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# COMPUTER SCIENCE CHALLENGES

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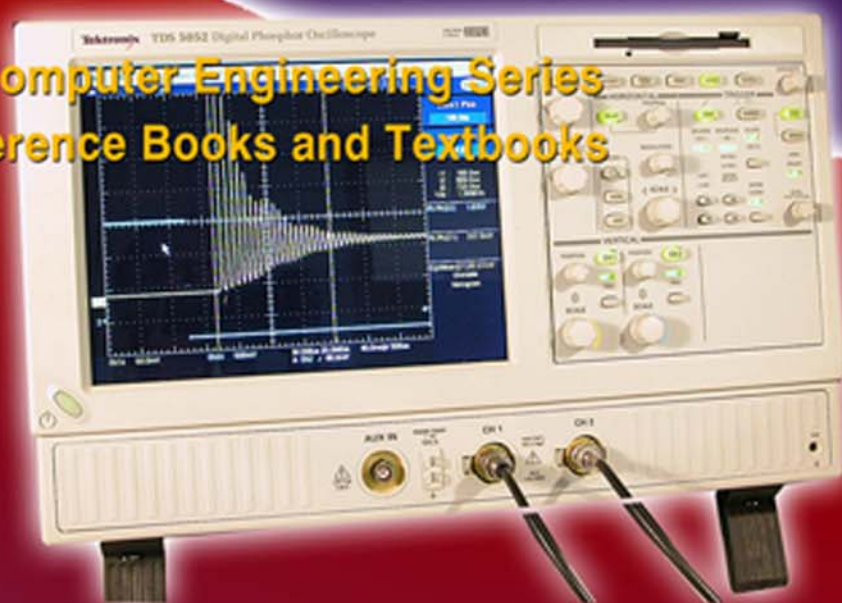
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## Preface

The book you are currently holding contains the Proceedings of the 7th WSEAS **International Conference on Applied Computer Science (ACS'07)**, which was held in Venice, Italy, November 21-23, 2007

Applied Computer Science and Advanced Applications of Computer Science are the bases for modern mankind life. Modern computer languages and applications, advanced information theory and applications, new algorithms and complexity analysis, software engineering, simulation, numerical analysis, game theory, computer graphics, computational geometry, machine vision, computer algebra, symbolic computation, e-Learning, e-Democracy, e-commerce, e-health, file structures and design, databases, knowledge engineering and data technology, pattern analysis, machine intelligence and applications, operating systems and internet, parallel and distributed systems, tolerance computing, mobile computing, object-oriented programming, computer architecture, fault-optimization techniques, soft computing, industry applications of informatics, parallel programming, microprocessors and microcomputers, advanced hardware design and electronics, computer networks, and visual reality are some of the most important branches of modern applied informatics and its applications. Many papers from all these branches are published in this volume.

The Plenary Speeches of ACS'07 were:

- *Advanced Parallel Processing Systems (Architectures and Applications)*, by Prof. Hamid Abachi, Monash University, Australia.
- *Message Security in Mobile Ad-Hoc Networks*, by Prof. Sudip Misra, Yale University, New Haven, Connecticut, USA.
- *Computer Vision Techniques for Advanced Driver Assistance Systems - Applications and Trends*, by Prof. Miguel Angel Sotelo Vazquez, University of Alcala, Spain.
- *Feature extraction for CBIR and Biometrics applications*, by Prof. Ryszard S. Choras, University of Technology & Life Sciences, Poland.
- *Cognitive based reasoning and recognition for Intelligent Human Interaction*, by Prof. Hamido Fujita, Iwate Prefectural University (IPU), Iwate, Japan.
- *Research and Development of Safety Related Systems*, by Prof. Josef Boercsoek, Universitat Kassel, Germany.

We would like to thank all members of the organizing laboratories for their contribution to the organization of the conference.

The contents of this Book are also published in the CD-ROM Proceedings of the Conference. Both will be sent to the WSEAS collaborating indices after the conference: [www.worldses.org/indexes](http://www.worldses.org/indexes).

In addition, papers of this book are permanently available to all the scientific community via the WSEAS E-Library.

Expanded and enhanced versions of papers published in these conference proceedings

are also going to be considered for possible publication in one of the WSEAS journals that participate in the major International Scientific Indices (Elsevier, Scopus, EI, Compendex, INSPEC, CSA .... see: [www.worldses.org/indexes](http://www.worldses.org/indexes)) these papers must be of high-quality (break-through work) and a new round of a very strict review will follow. (No additional fee will be required for the publication of the extended version in a journal).

We cordially thank all the people of WSEAS for their efforts to maintain the high scientific level of conferences, proceedings and journals.

The Editors



**Proceedings of the 7th WSEAS International Conference on  
APPLIED COMPUTER SCIENCE (ACS'07)  
TABLE OF CONTENTS**

<b>Feature Extraction for CBIR and Biometrics Applications</b> <i>Ryszard S. Choras</i>	1
<b>Application of Fir Median Hybrid Filters to remove blinks in Electrooculograms</b> <i>Marcelino Martinez, Emilio Soria, Rafael Magdalena, Antonio Jose Serrano Lopez, Joan Vila</i>	10
<b>Advanced Progress in Calculating PFD for Systems with PST</b> <i>J. Borcsok, P. Holub, D. Machmur</i>	16
<b>Control and Simulation of a Robot of two Degrees of Freedom (Implementation of a New Algorithm of Control)</b> <i>Pablo Sanchez-Sanchez, Fernando Reyes-Cortes, Antonio Michua-Camarillo, J. Cid-Monjaraz, M. Angel Arias</i>	23
<b>Calculation of MTTF values with Markov Models for Safety Instrumented Systems</b> <i>J. Borcsok, E. Ugljesa, D. Machmur</i>	30
<b>Partial Stroke Tests as a Procedure for the Extension of the Proof Test Interval</b> <i>J. Borcsok, D. Machmur</i>	36
<b>Some Inequalities Concerning Binomial Coefficients and the Weight Distribution of Proper Linear Codes</b> <i>H. D. Wacker, J. Boercsoek</i>	43
<b>The Deutsch-Josza Algorithm for n-Qudits</b> <i>Gabriela Mogos</i>	49
<b>Finding the Boundaries of Attributes Domains of Quantitative Association Rules using Abstraction - A Dynamic Approach</b> <i>Ranjeet Kumar, Preetham Kumar, V. S. Ananthanarayana</i>	52
<b>Understanding the Schema Matching Problem</b> <i>Alsayed Algergawy, Eike Schallehn, Gunter Saake</i>	59
<b>Modeling Epistemic Knowledge about Users</b> <i>Mircea Preda</i>	69
<b>Risk-Reduction by Relaxing Priority Constraint for Tranches in Needs-Based CDO</b> <i>Tatsuya Nakae, Kenji Baba, Norihisa Komoda</i>	75
<b>A Novel Scoring Method for Stroke Order Based on Choquet Integral with Fuzzy Measure</b> <i>Guey-Shya Chen, Yu-Du Jheng, Hsiang-Chuan Liu, Shih-Yat Chen</i>	82
<b>Network Reliability Importance Measures: Combinatorics and Monte Carlo based Computations</b> <i>Ilya Gertsbakh, Yoseph Shpungin</i>	88
<b>Joint Structural Importance in Consecutive-k Systems</b> <i>Hsun-Wen Chang, Jun-Da Chen</i>	95
<b>Power-Transformed-Measure and its Choquet Integral Regression Model</b> <i>Hsiang-Chuan Liu, Chin-Chun Chen, Guey-Shya Chen, Yu-Du Jheng</i>	101
<b>Fuzzy Possibility C-Mean Based on Mahalanobis Distance and Separable Criterion</b> <i>Hsiang-Chuan Liu, Der-Bang Wu, Jeng-Ming Yih, Shin-Wu Liu</i>	105

<b>Intensity Based Image Mosaicing</b>	111
<i>D. S. Vinod, Akshatha R. Bhat, Vidyullatha Prakash, M. Shivaprakash, Shanmugam Kannan</i>	
<b>Development of Specific Disease Data Warehouse for Developing Content from General Guide for Hypertension Screening, Referral and Follow Up</b>	117
<i>Teh Ying Wah, Ng Hooi Peng, Ching Sue Hok</i>	
<b>A Generation Approach of Transformation Code for Web Interchanging Documents</b>	123
<i>Le-Le Tang, Fu-Yang Peng</i>	
<b>Evolving a Model of Transaction Management with Concurrency Control for Multilevel Secure Distributed Real Time Database Systems</b>	127
<i>Veluchandhar Vadivelu, S. Albert Rabara</i>	
<b>Knowledge Pre-Processing in Decision Making</b>	134
<i>Hana Kopackova, Jitka Komarkova, Pavel Sedlak</i>	
<b>A Study on The Potential of Using Remote Labs for E-Learning Engineering Courses in Malaysian Universities</b>	140
<i>Abdullah Mohd Zin, Hasnim Harun</i>	
<b>CORBA Technologies for Railway Site Reservation and Passenger Information</b>	145
<i>Petre Bazavan</i>	
<b>Solving some Combinatorial Problems in Grid <math>n</math>-ogons</b>	151
<i>Antonio L. Bajuelos, Santiago Canales, Gregorio Hernandez, Ana Mafalda Martins</i>	
<b>Time-Efficient Stroke Extraction Method for Handwritten Signatures</b>	157
<i>Bence Kovari</i>	
<b>Target Recognition Task Based Online System for Refractive Error Measurement Using Font Transformations</b>	162
<i>Huma Tauseef, Muhammad Abuzar Fahiem, Farhat Saleemi</i>	
<b>A Novel CSG Approach for 3D Reconstruction of Helix Using Spiral Sweeps</b>	168
<i>Muhammad Abuzar Fahiem, Nadia Kanwal</i>	
<b>A Tele Collaborative Surgery Framework for 3D Heart Model</b>	173
<i>Lee Shi Yun, Woo Chaw Seng, Beh Yew Yong, Lai Chew Ping</i>	
<b>A Very Low Bit Rate Algorithm Based on Hierarchical Subband Scanning</b>	178
<i>Humberto Ochoa, Alejandra Mendoza, Efren Gutierrez, Osslan Vergara, Leticia Ortega, K. R. Rao</i>	
<b>A Fuzzy Logic Approach to Robust Cost Functions in Adaptive Systems</b>	182
<i>Emilio Soria, Jose D. Martin, Antonio J. Serrano, Rafael Magdalena, Marcelino Martinez</i>	
<b>A Survey on OLE for Process Control (OPC)</b>	186
<i>M. H. Schwarz, J. Boercsoek</i>	
<b>New Polymorphic NAND/XOR Gate</b>	192
<i>Richard Ruzicka</i>	
<b>A New Intrusion Detection Method Based on Data-Oriented Classification of Attacks</b>	197
<i>Tao Zou, Hua Chen, Cui Zhang, Minhuan Huang</i>	
<b>Data-flow Based Vulnerability Analysis and Java Bytecode</b>	201
<i>Hua Chen, Tao Zou, Dongxia Wang</i>	

<b>An Efficient Specification for Model Checking Using Check-Points Extraction Method</b> <i>Chikatoshi Yamada, Yasunori Nagata</i>	208
<b>Mobile IP Security and Scalable Support for Transparent Host Mobility on the Internet</b> <i>Marius-Cristian Niculescu, Elena Niculescu, Ionut Resceanu</i>	214
<b>Integrating Network Security Mechanisms into a DVB-T Network</b> <i>C. Manifavas, A. Sideris, P. Fragopoulou, V. Zacharopoulos</i>	222
<b>Simulation of Realistic Mobility Patterns for Mobile Ad Hoc Networks</b> <i>Alicia Trivino-Cabrera, Raul Morales-Berrocal, Eduardo Casilari</i>	227
<b>Auction System in Wireless Environment</b> <i>L. B. Bhajantri, S. S. Manvi, M. S. Kakkasageri, S. S. Nandi</i>	232
<b>Application of a Word-Alignment Algorithm to Bilingual Greek-Latin Documents</b> <i>Dionysios Sotiropoulos, Eleni Galiotou, Christos Skourlas</i>	238
<b>A Finite-State Approach to the Computational Morphology of Early Modern Greek</b> <i>Aristomenis Lampropoulos, Eleni Galiotou, Ioanna Manolessou, Angela Ralli</i>	242
<b>A Novel Approach of Genetic Algorithm for Solving University Timetabling Problems: a case study of Thai Universities</b> <i>Nawat Nuntasen, Supachate Innet</i>	246
<b>Conceptual Modeling of Dynamic Interactive Systems Using the Equivalent Transformation Framework</b> <i>Courtney Powell, Kiyoshi Akama</i>	253
<b>An Approach to Fully Automatic Aircraft Collision Avoidance and Navigation</b> <i>Santiago Alvarez De Toledo, Jose M. Barreiro, Jose L. Fuertes, Angel L. Gonzalez, Juan A. Lara</i>	259
<b>Web Service Usage Mining: Mining For Executable Sequences</b> <i>Mohsen Jafari Asbagh, Hassan Abolhassani</i>	266
<b>Control Chart Pattern Recognition using Semi-Supervised Learning</b> <i>Miin-Shen Yang, Jenn-Hwai Yang</i>	272
<b>The PIRR Methodology to Estimate Resource Requirements for Distributed NM Applications in Mobile Networks</b> <i>Filippo Neri</i>	277
<b>Medical Image Processing Useful Tool in Cancer Diagnosis</b> <i>Mihaela Costin, Octavian Baltag, Cipriana Stefanescu, Ciprian Costin</i>	282
<b>Microwave Medical Imaging in a Non-Invasive Breast Cancer Diagnosis System</b> <i>Mihaela Costin, Octavian Baltag, Cipriana Stefanescu, Adrian Ciobanu, Silviu Bejinariu</i>	288
<b>Supporting Decision Making in IT Security – An Information-Driven Approach</b> <i>Nikola Vlahovic</i>	294
<b>Development of Control Algorithms for a Self-Learning Mobile Robot</b> <i>Ionut Resceanu, Marius Niculescu</i>	300
<b>Human Gait Analyzed by Complex and Interconnected System</b> <i>Mihaela Baritz, Diana Cotoros</i>	306
<b>Edutainment Animated Folktales Software to Motivate Socio-Cultural Awareness</b> <i>Nor Azan Mat Zin, Nur Yuhanis Mohd Nasir</i>	310

<b>An Experiment of the Life Support Network for Elderly People Living in a Rural Area</b> <i>Jun Sasaki, Bayme Abaydulla, Keizo Yamada, Michiru Tanaka, Yutaka Funyu</i>	316
<b>Mobile Devices and Web Services</b> <i>Tomas Kozel, Antonin Slaby</i>	322
<b>Web Content Accessibility of Disabled Community Sites in Korea</b> <i>Chang-Kyo Suh, Eun-Ju Cho</i>	327
<b>Survey of Explanation Contents for Gourmet Product Information in Japanese e-Shopping Sites</b> <i>Ayako Hiramatsu, Takahiro Yamasaki, Kazuo Nose</i>	333
<b>Evaluation of Characteristics of a Community for Recommending Dissimilar Communities in SNS</b> <i>Susumu Takeuchi, Masanori Akiyoshi, Norihisa Komoda</i>	339
<b>Achieving Business Process Change With Improved Business Intelligence Systems: A Case Of Slovenian Company</b> <i>Andreja Habjan, Ales Popovic</i>	345
<b>A Knowledge Sharing and Managing System for Offshore Software Development Company</b> <i>Li Cai, Zuoqi Wang, Yufeng Jiao, Masanori Akiyoshi, Norihisa Komoda</i>	351
<b>Developing an Error Analysis Marking Tool for ESL Learners</b> <i>Saadiah Darus, Tg Nor Rizan Tg Mohd Maasum, Siti Hamin Stapa, Nazlia Omar, Mohd Juzaidin Ab Aziz</i>	355
<b>A Privacy Augmented Collaborative Environment (PACE)</b> <i>Geoff Skinner</i>	359
<b>Service Oriented Analysis and Design Process for the Enterprise</b> <i>Shankar Kambhampaty</i>	365
<b>Independent Agents for Urban Traffic Control Problem with Mobile-Agent Coordination</b> <i>Hadi Kheyruri, Arash Zand Jahangiri, Amin Pardakhtchi</i>	371
<b>Distributed and Parallel Computing in MADM Domain using the Optchoice Software</b> <i>Cornel Resteanu, Marius Somodi, Marin Andreica, Electra Mitan</i>	376
<b>A Extraction of Emotion in Human Speech Using Speech Synthesize and Each Classifier for Each Emotion</b> <i>Masaki Kurematsu, Jun Hakura, Hamido Fujita</i>	385
<b>An Exploration toward Automatic Facial Expression Analysis for Intelligent HCI Systems</b> <i>Jun Hakura, Masaki Kurematsu, Hamido Fujita</i>	390
<b>Cognitive Modeling in Software and Relation to Human Emotional Reasoning</b> <i>Hamido Fujita, Jun Hakura, Masaki Kurematu</i>	397
<b>An Approach for Bandwidth Reservation in Ad-Hoc Networks Having Infrastructure Support</b> <i>P. Venkata Krishna, N. Ch. S. N. Iyengar, Sudip Misra</i>	407
<b>A Power-Aware Routing Scheme for Wireless Sensor Networks</b> <i>Farhana Zabin, Sudip Misra, Isaac Woungang, Ngok-Wah Ma, Mohammad Ahsan Ali</i>	414
<b>Algorithms for Power-Efficient Data Acquisition in Underwater Sensor Networks</b> <i>Sanjay K. Dhurandher, Sudip Misra, Sushil Khairwal, Saurabh Neelay</i>	418
<b>Real-Time Speaker Identification System</b> <i>Bashar Al-Shboul, Hamad Alsawalqah, Dongman Lee</i>	422



## Authors Index

Ab Aziz, M. J.	355	Hernandez, G.	151	Neri, F.	277
Abaydulla, B	316	Hiramatsu, A	333	Niculescu, E.	214
Abolhassani, H.	266	Hok, C. S.	117	Niculescu, M.	300
Akama, K.	253	Holub, P.	16	Niculescu, M.-C.	214
Akiyoshi, M.	339, 351	Huang, M.	197	Nose, K.	333
Algergawy, A.	59	Innet, S.	246	Nuntasen, N.	246
Ali, M. A.	414	Iyengar, N. Ch. S. N.	407	Ochoa, H.	178
Alsawalqah, H.	422	Jahangiri, A. Z.	371	Omar, N.	355
Al-Shboul, B.	422	Jheng, Y.-D.	82, 101	Ortega, L.	178
Ananthanarayana, V.	52	Jiao, Y.	351	Pardakhtchi, A.	371
Andreica, M.	376	Kakkasageri, M. S.	232	Peng, F.-Y.	123
Arias, M. A.	23	Kambhampaty, S.	365	Peng, N. H.	117
Asbagh, M. J.	266	Kannan, S.	111	Ping, L. C.	173
Baba, K.	75	Kanwal, N.	168	Popovic, A.	345
Bajuelos, A. L.	151	Khairwal, S.	418	Powell, C.	253
Baltag, O.	282, 288	Kheyruri, H.	371	Prakash, V.	111
Baritz, M.	306	Komarkova, J.	134	Preda, M.	69
Barreiro, J. M.	259	Komoda, N.	75, 339, 351	Rabara, S. A.	127
Bazavan, P.	145	Kone, O.	427	Ralli, A.	242
Bejinariu, S.	288	Kopackova, H.	134	Rao, K. R.	178
Bhajantri, L. B.	232	Kovari, B.	157	Resceanu, I.	214, 300
Bhat, A. R.	111	Kozel, T.	322	Resteanu, C.	376
Boercsoek, J.	16, 30, 36, 43, 186	Krishna, P.V.	407	Reyes-Cortes, F.	23
Cai, L.	351	Kumar, P.	52	Ruzicka, R.	192
Canales, S.	151	Kumar, R.	52	Saake, G.	59
Casilari, E.	227	Kurematsu, M.	385, 390, 397	Saleemi, F.	162
Chang, H.-W.	95	Lampropoulos, A.	242	Sanchez-Sanchez, P.	23
Chen, C.-C.	101	Lara, J. A.	259	Sasaki, J.	316
Chen, G.-S.	82, 101	Lee, D.	422	Schallehn, E.	59
Chen, H.	197, 201	Liu, H.-C.	82, 101, 105	Schwarz, M. H.	186
Chen, J.-D.	95	Liu, S.-W.	105	Sedlak, P.	134
Chen, S.-Y.	82	Ma, N.-W.	414	Seng, W. C.	173
Cho, E.-J.	327	Maasum, N.R.M.	355	Serrano Lopez, A. J.	10
Choras, R. S.	1	Machmur, D.	16, 31, 36	Shivaprakash, M.	111
Cid-Monjaraz, J.	23	Magdalena, R.	10, 182	Shpungin, Y.	88
Ciobanu, A.	288	Manifavas, C.	222	Sideris, A.	222
Costin, C.	282	Manolessou, I.	242	Skinner, G.	359
Costin, M.	282, 288	Manvi, S. S.	232	Skourlas, C.	238
Cotoros, D.	306	Martin, J. D.	182	Slaby, A.	322
Darus, S.	355	Martinez, M.	10	Somodi, M.	376
De Toledo, S. A.	259	Martins, A. M.	151	Soria, E.	10, 182
Dhurandher, S. K.	418	Mat Zin, N. A.	310	Sotiropoulos, D.	238
Fahiem, M. A.	162, 168	Mendoza, A.	178	Stapa, S. H.	355
Fragopoulou, P.	222	Michua-Camarillo, A.	23	Stefanescu, C.	282, 288
Fuertes, J. L.	259	Misra, S.	407, 414, 418	Suh, C.-K.	327
Fujita, H.	385	Mitan, E.	376	Takeuchi, S.	339
Funyu, Y.	316	Mogos, G.	49	Tanaka, M.	316
Galiotou, E.	238	Mohd Zin, A.	140	Tang, L.-L.	123
Gertsbakh, I.	88	Morales-Berrocal, R.	227	Tauseef, H.	162
Gonzalez, A. L.	259	Nagata, Y.	208	Trivino-Cabrera, A.	227
Gutierrez, E.	178	Nakae, T.	75	Ugljesa, E.	30
Habjan, A.	345	Nandi, S. S.	232	Vadivelu, V.	127
Hakura, J.	385, 390, 397	Nasir, N. Y. M.	310	Vergara, O.	178
Harun, H.	140	Neelay, S.	418	Vila, J.	10

## Authors Index

Vinod, D. S.	111	Wu, D-B	105	Yong, B. Y.	173
Vlahovic, N.	294	Yamada, C.	208	Yun, L. S.	173
Wacker, H. D.	43	Yamada, K.	316	Zabin, F.	414
Wah, T. Y.	117	Yamasaki, T.	333	Zacharopoulos, V.	222
Wang, D.	201	Yang, J.-H.	272	Zhang, C.	197
Wang, Z.	351	Yang, M.-S.	272	Zou, T.	197, 201
Woungang, I.	414	Yih, J.-M.	105		