BCI 09
4th Balkan Conference in Informatics

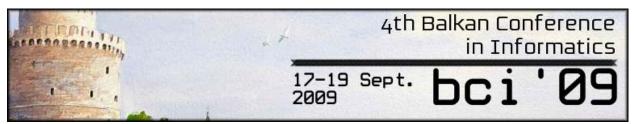## September 17-19, 2009
Capsis Hotel, Thessaloniki, Greece

Programme

BOSNIA AND HERZEGOVINA

UNIVERSITY OF MACEDONIA
ECONOMIC & SOCIAL SCIENCES

HELLENIC REPUBLIC

CITY
Affiliated Institution of the
UNIVERSITY OF SHEFFIELD

SOUTH-EAST
EUROPEAN
RESEARCH
CENTRE
SEERC

Greek
Computer
Society
Member IFIP
Macedonia.Thrace.Chapter.

The Aim

BCI'2009 is the 4th Balkan Conference in Informatics, following BCI'2007 held in Sofia, BCI'2005 held in Ohrid, and BCI'2003 held in Thessaloniki. The aim of the conference is to provide a forum for discussions and dissemination of research achievements, to promote interaction and collaboration among scientists from the Balkans and beyond, and to encourage involvement of young researchers from the region.

Organized By:

THE CONFERENCE AT A GLANCE

Time	Thursday 17 September	Friday 18 September	Saturday 19 September
9.00 - 9.30	*Registration* — Room A	*Registration* — Room A	*Registration* — Room A
9.30 - 11.00	**Invited Talk** **Prof. Dr. Keith G. Jeffery** *(Director, Information Technology & International Strategy, Science and Technology Facilities Council, Rutherford Appleton Laboratory)* "The New Technologies and the New Challenges for Informatics"	**Invited Talk** **Mr. Michail Bletsas** *(Director of Computing, MIT Media Lab)* "A Brief History of OLPC and what I Learned from it"	**Invited Talk** **Prof. Dr. Dimitris Karagiannis** *(Professor at University of Vienna, Austria)* "Modelling Semantics in Service-Oriented Environment"
11.00 - 11.30	*Coffee Break* — Room A, Room B	*Coffee Break* — Room A, Room B, Room C	*Coffee Break* — Room A, Room B
11.30 - 13.00	Room A: Session 1: Web Technologies Room B: Session 2: Text Processing - Software Engineering I	Room A: Session 7: Algorithms and Theory II Room B: Session 8: Artificial Intelligence Room C: Workshop: Session 1	Room A: Session 13: e-Issues - Data Management II Room B: Session 14: Informatics Education - e-Learning II
13.00 - 14.30	*Lunch*	*Lunch* — Room A, Room B, Room C	*Closing* — Room A
14.30 - 16.00	Room A: Session 3: Informatics Applications I - Algorithms and Theory I Room B: Session 4: Software Engineering II	Room A: Session 9: Agents - Distributed Systems II Room B: Session 10: Computer Networks Room C: Workshop: Session 2	
16.00 - 16.30	*Coffee Break* — Room A, Room B	*Coffee Break* — Room A, Room B, Room C	
16.30 - 18.00	Room A: Session 5: Distributed Systems I Room B: Session 6: Informatics Application II	Room A: Session 11: Data Management I Room B: Session 12: e-Learning I Room C: Workshop: Session 3	

DETAILED PROGRAMME

	Thursday (morning) 17th of September
9.00 - 9.30	*Registration*
9.30 - 9.45	*Opening (Room A)*
9.45 - 11.00	**Invited Talk** **Prof. Dr. Keith G. Jeffery** *(Director Information Technology & International Strategy, Science and Technology Facilities Council, Rutherford Appleton Laboratory)* **"The New Technologies and the New Challenges for Informatics"** (Room A)
11.00 - 11.30	*Coffee Break*

11.30 - 13.00	**Session 1:** **Web Technologies** *Chair: Athena Vakali* (Room A)	**Session 2:** **Text Processing - Software Engineering I** *Chair: Demosthenis Stamatis* (Room B)
	Mining the Community Structure of a Web Site (regular) Lefteris Moussiades and Athena Vakali	*Bootstrapping the Albanian Information Retrieval (regular)* Nikitas Karanikolas
	On the Performance of SVD-based Algorithms for Collaborative Filtering (regular) Manolis Vozalis, Angelos Markos and Konstantinos Margaritis	*Options for converting Albanian written texts into speech (short)* Agni Dika and Mentor Hamiti
	Capturing User Session Orientation based on Semantic Analysis and Concept Taxonomy (regular) Danai Vergeti, John Garofalakis and Theodoula Giannakoudi	*Developing a Text Recognition Application to be Run on SEE-Grid Platform (short)* Esmeralda Kapcari and Betim Cico
	Integration of Semantic Web in an E-Learning Environment (regular) Dorian Kokoshi and Betim Cico	*Authorship identification of books in Albanian Language throughout Markov chains (short)* Hakik Paci, Denisa Salillari and Orges Cico
	OWL for the Masses: From Structured OWL to Unstructured Technically Neutral Natural Language (regular) Ljubinka Gareva - Takasmanov and Ilias Sakellariou	*Rapid prototyping of service-oriented applications on OSGi platform (regular)* Ioan Lazar, Istvan Gergely Czibula, Simona Motogna, Bazil Parv and Codrut Lucian Lazar

13.00 - 14.30	*Lunch Break*

	Thursday (afternoon) 17th of September	
14.30 - 16.00	**Session 3:** **Informatics Applications I -** **Algorithms and Theory I** *Chair: Keith Jeffery* (Room A)	**Session 4:** **Software Engineering II** *Chair: Alexander Chatzigeorgiou* (Room B)
	Business Process Reengineering as a modernizing tool for the Public Administration – From Theory to Reality (regular) Ioannis Chalaris and Sotiris Vlahopoulos	*On the Approximation of the Substitution Costs for Free/Libre (regular)* Kirsten Haaland, Ioannis Stamelos, Rishab Ghosh and Ruediger Glott
	Academic Information Systems - Vision and Development (short) Žarko Bodroški and Srđan Škrbić	*Computing metrics of AspectJ programs through AspectCover tool (short)* Elinda Meçe (Kajo) and Lorena Kodra
	GIS application in hydrogeological albanian studies (short) Ariana Bejleri and Teuta Myftiu	*The Automation Method of Elaboration Process of Structured Application Oriented to Services (short)* Magariu Nicolae
	Automated Proving of the Behavioral Attributes (regular) Gheorghe Grigoras, Georgiana Caltais, Eugen-Ioan Goriac and Dorel Lucanu	*Improving hardware and operating system utilization, Solaris Zones (short)* Genti Daci and Enid Vrenozaj
	Morphological Algorithm for Color Objects Classification (regular) Eugen Zaharescu	*Towards managing high availability services using open source virtualization technology (short)* Besnik Seitaj
		On the Success of ERP systems: A comparative study between Open Source and Commercial Systems (short) Leonidas Chatzithomas, Ioannis Stamelos, Ioannis Antoniadis and Thomas Fotiadis
16:00 - 16:30	*Coffee Break*	
16.30 - 18.00	**Session 5:** **Distributed Systems I** *Chair: Panagiotis Katsaros* (Room A)	**Session 6:** **Informatics Applications II** *Chair: Mirjana Ivanovic* (Room B)
	Database Oriented Grid Middlewares (regular) Efthymia Tsamoura and Anastasios Gounaris	*Privacy preserving in eLearning environment (Case of modelling Hippocratic database structure) (regular)* Vanja Bevanda, Jasmin Azemović and Denis Mušić
	Load Balancing in a Cluster-Based P2P System (regular) John Garofalakis and Theofanis Aristofanis Michail	*Animation of Behavioral Specifications through Code Generation for a Payment System (regular)* Ozan Deniz, Mehmet Adak and Halit Oğuztüzün
	A cluster based authentication model for ad-hoc wireless networks (short) Orion Shakaj	*Implementing Codesign in XILINX VIRTEX II PRO (regular)* Betim Cico and Hergys Rexha
	IDS architecture and its role in detection of attacks in wireless networks (short) Ardit Shehu, Arjan Durresi and Betim Çiço	*Data mining in prediction of surgical outcome (short)* Alda Kika, Ilia Ninka, Betim Cico and Ridvan Alimehmeti
	A Survey on Attacks, Countermeasures and Authentication Mechanisms for Wireless Sensor Networks (short) Raimena Veisllari and Betim Cico	*Identification of high salinity stress in ornamental plant by biosignal process (short)* Konstantinos Kalovrektis, Christos Likas and Evaggelos Fountas
	End of Thursday Events	

Friday (morning) 18th of September		
9.00 - 9.30	*Registration*	
9.30 - 11.00	**Invited Talk** **Mr. Michail Bletsas** *(Director of Computing, MIT Media Lab)* **"A Brief History of OLPC and what I Learned from it"** (Room A)	
11.00 - 11.30	*Coffee Break*	
	Session 7: **Algorithms and Theory II** *Chair: George Eleftherakis* (Room A)	**Session 8:** **Artificial Intelligence** *Chair: Petros Kefalas* (Room B)	**Workshop - Session 1:** (Room C)
11.30 - 13.00	*Efficient Testing of Random Number Sequences using Graphics Processing Units (regular)* Alin Suciu, Lidia Zegreanu and Catalin Zima	*MIXPLAN: A CLP-based Mixed-initiative Planning System for Temporal Domains (regular)* Eleni Dagkli and Ioannis Refanidis	**Workshop on** *Training and networking for WB-EU research cooperation in ICT for Learning and eLearning* *Training Session: Short training on contractual and financial rules, how to write a proposal, how to set up consortia, how to manage projects and finally how to disseminate results*
	Secrecy for Bounded Security Protocols: disequality tests and an intruder with existentials lead to undecidability (regular) Catalin Birjovean	*Automated Model Design using Genetic Algorithms and Model Checking (regular)* Raluca Lefticaru, Florentin Ipate and Cristina Tudose	
	Parallel ENT (regular) Kinga Marton and Alin Suciu	*A task-based ontology engineering approach for novice ontology developers (regular)* Lambrini Seremeti and Achilles Kameas	
	Experimental Study on Variants of the Zhu-Takaoka String Matching Algorithm (short) Panagiotis Michailidis	*The Implementation of Artificial Neural Networks Using Reconfigurable Computing on FPGA with New Design Methodology (short)* Betim Cico and Anita Peta	
	Benchmarking the True Random Number Generator of TPM Chips (short) Alin Suciu and Tudor Carean		
13:00-14:30	**Lunch Break**	

	Friday (afternoon) 18th of September		
	Session 9: **Agents -** **Distributed Systems II** *Chair: Gheorghe Grigoras* (Room A)	**Session 10:** **Computer Networks** *Chair: Betim Cico* (Room B)	**Workshop - Session 2:** (Room C)
14.30 - 16.00	*A collision detection and resolution multi agent approach using utility functions (regular)* George Valkanas, Pantelis Natsiavas and Nick Bassiliades	*Exploiting the Congestion Control Behaviour of the Transmission Control Protocol (regular)* Stefanos Harhalakis, Nikolaos Samaras and Vitsas Vasileios	**Workshop on** *Training and networking for WB-EU research cooperation in ICT for Learning and eLearning* *Best practices (EU and WB coordinators of Technology Enhanced Learning projects speaking about the project and their experience in FP)*
	One to Many Monotonic Concession Negotiation Protocol (regular) Costin Badica and Mihnea Scafeş	*Broadband business opportunities for utility based firms in the new era: modeling the competition (regular)* Georgios Angelou and Anastasios Economides	
	Application of Machine Learning Techniques to Agents (short) Alketa Hyso and Betim Çiço	*A Proposed Model for PBR Rules in the IPv6 Offering QoS for IPTV Broadcasting and Performance Evaluation of the PBR and QoS Control Routing for Multi-Channel Adaptive Streaming (PQMAS) Model (short)* Igli Tafa and Betim Cico	
	Scheduling Gangs with Different Distributions in Gangs' degree of Parallelism in a Multi-Site System (regular) Zafeirios Papazachos and Helen Karatza	*RADIUS Wireless Network User Authentication in Heterogeneous Operating Systems Environments (short)* Dusan Vuckovic, Martin Jovanovic and Dragan Jankovic	
	Scalability and effectiveness of ad-hoc networks routing protocols in a sensor-node based scenario (short) Fatjon Dauti		
16.00 - 16.30	*Coffee Break*		
	Session 11: **Data Management I** *Chair: Yannis Manolopoulos* (Room A)	**Session 12:** **e-Learning I** *Chair: Iraklis Paraskakis* (Room B)	**Workshop - Session 3:** (Room C)
16.30 - 18.00	*Privacy Preserving Record Linkage Using Phonetic Codes (regular)* Alexandros Karakasidis and Vassilios S. Verykios	*Implementing Collaborative e-Learning Techniques in Collaborative Virtual Environments: The case of Second Life (regular)* Thrasyvoulos Tsiatsos, Andreas Konstantinidis, Lazaros Ioannidis and Chrysanthi Tseloudi	**Workshop on** *Training and networking for WB-EU research cooperation in ICT for Learning and eLearning* *Networking Session: Presentation of project ideas (WBC researchers to present their ideas and look for partners)*
	Dynamic Evolution and Improvement of Data Warehouse Design (regular) Dragan Sahpaski, Goran Velinov, Boro Jakimovski and Margita Kon-Popovska	*Technology Tools for Scripted Collaborative Learning: The Case of the Reload Learning Design Player (regular)* Nikos Michailidis and Stavros Demetriadis	
	Cluster-Based Similarity Search in Time Series (regular) Leonidas Karamitopoulos and Georgios Evangelidis	*A Prototype Virtual Collaboration Environment for Sharing Medical Educational content (regular)* Stathis Konstantinidis, Panagiotis Bamidis and Eleni Kaldoudi	
	Offering Increased Privacy Guarantees in Continuous Location Based Services (short) Dimitrios Douras, Aris Gkoulalas-Divanis and Vassilios Verykios	*Introducing Adaptivity to eLessons on Object-oriented Programming (regular)* Zivana Komlenov, Zoran Budimac and Mirjana Ivanovic	
	Adding a new site in an existing Oracle Multimaster Replication with Online Instantiation method without quiescing the Master Group (short) Betim Cico, Hakik Paci and Parid Cico	*Software Construction of an Authoring Tool for Adaptive E-learning Platform (regular)* Dessislava Vassileva, Boyan Bontchev, Boryana Chavkova and Vladimir Mitev	
	Gala Dinner		
	End of Friday Events		

Saturday (morning) 19th of September	
9.00 - 9.30	*Registration*
9.30 - 11.00	**Invited Talk** **Prof. Dr. Dimitris Karagiannis** ***(Professor at University of Vienna, Austria)*** **"Modelling Semantics in Service-Oriented Environment"** (Room A)
11.00 - 11.30	*Coffee Break*

11.30 - 13.00	**Session 13:** **e-Issues -** **Data Management II** *Chair: Christos Georgiadis* (Room A)	**Session 14:** **Informatics Education -** **e-Learning II** *Chair: Thrasyvoulos Tsiatsos* (Room B)
	Assessing e-Readiness in SEE countries: Perceptions towards e-Government Public Services (regular) Vasileios Zarimpas, Maria Grouztidou and Despina Anastasiadou	*Suitable asynchronous distance education fora size for working groups in informatics teachers training (regular)* Kiriakos Patriarcheas, Spyridon Papaloukas and Michalis Xenos
	Key Issues for the Quality Assessment of Mobile Commerce Services (regular) Christos K. Georgiadis and Emmanouil Stiakakis	Towards a Pedagogic Methodology and Model: The ELEVATE Project (regular) *Andreas Konstantinidis, Iraklis Paraskakis, Thanassis Bouras, Kostas Perakis and Stelios Pantelopoulos*
	Integration of e-libraries in e-universities: A technological approach (short) Victoria Myroni and Andreas Pombortsis	Cooperative Learning: The Role of Extra-Curricula Activities (short) *Dimitar Christozov, John Galletly, Volin Karagiozov and Stoyan Bonev*
	Faster estimation of the correlation fractal dimension using box-counting (regular) Christos Attikos and Michael Doumpos	*Tangible Programming Interfaces: A Literature Review (short)* Theodosios Sapounidis and Stavros Demetriadis
	An Interpreter for Priority Fuzzy Logic Enriched SQL (regular) Srdjan Skrbic and Aleksandar Takaci	*From Legacy Teaching Material to Learning Objects – Possible Conversion Model (short)* Zoran Putnik, Zoran Budimac and Mirjana Ivanovic

Closing (Room A)

CONFERENCE ORGANIZATION

Conference Chairmen

- Yannis Manolopoulos (Aristotle University, Greece)
- Costas Margaritis (University of Macedonia, Greece)

Organizing Committee

- George Eleftherakis (CITY College, Greece) (**Co-chairman**)
- Christos K. Georgiadis (University of Macedonia, Greece) (**Co-chairman**)
- Panagiotis Ketikidis (Greek Computer Society, Macedonia-Thrace Annex, Greece) (**Co-chairman**)

Programme Committee

- Christos Douligeris (University of Piraeus, Greece) (**Co-chairman**)
- Petros Kefalas (South-East European Research Center, Greece) (**Co-chairman**)
- Demosthenes Stamatis (Alexander TEI, Greece) (**Co-chairman**)

Programme Committee Members

- Costin Badica *(Univ. of Craiova, Romania)*
- Ivana Berkovic *(Univ. of Novi Sad, Serbia)*
- Zoran Budimac *(Univ. of Novi Sad, Serbia)*
- Mehmet Caglayan *(Bogazici Univ., Turkey)*
- Betim Cico *(Ploytechnic Univ. of Tirana, Albania)*
- Miroslav Ciric *(Univ. of Nis, Serbia)*
- Alex Delis *(Univ. of Athens, Greece)*
- Zamir Dika *(South East European Univ., FYROM)*
- Kostas Dimopoulos *(CITY College, Greece)*
- Dimitris Dranidis *(CITY College, Greece)*
- Pavlos Efraimidis *(Democritus Univ. of Thrace, Greece)*
- Avram Eskenazi *(Bulgarian Academy of Sciences, Bulgaria)*
- George Evangelidis *(Univ. of Macedonia, Greece)*
- Bekim Fetaji *(South East European Univ., FYROM)*
- John Garofalakis *(Univ. of Patras, Greece)*
- George Gravvanis *(Democritus Univ. of Thrace, Greece)*
- George Grigoras *(Univ. of Iasi, Romania)*
- Takis Hartonas *(Technological Educational Institute of Larissa, Greece)*
- Natasa Hoic-Bozic *(Univ. of Rijeka, Croatia)*
- Florentina Hristea *(Univ. of Bucharest, Romania)*
- Nestor Ioannidis *(Technological Educational Institute of Athens, Greece)*
- Florentin Ipate *(Univ. of Pitesti, Romania)*
- Mirjana Ivanovic *(Univ. of Novi Sad, Serbia)*
- Nikitas Karanikolas *(Technological Educational Institute of Athens, Greece)*
- Evaggelos Kehris *(Technological Educational Institute of Serres, Greece)*
- Margita Kon-Popovska *(Univ. of Ss Cyril & Methodius, FYROM)*
- Eugenia Kovatcheva *(Univ. of Sofia, Bulgaria)*
- Bozo Krstajic *(Univ. of Montenegro, Montenegro)*
- Alp Kut *(Eylul Univ., Turkey)*
- Aristidis Likas *(Univ. of Ioannina, Greece)*
- Nicolae Magariu *(Moldova State Univ., Moldova)*
- Christos Makris *(Univ. of Patras, Greece)*
- Nenad Mitic *(Univ. of Belgrade, Serbia)*
- Simona Motogna *(Univ. of Cluj, Romania)*
- Stavros Nikolopoulos *(Univ. of Ioannina, Greece)*
- Roumen Nikolov *(Univ. of Sofia, Bulgaria)*
- Iliana Nikolova *(Univ. of Sofia, Bulgaria)*
- George Papadopoulos *(Univ. of Cyprus, Cyprus)*
- Iraklis Paraskakis *(South-East European Research Center, Greece)*
- Dana Petcu *(Univ. of Timisoara, Romania)*
- Elias Pimenidis *(Univ. of East London, UK)*
- Boris Rachev *(Varna Technical Univ., Bulgaria)*
- Ilias Sakellariou *(Univ. of Macedonia, Greece)*
- Spiros Skiadopoulos *(Univ. of Peloponnese, Greece)*
- Ioannis Stamelos *(Aristotle Univ. of Thessaloniki, Greece)*
- Yannis Theodordis *(Univ. of Piraeus, Greece)*
- Thrasivoulos Tsiatsos *(Aristotle Univ. of Thessaloniki, Greece)*
- Ozgur Ulusoy *(Bilkent Univ., Turkey)*
- Athena Vakali *(Aristotle Univ. of Thessaloniki, Greece)*
- Anca Vasilescu *(Univ. of Brasov, Romania)*
- Michalis Vazirgiannis *(Athens Univ. of Economics and Business, Greece)*
- George Vouros *(Univ. of the Aegean, Greece)*
- Tatjana Welzer *(Univ. of Maribor, Slovenia)*
- Husnu Yenigun *(Univ. of Sabanci, Turkey)*
- Stathis Zachos *(National Technical Univ. of Athens, Greece)*
- Katerina Zdravkova *(Univ. of Ss Cyril & Methodius, FYROM)*

URL:
http://www.bci-conferences.org/

2009 Fourth Balkan Conference in
Informatics

17-19 September 2009
Thessaloniki, Greece

UNIVERSITY
OF MACEDONIA
ECONOMIC & SOCIAL SCIENCES

CITY
Affiliated Institution of the
UNIVERSITY OF SHEFFIELD

SOUTH-EAST
EUROPEAN
RESEARCH
CENTRE
SEERC

Greek
Computer
Society
Member IFIP
Macedonia,Thrace Chapter