:
  Todor Stoilov, Prof., DSc – Bulgaria
  Boris Rachev, Assoc. Prof., Ph.D. – Bulgaria

• Scientific Secretary:
  Dimo Dimov, Assoc. Prof., Ph.D. – Bulgaria

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  Douglas Harms (USA)
  Evtim Peytchev (United Kingdom)
  Georgi Todorov (Bulgaria)
  Georgi Totkov (Bulgaria)
  Grisha Spasov (Bulgaria)
  Heinz-Dietrich Wuttke (Germany)
  Iliya Georgiev (USA)
  Ivan Jelinek (Czech Republic)
  Janusz Jablonowski (Poland)
  Joris Mihael (Israel)
  Jukka Teuhola (Finland)
  Juliana Peneva (Bulgaria)
  Karl Jones (United Kingdom)
  Leon Rothkrantz (The Netherlands)
  Leonid Rozenblyum (USA)
  Lidiya Georgieva (Bulgaria)
  Liudmil Dakovski (Bulgaria)
  Margarita Todorova (Bulgaria)
  Mayer Aladjem (Israel)
  Melih Inal (Turkey)
  Michael Vasilakopoulos (Greece)
  Nicole Levy (France)
  Nikolay Dokev (Bulgaria)
  Novruz Allahverdi (Turkey)
  Olegas Vasilecas (Lithuania)
  Peter Stanchev (USA)
  Radi Romansky (Bulgaria)
  Rumen Nikolov (Bulgaria)
  Stoicho Stoichev (Bulgaria)
  Timo Järvi (Finland)
  Tzvetomir Vassilev (Bulgaria)
  Ville Leppanen (Finland)
  Yannis Manolopoulos (Greece)
◆ NATIONAL ORGANIZING COMMITTEE

- Co-Chairs:
  Plamen Vatchkov, Assoc. Prof., Ph.D. – Bulgaria
  Angel Smrikarov, Assoc. Prof., Ph.D. – Bulgaria
  Bozhan Zhechev, Assoc. Prof., Ph.D. – Bulgaria

- Secretary:
  Margarita Grigorova (Bulgaria)

- Members:
  Emil Bojanov (Bulgaria)  Raycho Ilarionov (Bulgaria)
  Plamenka Borovska (Bulgaria)  Stoyanka Smrikarova (Bulgaria)
  Alexey Egorov (Bulgaria)  Margarita Teodosieva (Bulgaria)
  Alexander Dimov (Bulgaria)  Nikolai Liutov (Bulgaria)
  Nayden Vasilev (Bulgaria)  Maria Kasheva (Bulgaria)
  Peter Antonov (Bulgaria)  Daniela Dureva (Bulgaria)
  Anatoliy Antonov (Bulgaria)  Galina Bogdanova (Bulgaria)
  Margarita Todorova (Bulgaria)  Boyanka Zhelyazova (Bulgaria)
Thursday 12th June 2008

09:00 – 14:30
In the foyer of the new library
Registration

15:00
New Library, Conference Room
OPENING
WELCOME
Chair: Raycho Ilarionov

PLENARY SESSION
Chair: Todor Stoilov
Co-chair: Boris Rachev

Computer Technologies for 3D Video Delivery for Home and Mobile Entertainment
Atanas Gotchev
DEPARTMENT OF SIGNAL PROCESSING, TAMPERE UNIVERSITY OF TECHNOLOGY, FINLAND
******

E-GOVERNANCE ACT
Plamen Vachkov
STATE AGENCY OF INFORMATION TECHNOLOGIES AND COMMUNICATIONS

Roumen Trifonov
COORDINATION COUNCIL FOR INFORMATION SOCIETY AT COUNCIL OF MINISTERS
******

From eLearning to eUniversity
Roumen Nikolov
SOFIA UNIVERSITY

17:00
Sightseeing of the Technical University of Gabrovo

19:30
Social Evening in the Restaurant “BALKAN”
The Main Building

The New Library

Hotel “BALKAN”
SECTION 1

Computer Systems (Hardware)

Chair: Angel Popov
Scientific Secretary: Hristo Kilifarev

Friday 13\textsuperscript{th} June 2008
09:00 – 09:30
Main building, Hall 3410

1.1. Formation of Attribute Spaces Using Wavelets in Automatic Classification of Explosives
Nikolai Shopov, Raycho Ilarionov, Ivan Simeonov, Hristo Kilifarev

1.2. Improvement and Optimization of an Embedded System for Short-Time Weather Forecasting
Hristo Kilifarev, Ivan Simeonov, Raycho Ilarionov

DISCUSSIONS

11:00 – 11:30
Coffee Break
SECTION 2

Computer Systems (Software)

Chair: Lyudmil Dakovski
Co-Chair: Stoyan Bonev
Scientific Secretaries: Dilyana Budakova

SECTION 2 - SESSION 1
Friday 13th June 2008
09:00 – 11:00
Main building, Hall 3303

2. 1. Emotion Recognition Using Brain Activity
   Robert Horlings, Leon J. M. Rothkrantz
2. 2. Address Block Segmentation Using Ensemble-Clustering Techniques
   Leon J. M. Rothkrantz, Mustafa Idrissi
2. 3. An Adaptable FSA Simulator
   Stoyan Bonev
2. 4. Computer Assisted Active Learning System Development for Critical Thinking and Flow
   Dilek Karahoca, Adem Karahoca, Ali Güngör, Ilker Yengin
2. 5. Text Search in Document Images Based on Hausdorff Distance Measures
   Andrey Andreev, Nikolay Kirov
2. 6. Innovative Concept of Open Source Enterprise Resource Planning (ERP) System
   Svilen Valkov
2. 7. On Some Drawbacks of the PHP Platform
   Nikolaj Cholakov
2. 8. Ontology-Based Examinational Students Work Retrieval
   Dilyana Budakova, Lyudmil Dakovski

DISCUSSIONS

11:00 – 11:30
Coffee Break

SECTION 2 - SESSION 2
Friday 13th June 2008
11:30 – 13:30
Main building, Hall 3303

2. 9. Development of Applications with Service Oriented Architecture for Grid
   Vladimir Dimitrov
2. 10. Architectural Framework for Dynamic Web-applications
      Aleksandar Stoev, Aleksandar Dimov
2. 11. Adaptable Evaluation Approach for Software Architecture
      Olfa Lamouchi, Amar Ramdan-Cherif, Nicole Lévy
2. 12. Comparison of Parallel Metaheuristics for Solving the TSP
   Milena Lazarova, Plamenka Borovska
2. 13. Parallel Simulated Annealing for Solving the Room Assignment Problem on
   Shared and Distributed Memory Platforms
   Milena Lazarova
2. 14. The Impact of Fragmentation over Streaming Video Traffic
   Delyan Genkov
2. 15. Algorithm and Testing Software for Avoiding Fragmentation at the Application
   Layer
   Delyan Genkov

DISCUSSIONS

13:30 – 14:30
Lunch
SECTION 3A

Application Aspects of Computer Systems and Technologies

Chairs: Nadezhda Ruskova
Co-Chairs: Tsvetozar Georgiev
Scientific Secretaries: Valentin Mutkov

SECTION 3A - SESSION 1
Friday 13th June 2008
09:00 – 11:00
Main building, Hall 3311

3A. 1. Function Based Identification of Affected Components in Cross-Domain Engineering
Jivka Ovtcharova, Milan Marinov

3A. 2. Mobile Application for Determination of Users’ Text Entry Speed
Tsvetozar Georgiev, Evgeniya Georgieva

3A. 3. Time Synchronization of Multimedia Streams and Objects
Yordan Shterev

3A. 4. Performance of Multimedia Presentation with Branches by Synchronized Multimedia Integrated Language
Yordan Shterev

3A. 5. Partitioning Parallel Discrete Event Simulation
Hristo Valchanov, Nadezhda Ruskova, Dimitar Genov, Nedjalko Nikolov

3A. 6. Overheads Reduction of the Distributed Time Warp Simulation
Hristo Valchanov, Nadezhda Ruskova, Trifon Ruskov

3A. 7. Parameter Estimation for Finite Mixtures of Generalized Partial Credit Models
Dimiter Tsvetkov, Lyubomir Hristov

3A. 8. Modeling of Network Traffic With Self-Similar Process
Evgeniya Gospodinova, Mitko Gospodinov

DISCUSSIONS

11:00 – 11:30
Coffee Break

SECTION 3A - SESSION 2
Friday 13th June 2008
11:30 – 13:30
Main building, Hall 3311

3A. 9. Comparison of Bees Algorithm, Ant Colony Optimisation and Particle Swarm Optimisation for PID Controller Tuning
Karl O. Jones, André Bouffet
3A. 10. Complex Spread Spectrum in Uplink Line of Mobile Link Systems CDMA2000 and UMTS
   Petar Petrov, Valentin Mutkov
3A. 11. An Algorithm for Complex Spread Spectrum in Downlink Line of Mobile Link Systems CDMA2000 and UMTS
   Petar Petrov, Valentin Mutkov
3A. 12. Time-Delay Simulation Analysis of Local Controller Networks
   Nikolay Kakanakov, Mitko Shopov, Grisha Spasov
3A. 13. ABC - Alphabetical Computer-Based Handwriting Investigation System
   Dobrin Nestorov, Stefan Benchev, Stefan Bonchev, Georgi Gluhchev
3A. 14. Diagnosis Modelling of Urethral Obstructions Using Fuzzy Expert System
   Kürşat Zühtüoğlu, İsmail Sarıtaş, Nihat Arikian
3A. 15. The Design of Fuzzy Expert System for Emission Parameters
   İsmail Saritas, Murat Ciniviz

DISCUSSIONS

13:30 – 14:30
   Lunch
SECTION 3B

Application Aspects of Computer Systems and Technologies

Chairs: Stoicho Stoichev
Co-Chairs: Tzvetomir Vassilev
Scientific Secretaries: Adriana Borodzhieva

SECTION 3B - SESSION 1
Friday 13th June 2008
09:00 – 11:00
Main building, Hall 3312

3B. 1. Learning and Growth Strategy Metrics
Petko Ruskov, Yanka Todorova

3B. 2. Building the Academic Strategy Program
Petko Ruskov, Yanka Todorova

3B. 3. Objective Evaluation of Quality of Colour Reproduction in Current LCD Monitors
Dobromir Dochev

3B. 4. Comparison of Two Colour Calibration Techniques for Digital Photography
Tzvetomir Vassilev, Bernhard Spanlang

3B. 5. Determination of the Resistance Characteristics of Self-Compacting Concrete Samples by Artificial Neural Network
Mustafa Altin, Ismail Saritas, M. Tolga Cogurcu, Sakir Tasdemir, Mehmet Kamanli, M. Yasar Kaltakci

3B. 6. Prediction of Surface Roughness Using Artificial Neural Network in Lathe
Şakir Taşdemir, Süleyman Neşeli, Ismail Sarıtaş, Süleyman Yaldız

3B. 7. Artificial Neural Network Design for Behaviours of Reinforced Concrete Column Under Axial Load and Comparison of Experimental Study
M. Tolga Cogurcu, Ismail Saritas, Mustafa Altin, M. Sami Donduren, Mehmet Kamanli, Mevlüüt Yasar Kaltakci

DISCUSSIONS

11:00 – 11:30
Coffee Break

SECTION 3B - SESSION 2
Friday 13th June 2008
11:30 – 13:30
Main building, Hall 3312

Todor Stoilov, Krasimira Stoilova

3B. 9. Main Components of a MPLS Recovery Approach
Svetlin Petrov
3B. 10. Developing a Profile of the User of Electronic Content  
**Jordan Stoyanov, Georgi Todorov**

3B. 11. An Accelerating Technique for Population Based Algorithms  
**Vassil Guliashki**

3B. 12. An algorithm for Studying Mental Tasks’ Power Spectra Along the Time  
**Plamen Manoilov, Adriana Borodzhieva**

3B. 13. Simulating the Operation of Feed-forward Convolutional Encoders and Viterbi Decoders Applied in Additive White Gaussian Noise Communication Channels  
**Adriana Borodzhieva, Plamen Manoilov**

3B. 14. Designing Robust Copyright Protection for Software Products  
**Eugene Genov**

**DISCUSSIONS**

13:30 – 14:30  
Lunch
SECTION 4

Educational Aspects of Computer Systems and Technologies

Chairs: Karl O. Jones
Co-chairs: Juliana Peneva
Scientific Secretaries: Vladimir Mateev

SECTION 4 - SESSION 1
Friday 13th June 2008
09:00 – 11:00
Main building, Hall 32 - conference room

4. 1. Practical Issues for Academics Using the Turnitin Plagiarism Detection Software
   Karl O. Jones
4. 2. E-learning Standardization – Bulgaria: Current Status, Issues and a Possible Solution
   Georgi Totkov, Todor Uzunov, Rositsa Doneva, Nikolay Kasakliev
4. 3. A Software System for Speech Therapy and Voice Quality Improvement
   Vania Sivakova, Todorka Terzieva, Georgi Totkov
4. 4. FPGA Platform Based Digital Design Education
   Dmitri Mihhailov, Margus Kruus, Alexander Sudnitson
4. 5. An Adaptable Personal Learning Environment for e-Learning and e-Assessment
   Steve Green, Lilyana Nacheva-Skopalik, Elaine Pearson
4. 6. Educational Process Model
   Hristo Tujarov, Svetlana Avramova, Stefan Kalchev, Milena Stefanova
4. 7. An Educational Project for Master’s Program in Computing
   Juliana Peneva, Stanislav Ivanov, Petko Staynov

DISCUSSIONS

11:00 – 11:30
Coffee Break

SECTION 4 - SESSION 2
Friday 13th June 2008
11:30 – 13:30
Main building, Hall 32 - conference room

   Dilek Karahoca, Adem Karahoca, Ali Güngör
   Maria Hristova, Stanimir Stoyanov, Asya Stoyanova-Doycheva
4. 10. Virtual Instrument for Truth Table Construction of analytically-defined Boolean Functions
   Vladimir Mateev
4. 11. Learning Styles Testing in Moodle
   Daniela Dureva, Georgi Tuparov
4. 12. VEHICCLE: A Model of Web-based Language Learning
   Anelly Kremenska
4. 13. Investigating Student Readiness for Computer Assisted Language Learning
   Anelly Kremenska

DISCUSSIONS

13:30 – 14:30
Lunch
SECTION 5A

PhD Students Workshop

Chairs: Vladimir Lazarov,
Co-chairs: Olegas Vasilecas
Scientific Secretaries: Ivaylo Penev

SECTION 5A - SESSION 1
Friday 13th June 2008
09:00 – 11:00
Main building, Hall 3114

5A.1. Formal Transformation of Ontology Axioms to Rules
Diana Kalibatiene, Olegas Vasilecas

5A.2. Mission-critical Transfer and Ethernet-based MAN Networks – a Contemporary Snapshot
Vanya Topalova

5A.3. Deciding on the Architecture of the Concept Map Based Knowledge Assessment System
Romans Lukashenko, Marks Vilkeli, Alla Anohina

5A.4. Implementation of Monte Carlo Simulation in a Distributed Computing Environment
Ivaylo Penev

5A.5. Ontology Based CBR Architecture For Knowledge Management in BULCHINO Catalogue
Nadezhda Govedarova, Stanimir Stoyanov, Ivan Popchev

5A.6. Testing and Analysis of an Algorithm for Protein Structure Comparison
Dobrinka Petrova

5A.7. Integration of IT Strategy and Enterprise Architecture Models
Ivaylo Velitchkov

DISCUSSIONS

11:00 – 11:30
Coffee Break

SECTION 5A - SESSION 2
Friday 13th June 2008
11:30 – 13:30
Main building, Hall 3114

5A.8. Determination of Body Measurements of a Cow by Image Analysis
Şakir Taşdemir, Murat Yakar, Abdullah Ürkmez, Şeref Inal

Anca Andreescu, Marinela Mircea

5A.10. Semantic User Profile Acquisition and Sharing
Tomáš Kadlec, Ivan Jelinek
5A.11. An Investigation on the Approaches for Version Control Systems
   Vladimir Jotov
5A.12. Simulation Models of Two-Phase Locking of Distributed Transactions
   Svetlana Vasileva, Aleksandar Milev
5A.13. Data Protection Utilizing Trusted Platform Module
   Elior Vila, Plamenka Borovska

DISCUSSIONS

13:30 – 14:30
   Lunch
SECTION 5B

PhD Students Workshop

Chairs: Georgi Todorov
Co-chairs: Georgi Totkov
Scientific Secretaries: Orlin Tomov

Friday 13th June 2008
09:00 – 11:00
Main building, Hall 3116

5B.1. Extended IMS Specification for Accumulative Test System
     Mariana Sokolova, George Totkov
5B.2. Mathematics and Programming: Some studies
     Ana Pacheco, Anabela Gomes, Joana Henriques, Ana Maria de Almeida,
     António José Mendes
5B.3. Adaptive Model for User Knowledge in the E-Learning System
     Todorka Glushkova
5B.4. Virtual Labs with Remote Access to a Real Hardware Equipment in the Computer
     Systems Education
     Orlin Tomov
5B.5. Team Work in Software Development Student Projects
     Anca Andreescu, Iulian Intorsureanu, Adina Uta, Rodica Mihalca
5B.6. Using Semantic Web Technologies for Information Adaptation
     Vojtech Jirkovsky, Ivan Jelinek

DISCUSSIONS

11:00 – 11:30
Coffee Break
SECTION 6

Students Workshop

Chair: Petar Kenderov
Co-chair: Anelia Ivanova
Scientific Secretaries: Galina Ivanova

Friday 13th June 2008
09:00 – 10:00
New Library, Conference Room

6.1. An Example of Distributed Mobile System for Monitoring
Velislava Spasova

6.2. A Conceptual Model of Scientific Council WEB Site
Marina Petkova, Anelia Ivanova, Angel Smrikarov

6.3. A Training Model of a CMOS at INEX
Ognyan Zahariev

DISCUSSIONS

SECTION 7

High-School Students Workshop

Chair: Petar Kenderov
Co-chair: Anelia Ivanova
Scientific Secretaries: Galina Ivanova

Friday 13th June 2008
10:00 – 11:00
New Library, Conference Room

7.1. HiMIX – A Computer Based Virtual Chemical Laboratory
Vladislav Trifonov, Nikolay Suknyarov

7.2. Virtual Model of EIM ES 1020B from Computer Museum of Mathematics and
Informatics Faculty in Shumen University
Katerina Velcheva, Violeta Velcheva, Stanimir Stanev

7.3. Pascal / C++ Developer's Handbook
Krasimir Asenov, Alexander Kolarski, Martin Kirilov

DISCUSSIONS

11:00 – 11:30
Coffee Break
WORKSHOP

v(HDL) - Hardware Description Language as a Tool for Creating of Hardware

Chair: Philip Philipov
Co-chair: Nikolay Kostadinov
Scientific Secretaries: Ivan Panajotov

Friday 13th June 2008
09:30 – 10:30
Main building, Hall 3410

Liaison between SoP and v(HDL)
Koljo Onkov, Ivan Evgeniev

Teaching VHDL for Students in Computing at the University of Rousse
Anelia Ivanova, Nikolay Kostadinov, Galina Ivanova

DISCUSSIONS

11:00 – 11:30
Coffee Break
CompSysTech'09
WORKSHOP

FP7 Project SISTER: Strengthening the IST Research Capacity of Sofia University. Opportunities for collaboration.

Chair: Roumen Nikolov  
Co-chair: Petko Ruskov  
Scientific Secretary: Aleksandar Dimov

Friday 13th June 2008  
10:30 – 11:30  
Main building, Hall 3410

Presentation of SISTER Project  
Roumen Nikolov

Strengthening the Capacity in Software and Services and Intelligent Content and Semantics  
Aleksandar Dimov

Strengthening the Capacity in Interdisciplinary Skills of the Staff and the Technology Environment  
Petko Ruskov

DISCUSSIONS

13:30 – 14:30  
Lunch
CompSysTech'09
Friday 13th June 2008
15:00
New Library, Conference Room

The CHAIRS
of the PROGRAMME COMMITTEE and the ORGANIZING COMMITTEE
will bestow
a CRYSTAL PRIZE
to the authors of the best papers.

Friday 13th June 2008
15:30
New Library, Conference Room

Meeting
of the PROGRAMME COMMITTEE and ORGANIZING COMMITTEE
and the chairs of each sections
of the CompSysTech’08

Friday 13th June 2008
17:00
EXCURSION
to the city of Tryavna

19:30
Dinner in the brewery of Tryavna
                Back to Gabrovo
Gabrovo

Tryavna