
Contents

BORM-II and UML as Accessibility Process in Knowledge and Business Modelling	1
Vojtěch Merunka, Robert Pergl, and Jakub Tůma	
Planning-Context Aware Mobile Recommendations	7
Chad A. Williams and Sean T. Doherty	
Genetic Algorithms-Fuzzy Based Trade-Off Adjustment Between Software Complexity and Deliverability	15
Siddharth Lavania, Manuj Darbari, Neelu J. Ahuja, and Imran Ali Siddqui	
Visual Servoing Based Positioning and Object Tracking on Humanoid Robot	19
Michael Bombile	
Obtaining Agents and Entities from Natural Language	29
Luis Alfonso Lezcano, Jaime Alberto Guzmán-Luna, and Sebastián Alonso Gómez	
A New Methodology Based on Cloud Computing for Efficient Virus Detection	37
Vasileios A. Memos and Kostas E. Psannis	
New Generation Android Operating System-Based Mobile Application: RSS/News Reader	49
Taner Arsan, Mehmet Arif Erşahin, and Ebru Alp	
Intelligent Emergency Response System for Police Vehicles in India	57
Ishan Ganeshan and Nasrullah Memon	
Adaptive Instantaneous Traffic Signal Management Through Cascade Object Detection	63
Md. Sharifur Rahman and Md. Rafiqul Islam	
Analysis of the Lifetime of Wireless Sensor Networks for Underground Communications in Wet Sand	71
Abdelrahman Elleithy and Gonhsin Liu	
About One Way to Discover Formative Assessment Cheating	83
Jan Genci	
Application of a Feed-Forward Control Structure	91
Wei-yu Louis Feng	
Reactive Planning to Compose Learning Routes in Uncertain Environments	101
Ingrid-Durley Torres and Jaime Guzmán-Luna	

Biodiesel Production in Stirred Tank Chemical Reactors:	
A Numerical Simulation	109
Alejandro Regalado-Méndez, Rubí Romero Romero, Reyna Natividad Rangel, and Sigurd Skogestad	
Evaluation of Optimal Control-Based Deformable Registration Model	117
Naleli Jubert Matjelo, Fred Nicolls, and Neil Muller	
The Effect of Mutual Coupling on a Microstrip Printed Antenna	
Array Operates at 5 GHz Using Three Different Substrates	125
Ali Elrashidi, Islam Ashry, Khaled Elleithy, and Hassan Bajwa	
Variable Delay Optical Buffer Using Tunable Fiber Bragg Gratings	133
Islam Ashry, Ali Elrashidi, Dalia Sallam, Moustafa H. Ali, and Khaled Elleithy	
An Exploratory Case Study of Offshore Outsourcing: Problems	
in Multicultural Settings	137
Jussi Koskinen, Veikko Halttunen, and Juha Mansikkaniemi	
Comparison of M5' Model Tree with MLR in the Development	
of Fault Prediction Models Involving Interaction Between Metrics	149
Rinkaj Goyal, Pravin Chandra, and Yogesh Singh	
Content Based Image Retrieval System with a Combination	
of Rough Set and Support Vector Machine	157
Maryam Shahabi Lotfabad, Mohd Fairuz Shiratuddin, and Kok Wai Wong	
Cloud Storage Using Matches Algorithms	165
Zyad Nossire, Julius Dichter, Eman Abdelfattah, and Subrina Thompson	
Information Retrieval with the Use of Music Clustering	
by Directions Algorithm	171
Adam L. Kaczmarek	
Using SQL Queries to Evaluate the Design of SQL Databases	179
Erki Eessaar and Janina Voronova	
Improving Higher-Order Learning and Critical Thinking Skills	
Using Virtual and Simulated Science Laboratory Experiments	187
Nicole Simon	
Handling a Device Changing from 3G to Wi-Fi Without Breaking	
Established Connections	193
Richard Sims and Carolin Bauer	
Implementation and Analysis of a Morphological Algorithm	
for the Attributes Opening and Closing	199
D. Bachurin and A. Lakhtin	
Document Classification Using Enhanced Grid Based	
Clustering Algorithm	207
Mohamed Ahmed Rashad, Hesham El-Deeb, and Mohamed Waleed Fakhr	
Improving Identity Privacy in 3GPP-WLAN	217
Hiten Choudhury, Basav Roychoudhury, and Dilip Kr. Saikia	
Performance of BFS A Collision Resolution: RFID Including	
Non-unique Tag IDs	225
Kirti Chemburkar, Zornitza Genova Prodanoff, Kenneth Martin, and Susan Vasana	

Assessing Software Project Management Complexity: PMCAT Tool	235
Vyron Damasiotis and Panos Fitsilis	
Performances of LEON3 IP Core in WiGig Environment on Receiving Side	243
Natasha Tagasovska, Paulina Grnarova, Aristotel Tentov, and Danijela Efnusheva	
Clustering-Based Topic Identification of Transcribed Arabic Broadcast News	253
Ahmed Abdelaziz Jafar, Mohamed Waleed Fakhr, and Mohamed Hesham Farouk	
Epilepsy Seizure Detection in EEG Signals Using Wavelet Transforms and Neural Networks	261
E. Juárez-Guerra, V. Alarcon-Aquino, and P. Gómez-Gil	
A Bargaining Approach for Disseminating Context Information to Context-Aware Services	271
Elarbi Badidi	
Automatic Generator of Decoupling Blocks Using Genetic Programming	281
M. Montes Rivera, M. Paz Ramos, and J.L. Orozco Mora	
MEMS Dual Axis Accelerometer with H-T Shape Structure	291
Xingguo Xiong, Lidong Qiang, Linfeng Zhang, and Junling Hu	
Prior Data Quality Management in Data Mining Process	299
Mamadou S. Camara, Djasrabe Nagingar, and Alassane Bah	
Towards a Better Infrastructure Supporting the e-Education as a State Public Service	309
D. Kumlander	
Novel Time-Stamped Digital Card (TSDC) to Determine User's Identity	317
Munif Alotaibi, Aziz Alotaibi, Adel Qahmash, and Zhengping Wu	
PSPICE Implementation of Block-Wise Shut-Down Technique for 8 × 8 Bit Low Power Pipelined Booth Multiplier	325
Umatri Pradhananga, Xingguo Xiong, and Linfeng Zhang	
Trust Models in Cloud: A Survey on Pros and Cons	335
Usha Divakarla and K. Chandra Sekaran	
Face Recognition Security System	343
Michel Owayjan, Amer Dergham, Gerges Haber, Nidal Fakih, Ahmad Hamoush, and Elie Abdo	
Evaluation of Sound Perception to Identify Candidate Frequency for Wireless Networking	349
Kuruvilla Mathew, Chong Eng Tan, and Biju Issac	
The Efficiency of the Code Parallelization in Multi Core Environment on the Basis of Image Processing in 3D Space	361
Krzysztof Oleszko	
Evaluation of the Contract-Aware Software Development Process in a Controlled Experiment	365
A. Derezińska and P. Oltarzewski	
Benchmarking GPenSIM	373
Reggie Davidrajuh	

A Field Experiment of System to Provide Tourism Information Using Image Recognition Type AR Technology	381
Hidemi Fukada, Koichi Kasai, and Shou Ohtsu	
Metrics for Data Warehouse Quality	389
Bharti Suri and Prerna Singh	
A Framework Based on Model Driven Engineering to Support Schema Merging in Database Systems	397
Marcus Vinícius Carvalho, Denivaldo Lopes, and Zair Abdelouahab	
Work in Progress: Model Design to Measure the Efficacy of Students Learning Preferences—Does Media Matter?	407
Ashfaque Ahmed Chowdhurya, Aruna Jayasuriya, and Elizabeth A. Eschenbach	
Computerizing Exams: The Michigan Tech Testing Center	413
Amber J. Kempainen, Gretchen L. Hein, and Michael R. Meyer	
Gravitation Search Training Algorithm for Asynchronous Distributed Multilayer Perceptron Model	417
Natalya P. Plotnikova, Sergey A. Fedosin, and Valery V. Teslya	
Application of Image Processing Techniques to the Identification of Phases in Steel Metallographic Specimens	425
Adarsh Kesireddy and Sara McCaslin	
Requirement and Interaction Analysis Using Aspect-Oriented Modeling	431
Sagar Mohite, Rashmi Phalnikar, and S.D. Joshi	
Fingerprint Orientation Image Estimation in the Frequency Domain	439
Victor-Valeriu Patriciu, Stelian Spînu, and Cezar Pleşca	
Relationship Between Affordance and Cultural Conventions in the Design of IVR Systems for Oral Users	445
Tembalethu J. Ndwe and Nomusa Dlodlo	
Analysis and Implementation of Frequency Domain Equalizer for Single Carrier System in the 60 GHz Band	451
Tatjana Chavdarova, Goran Jakimovski, Blagoj Jovanov, Aristotel Tentov, and Maja Malenko	
Recent Trends and Developments for Standardization of Video Quality Assessment Metrics	457
Ranjit Singh and Naveen Aggarwal	
An Efficient 64-Point IFFT Hardware Module Design	463
Danijela Efnusheva, Aristotel Tentov, and Natasha Tagasovska	
The Relationship Between Psychological Distress and Human Computer Interaction Parameters: Linear or Non-linear?	471
Indika Karunaratne, Ajantha S. Atukorale, and Hemamali Perera	
Leading Innovation in Universities: From Practice Ahead of Practice	479
Kristina Zgodavova and Matus Horvath	
Implementation of Variants in Component Based Software Production	485
Yusuf Altunel and Abdül Halim Zaim	

A Methodology for Designing Agent-Based Models: Agent from « UP » for Complex Systems	493
Ahmed Tidjane Cisse, Aboubacar Cisse, Alassane Bah, Jacques A. Ndjone, and Cheikh M.F. Kebe	
Towards a Passive Gait: Modeling the Fully Actuated Humanoid NAO	505
P. Bohra and M. Bombile	
An Architectural Model Framework to Improve Digital Ecosystems Interoperability	513
S. Shervin Ostadzadeh, Fereidoon Shams, and Kambiz Badie	
Towards Multi-gigabit OFDM Throughput on FPGA: Limitations and Challenges	521
Goce Dokoski and Aristotel Tentov	
Integral KNIT Cluster as a Source of Development Factors and Technological Frame for the Realization of Country Development Projects	525
Aleksandras Vytautas Rutkauskas and Viktorija Stasytytė	
The Impact of Film-based Learning in Science Education	531
M. Host'ovecký and J. Štubňa	
An Approach Based on BPMN to Detail Use Cases	537
Adriana Herden, Pedro Porfirio M. Farias, and Adriano Bessa Albuquerque	
Design of a SCADA System to Prevent Freezing in Oil Pipes	545
M. Ghassoul, S.R.A. AlMishal, B.A. Ali, and A.A.N. Thabit	
Optimizing Next-Generation Mobile Networks Using Frequent Sequential Pattern Mining	551
Zachary W. Lamb and Sherif S. Rashad	
A Critical Review on World University Ranking in Terms of Top Four Ranking Systems	559
Farzana Anowar, Mustakim A. Helal, Saida Afroj, Sumaiya Sultana, Farhana Sarker, and Khondaker A. Mamun	
Multi-agent Architecture for User Adaptive Information Retrieval Systems	567
Juan J. Pacheco-Reyes, Oleg Starostenko, Vicente Alarcon-Aquino, and Jorge Rodriguez-Asomoza	
Case Study: Challenges and Issues in Teaching Fully Online Mechanical Engineering Courses	575
Sara McCaslin and Fredericka Brown	
Finding Specifications of While Statements Using Patterns	581
Aditi Barua and Yoonsik Cheon	
High-Linearity MEMS Accelerometer with Lateral Comb Finger Groups	589
Xingguo Xiong and Huanyu Li	
A Quality-Driven Approach for Ranking Web Services	599
Eyhab Al-Masri	

RFID-Based Approach for Monitoring Patient’s Health Inside Hospitals	607
Eyhab Al-Masri and Mohamed Hamdi	
An Evaluation of N-Gram Correspondence Models for Transliteration Detection	615
Peter Nabende	
Design of an Optimized Crane Location System for Construction Sites	623
Soly Mathew Biju, AbdulLatif Tchan, Marina Helmy, and Kirolos Ayad	
Route Tracking of Moving Vehicles for Collision Avoidance Using Android Smartphones	629
Ehab Ahmed Ibrahim, Said El Noubi, and Moustafa H. Aly	



<http://www.springer.com/978-3-319-06763-6>

New Trends in Networking, Computing, E-learning,
Systems Sciences, and Engineering

Elleithy, K.; Sobh, T. (Eds.)

2015, XIV, 635 p. 471 illus., 315 illus. in color.,

Hardcover

ISBN: 978-3-319-06763-6