



Technical University of Sofia

Faculty of Computer Systems and Control



Bogaziçi University, Istanbul

Turkey



Ankara University, Ankara

Turkey

Association of the Certified Microsoft Partners, Bulgaria



IEEE Computer Society, Bulgarian Section
IEEE Communications Society, Bulgarian Section

P R O G R A M

THIRD INTERNATIONAL SCIENTIFIC CONFERENCE

COMPUTER SCIENCE

Istanbul, Turkey
12 - 15 October 2006

CONFERENCE CO - CHAIRS

Plamenka Borovska,

Technical University of Sofia, Bulgaria

Baki Koyuncu,

Ankara University Ankara, Turkey

Tunga Gungor,

Bogaziçi University Istanbul, Turkey

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Thursday, October 12th, 2006

13:00 – 17:00 Registration

14:00
Opening
Plenary Session

Chairs: Plamenka Borovska, TU of Sofia
Baki Koyuncu, Ankara University
Tunga Gungor, Bogaziçi University Istanbul

Conference Hall 1

- 1. Stoyan Markov, Bulgarian Academy of Science** *“High performance computing and large scale simulation”*
- 2. Tunga Gungor, Bogazici University, Istanbul, Turkey** *“A composite approach for part of speech tagging in Turkish”*
- 3. George Paul, Otto-Von-Guericke University, Germany** *“Managing complexity in user interface development”*
- 4. Evtim Peychev, Nottingham Trent University, UK** *“Distributed computers communication frameworks – collaborative knowledge, data and control generation”*
- 5. Verginia Ananieva, Bulgarian Institute for Management and Technology** *“Center for competence in parallel computing – implementation and development strategy”*

SECTION 1

Computer Components and Systems

Chair: **Pavel Martinov - TU of Sofia**

Co-chairs: **Gokhan Ilk - Ankara University, Ufuk Caglayan -Bogazici University, Istanbul**

Session 1

Friday, October 13th, 2006

10:00 – 12:00

Conference Hall 1

1. Intel multi-core processors as platform for research – *Martin Martinov*
2. Trusted Computing Platforms: An approach for hardware-based security solutions - *Elior Vila*
3. Modeling, simulation and implementation of third order sigma-delta modulator - *Georgi Tsenov, Snejana Terzieva, Valeri Mladenov, Simeon Vladov, Georgi Toshev*
4. Observer-based approach for fault detection and isolation - *Svetla Vassileva, Silvia Mileva*
5. Fully monolithic dc-dc converters designed on CMOS 0.35 μm process - *Tihomir Brusev, Petar Goranov, Marin Hristov*
6. Open Source Implementation of the EKV Model for MOSFET Simulation in Matlab - *Georgi Angelov, Marin Hristov, Tihomir Takov*
7. Reliability's investigation of lightning protection rockets - *Nikolay Petrov , Tania Petrova, Ivan Petrov*
8. Reliability's conception for management of risk technical systems - *Nikolay Petrov*

Session 2 (Poster)

Friday, October 13th, 2006

12:00 – 13:00

Conference Hall 1

9. Fault diagnosis and uncertainty management (illustration to a biotechnological process) - *Svetla Vassileva, Silvia Mileva*
10. Interball project – a set of space instruments on board the Auroral Satellite for remote sensing and “in situ” measurements of phenomena in the polar range - *Kunyu Palazov , Alexander Bochev , Angel Manev , Evgeni Pandov*
11. Implementing of FIR filter efficiently in an FPGA - *Anna Kuncheva, Kamen Fillyov, Marin Hristov*
12. A Heuristic Approach to Teaching Negative Resistance Phenomenon - *Cyril Mechkov*
13. Universal programmer, which supports microchip (Pic12, Pic16), ATMEL (AVR, AT89), SPI EEPROM (25xxx), 16- and 8-bit I²C EEPROM (24xxx, AT17xxx), 16- and 8-bit MICROWIRE EEPROM (93xxx)- *Sergey Nedev, Vladimir Georgiev*
14. An Optimization of Radio Communication Protocols in Wireless Security Systems - *Georgi Popov, Plamenka Borovska*
15. A Fuzzy Logic Based DSP Processing for Pet Immunity PIR Motion Detectors- *Georgi Popov, Daniela Gotseva*
16. System for automation of processes related with scientific conferences - *Kiril Karaatanasov, Plamenka Borovska, Adelina Aleksieva-Petrova*

13:00 – 14:00 Break

SECTION 2
Computer Architecture and Networks
Parallel and Distributed Processing

Chair: **Fatih Alagoz - Bogazici University, Istanbul**
Co-chairs: **Peter Manoilov – TU of Sofia, Niyazi Meric – Ankara University**

Session 1
Friday, October 13th, 2006
14:00 – 16:00
Conference Hall 1

1. Target-aware timing modeling for wireless ad-hoc networks - *Zdravko Karakehayov, Zdravko Monov*
2. The Rempli project: Real-time Energy Management via Powerlines and Internet - *Vesselin Gueorguiev, Ivan Ivanov, Desislava Georgieva*
3. Aeronautical Data Networks: toward an all IP Solution - *Betim Çiço, Lendina Smaja*
4. Architectural Design and Implementation of a Slack Computer Cluster Based on NPACI Rocks - *Vladimir Zlatev, Plamenka Borovska*
5. Parallel architecture implemented in FPGA based on message passing system - *Pavel Zaykov, Peter Manoilov, Georgi Kamburov, Plamenka Borovska*
6. Parallel architecture implemented in FPGA based on shared memory system - *Georgi Kamburov, Peter Manoilov, Pavel Zaykov, Plamenka Borovska*
7. Cache Performance Relations with Traces' Properties - *Vaska Petkova, Maria Marinova, Vladimir Lazarov*
8. Parallel Genetic Computation of the TSP with Circular Periodic Chromosome Migration- *Plamenka Borovska, Subhi Bahudaila*

Session 2 (Poster)
Friday, October 13th, 2006
16:00 – 18:00
Conference Hall 1

9. Successive Approximation Routing for Wireless Ad-hoc Networks - *Zdravko Karakehayov, Ludmila Karakehayova, Ivan Radev*
10. The advantages achieved in Web Services using the WSDL Technology - *Betim Çiço, Isak Shabani*
11. Rollback Overhead Reduction in Optimistic Distributed Simulation over Network of Workstations - *Hristo Valchanov, Nadezhda Ruskova, Trifon Ruskov*
12. Simulation of Transmission Control Protocol- *Valentin Hristov*
13. Parallel Processing in Electrical Drives Control - *Yassen Gorbounov , Constantin Pavlitov, Ljudmil Spirov*
14. Impact of the Mutation Strategy on the Solution Quality of Parallel Genetic Algorithm with Circular Migration – *Plamenka Borovska, Subhi Bahudaila*
15. On the Use of XML for Data Access in Networks of Embedded Devices - *Grisha Spasov, Nikolay Kakanakov, Mitko Shopov, Ivan Stankov*
16. Modern Quality of Services Evaluation Methods - *Marek Huczala, Albert Abilov*
17. Productivity characteristics and optimization in a file server with multiple access working in a uniform multitasking environment - *Martin Damyanov, Ognian Nakov, Dessislava Petrova*

18. An Analysis and Elaboration of the Secrets Sharing Protocol – *Peter Antonov, Valentina Antonova*
19. Analyses of Error Distribution Influence on a "point to point" Communication Cannel Performance - *Georgi Naydenov*
20. Implementation of Generalized Nets for studying of conditional correct space switch for computer networks - *Petko Stoyanov, Georgi Naydenov*
21. Comparative analysis of networks for integration services with high QoS - *Petko Stoyanov, Georgi Naydenov*
22. A Deadlock Possibility Investigation Using GPSS - *George Popov, Ognian Nakov, Maria Hristova*
23. Architectural Design of a Super Server - *Plamenka Borovska, Moxem Mohamed*
24. Discussion of Microkernel and Monolithic Kernel Approaches - *Grisha Spasov, Ivan Stankov*

SECTION 3

Data Bases

Higher Education, IT and European Integration

Chair: **Niyazi Meric - Ankara University**

Co-chairs: **Suzan Uskudarli, Bogazici University, Istanbul**

Milena Lazarova- TU of Sofia

Session 1

Saturday, October 14th, 2006

10:00 – 12:00

Conference Hall 1

1. Coalesced lists as a method for collision resolution - *Svetlana Marinova*
2. Geometric Approach for Shape Description of Image Objects that is Stable with Respect of Transformation - *Mariana Stoeva, Violeta Bojikova*
3. Recessive Bits in Genetic Algorithm for Some Optimization Problems in Relational Data Warehouses - *Goran Velinov, Danilo Gligoroski, Margita Kon-Popovska*
4. Building skills for the knowledge society - *Elissaveta Gourova, Albena Antonova, Roumen Nikolov*
5. Web Based html-rich text Editor “web-editor” Using Open Source Software - *Leonidas Frigidis, D. Markopoulos, V. Mardiris, V. Chatzis*
6. Virtual Learning Environment for Student’s Self-Study - *Veselina Nedeva, Tanya Pehlivanova*
7. Aspects in E-Learning Usability: Learning Resources - *Valentina Terzieva*
8. Integrated system for gathering, processing and analysis of information for the scientific developments and innovations in the Bulgarian Universities - *Daniela Gotseva, Ivan Pankov, Angel Angelov*

Session 2 (Poster)

Saturday, October 14th, 2006

12:00 – 13:00

Conference Hall 1

9. From Data-mining to Knowledge-mining - *Geo Kunev*
10. Citation Index of Scientific Issues - *Boriana Deliiska*

11. Quality in e-Learning in Bulgaria - *Donika Valcheva, Georgi Todorov*
12. New Learning Technics by Using Internet like Educational Environment - *Nely Georgieva, Zdravka Djandarmova*
13. Professional Standards of a PhD and Curriculum in Computer Science - *Plamenka Borovska*
14. Using of the e-learning system MOODLE for leading of laboratory practice - *Tanya Pehlivanova*
15. Student-focused Activities of e-Learning - *Veselina Nedeva*
16. Software training and display system of execution of the mathematical operation division - *Sergey Nedev, Radoslav Hristov*

13:00 – 14:00 Break

Session 3 (Poster)

Saturday, October 14th, 2006

14:00 – 15:00

Conference Hall 1

17. Prototype of WAP Based Mobile Learning System - *Evgeniya Georgieva, Stoyanka Smrikarova, Tsvetozar Georgiev*
18. Learn Foreign Language Anytime Anywhere by LinguaNet - *Stoyanka Smrikarova, Evgeniya Georgieva, Tsvetan Hristov, Tsvetozar Georgiev*
19. Doctoral Education in Computing - *Stoyanka Smrikarova, Angel Smrikarov*
20. Master Degree Education in Information Technologies at the Technical University of Sofia - *Milena Lazarova, Plamenka Borovska, Ognian Nakov*
21. Equal Opportunities for Men and Women in Science and Research - *Margarita Todorova, Georgi Todorov, Mariyana Nikolova, Milena Stefanova*
22. Bologna Process in Bulgaria – *Dimitrinka Margenova*
23. Safety-Critical Computer Systems - Modeling and Simulation in Education - *George Popov, Nelly Stoycheva, Maria Hristova*
24. A Secure Web-based System for Methodical Maintenance of Students' Academic Training - *Valentina Antonova, Peter Antonov*

SECTION 4

Software Engineering

Chair: **George Paul – Otto-Von-Guericke University**

Co-chairs: **Refik Samet – Ankara University, Borahan Tumer - Marmara University, Istanbul**

Session 1

Friday, October 13th, 2006

10:00 – 12:00

Conference Hall 2

1. Managing Complexity in User Interface Development- *Daniel Tiedge, Georg Paul*
2. Model based Requirements Engineering in the Automotive Sector - *Daniel Motus, Georg Paul, Björn Sommer, Lilli Schulz*
3. Design Tool for Vibratory Equipment Rubber Isolators - *Ionel Batog*
4. Dynamic Software Clustering - *Violeta Bozhikova, Mariana Stoeva, Milena Karova*
5. Software Process Improvement Models - *Kalinka Kaloyanova, Desislava Karapetrova*
6. Applicability of the Object-Oriented Paradigm in Multidimensional Models - *Ivanka Valova, Arda Goknil*

7. Application of Spice simulation to investigation of class E power amplifier characteristics - *Elissaveta Gadjeva, Marin Hristov, Olga Antonova*
8. A Modâl-Based Approach to Automated Diagnosis of SC-circuits - *Elissaveta Gadjeva, Zdravko Garmev, Marin Hristov, Nikolay Gadzhev*

Session 2 (Poster)

Friday, October 13th, 2006

12:00 – 13:00

Conference Hall 2

9. A tiny thread Library - *Lilyan Nikolov*
10. Comparison of different types of intelligent agents: A case study and a simulation - *Betim Çiço, Elda Paja, Alketa Hyso*
11. Simulation modeling for Thermal Solar applications - *Stanko Shtrakov, Anton Stoilov*
12. Wrapping legacy codes for Numerical Simulation Applications - *Anna Malinova, Snezhana Gocheva-Ilieva, Ilycho P. Iliev*
13. Agent development platforms - tools, languages, methodologies and application areas – *Tatiana Ivanova*
14. Non-traditional Constructions in XML Parsers - *Bozhidar Georgiev*
15. Object - Oriented Software Engineering for Design of a Kind of Psychological Questionnaires - *Anelia Popandreeva, Evgeny Pandov*
16. Computer based system for offline and real - time tracking - *Rossen Miletiev, Rumén Arnaudov, Yassen Angelov*
17. Simulation of Integrated Sensors Using Analog Behavioral Models - *Boyanka Nikolova, Georgi Nikolov, Marin Hristov*

13:00 – 14:00 Break

SECTION 5

Information Technologies

Chair: John Galletly – American University in Bulgaria

Co-chair: Fahrettin Arslan – Ankara University, Tuna Tugcu - Bogazici University, Istanbul

Session 1

Friday, October 13th, 2006

14:00 – 16:00

Conference Hall 2

1. Solving a Variant of the Minimum-Interference Frequency Assignment Problem using Ant Colonies - *Kiril Matev, John Galletly*
2. Compiling a Turkish-English Bilingual Corpus and Developing an Algorithm for Sentence Alignment - *Tunga Gungor, Serafettin Tasci, A. Mustafa Gungor*
3. Proactive Caching Scheduler for Web Services - *Can Ozturan, Mehmet Guvenis*
4. Process Automation Modeling With Meta Data Management On Heterogeneous System Structures - *Nail Diker, Levent Toker*
5. Ever Green Inverse Polish Notation - *Stoyan Bonev, Dimitar Christozov, Volin Karagiozov*
6. Advanced Document Clustering Using n-gram Words Enhanced Latent Semantic Indexing - *Ahmet Guven, Oya Kalýpsýz, Ö. Özgür Bozkurt*

7. Automatic Detection of Arrhythmic Disorders From ECG Signals - *Asly Uyar Özkaya, Fikret Gürgen*
8. Applying Hausdorff Distance to the Compound Sets of Points - *Yulka Petkova, Vassil Smarkov*

Session 2 (Poster)

Friday, October 13th, 2006

16:00 – 17:00

Conference Hall 2

9. Grid computing solutions for massively-multiplayer online role playing games – *Iveta Ilieva*
10. Optimization of DR(Disaster Recovery) Procedures in SAN by using graph models and algorithms - *Krasimir Miloshev, Stoicho Stoichev*
11. Web Services for high-quality tourism industry - *Daniela Gotseva, Ivan Pankov*
12. Modeling the Authoring Concepts in the Technology Enhanced Learning - *Malinka Ivanova, Rossen Rashev, Mark Melia, Leena Hiltunen*
13. Web 2.0: Conceptual Modeling of the Design Strategy - *Malinka Ivanova, Ekaterina Vasilyeva*
14. Application of computer vision techniques and image shape analysis for quality control of wheat seeds - *Yulka Petkova, Stanislav Penchev*
15. Algorithm for median filtering of images with a mask 3x3 - *Nayden Vasilev, Deyana Pancheva, Atanaska Bosakova – Ardenska*
16. Photorealistic Renderers: Which Is the Best One - *Vesselin Gueorguiev, Desislava Georgieva*
17. Two prototypes for animating humanoid movements from simulated data - *Zhechka Toteva*
18. Image Scaling Algorithms for Digital Cameras - *Georgi Zapryanov, Iva Nikolova*

Session 3

Chair: **Ludmil Dakovski** – TU of Sofia

Co-chair: **Bulent Ekin** – Ankara University, **Fikret Gurgun** - Bogazici University, **Istanbul**

Saturday, October 14th, 2006

10:00 – 12:00

Conference Hall 2

19. Implementation approach for OSA mobility agent - *Hristo Froloshki, Evelina Pencheva*
20. Next Generation Service Creation Environment - *Ivaylo Atanasov, Evelina Pencheva*
21. VoIP Speech Quality Estimation with LSP distance measurements - *Alexander Bekiarski, Snejana Pleshkova-Bekiarska*
22. Software architecture of a self adaptive hypermedia e-learning system - *Boyan Bontchev, Dessislava Vassileva*
23. Evaluation of different knowledge presentation scenarios based of specific goal - *Plamena Andreeva, Maya Dimitrova, Alexander Gegov, Petia Radeva*
24. Assessment of Workflow Software Tools - *Todor Stoilov, Krasimira Stoilova*
25. Face Recognition using Principal Component Analysis and Radial Basis Neural Network - *Ognian Boumbarov, Strahil Sokolov, Georgi Gluhchev*
26. SAN infrastructure Analysis and Optimization by using graph models - *Krasimir Miloshev, Stoicho Stoichev*

Session 4 (Poster)
Saturday, October 14th, 2006
12:00 – 13:00
Conference Hall 2

27. Implementation of Aggregations in a Data Warehouse Logical Scheme – Framework and Mechanism - *Anna Rozeva*
28. Determine Ozone Concentrate by Module Neural Model - *Stefan Velikov*
29. Risk management system for corporations - *Galina Georgieva, Anatoliy Antonov*
30. An Approach to Provide Network Intelligence through Open Interfaces - *Ivaylo Atanasov, Evelina Pencheva*
31. Feature Analysis for the assessment of bruise aging - *T. Dimitrova, L. Georgieva, C. Pattichis, M. Neofytou, N. Angelov*
32. Sources of competitive advantages - *Rositsa Nakova*
33. Enterprise Architecture and the Bulgarian E-Governance - *Roumen Trifonov, Toshko Nedialkov*
34. Business Intelligent in E-Governance - *Roumen Trifonov, Boyan Jekov*
35. Multidimensional dynamic scene analysis for video security applications - *Plamen Tzvetkov, Georgi Petrov, Panayot Iliev*
36. Polar-Fourier-Wavelets Transform for an Effective CBIR - *Dimo Dimov*

13:00 – 14:00 Break

SECTION 6
Algorithms and Programming Languages

Chair: **Refik Samet – Ankara University**
Co-chairs: **Stoycho Stoychev – TU of Sofia, Haluk Bingol - Bogazici University, Istanbul**

Session 1
Saturday, October 14th, 2006
14:00 – 16:00
Conference Hall 2

1. Comparison methods of genetic schemes in Genetic Algorithms - *Milena Karova, Vassil Smarkov*
2. Optimization of Quadtree Triangulation for Terrain Models - *Emrah Ozsavas, Refik Samet*
3. Agent oriented programming paradigm - languages, perspectives and application areas - *Tatiana Ivanova*
4. Software for Computing Behavior of Max-product Fuzzy Machines - *Zlatko Zahariev, Ketty Peeva*
5. Asynchronous Function Calls - *Daniela Gotseva*
6. Concept Learning and Classification with Prime Implicants Applied to Numerical Domains - *Zekie Shevked, Ludmil Dakovski*
7. Some applications of Petri nets for verification of the technical devices and systems - *Krasimira Filipova, Simona Petrakieva, Filip Filipov*
8. Environments convergence - *Tsvetan Filev*