

---

## Contents

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

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

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

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

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

---

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

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