

2010 Developments in E-systems Engineering

(DESE 2010)

**London, United Kingdom
6-8 September 2010**



IEEE Catalog Number: CFP1056I-PRT
ISBN: 978-1-4244-8044-9

2010 Developments in E-systems Engineering

DeSE 2010

Table of Contents

Preface.....	ix
Conference Committees.....	xi
Reviewers.....	xiv

eHealth and eMedicine

Telemedicine and Smart Phones as Medical Peripheral Devices (Computational Approaches)	3
<i>Ivan Evg. Ivanov, Vesselin Gueorguiev, Velizar Bodurski, and Vencislav Trifonov</i>	
Information Technology Governance, Risk and Compliance in Health Care - A Management Approach	7
<i>Mike Krey</i>	
An Automated Method for Segmentation of Coronary Arteries in Coronary CT Imaging	12
<i>Yin Wang and Panos Liatsis</i>	
Evaluating Remote Mobile Technology in a Clinical Environment	17
<i>F. Arshad, P. Fergus, and S. Appleton</i>	
Vessel Extraction in Fluorescein Angiograms of the Human Retina Using a Supervised Classifier	23
<i>Rubiel Vargas and Panos Liatsis</i>	
Where's the Evidence for Evidence-based Knowledge in Ehealth Systems?	29
<i>Raphael Bahati, Stacey Guy, Michael Bauer, and Femida Gwadry-Sridhar</i>	
Healthcare Data Access Control Using XACML for Handheld Devices	35
<i>Saritha Arunkumar and Muttukrishnan Rajarajan</i>	
A Multi-Agent Approach for Self-Diagnosis of a Hydrocephalus Shunting System	39
<i>Abdel Rahman Alkharabsheh, Lina Momani, Nayel Al-Zubi, and Waleed Al-Nuaimy</i>	

Wireless Sensor Networks and the Internet of Things

Implementing a Trust-Aware Routing Protocol in Wireless Sensor Nodes	47
<i>Theodore Zahariadis, Panagiotis Trakadas, Helen Leligou, Panagiotis Karkazis, and S. Voliotis</i>	
Paradigms, Frameworks and Prototypes Towards the Realization of the Internet of Things	53
<i>C. Tselikis, A. Alexopoulou, C. Vangelatos, A. Leventis, and E.G. Ladis</i>	
Reconfiguration in Wireless Sensor NeTworks	59
<i>Helen C. Leligou, Luis Redondo, Theodore Zahariadis, Daniel Rodriguez Retamosa, Panagiotis Karkazis, Ioannis Papaefstathiou, and Stamatis Voliotis</i>	
Service Oriented Tasking System for WSN	64
<i>Benjamin Le Corre, Jérémie Leguay, Mario Lopez-Ramos, Vincent Gay, and Vania Conan</i>	
A Web Services-oriented Architecture for Integrating Small Programmable Objects in the Web of Things	70
<i>Orestis Akribopoulos, Ioannis Chatzigiannakis, Christos Koninis, and Evangelos Theodoridis</i>	
A Self-Configurable Architecture for Wireless Sensor Networks	76
<i>M. Asim, M. Yu, H. Mokhtar, and M. Merabti</i>	
eCulture	
Associate Model of Methods Used for Restoration / Conservation Resources	85
<i>Dragos Ene and Roxana Radvan</i>	
A Theoretical Approach Based on the Correlation of Unified Data for Different Analyzing Techniques Used in the Modern Investigation of Artworks	89
<i>Angheluta Laurentiu-Marian and Rigas Alexandros</i>	
eLearning	
A Model-Driven Framework to Support Development of Serious Games for Game-based Learning	95
<i>Stephen Tang and Martin Hanneghan</i>	
An Analytical Model for Teaching Architectural Building Design	101
<i>Ahmed M. Azmy</i>	
Leveraging e-Learning for Enhancing Employability of Students	107
<i>Srinagesh Chatarajupalli, Gopu Venkatswamy, and A.R. Aryasri</i>	
Creating Complex Interactive 3D Visualisations of Naval Battles from Natural Language Narratives	113
<i>Steve Presland, Brian Farrimond, Paul Hazlewood, and Amanda Oddie</i>	
Implementation of an E-Learning Module in Virtual Centre for Entrepreneurship: The Development of Cultural Awareness in Students	119
<i>Tatjana Welzer, Marjan Družovec, Metka Zorič Venuti, Anthony E. Ward, and Hamed Yahoui</i>	

International Curricula Networks for Recognition of Life Long Learning Programs: A Case Study of a Bit Sized e-Learning Module in Internet Security	123
<i>J.C. Burguillo, A. Peleteiro, J.M. Thiriet, and H. Yahoui</i>	
Key Issues Concerning the Simultaneous Development of Technical and Linguistic Competences in a Single E-module	127
<i>Matka Zorič Venuti, Tatjana Welzer, and Anthony E. Ward</i>	
Can We Truly Learn from A Cloud Or Is It Just A Lot of Thunder?	131
<i>D. Al-Jumeily, D. Williams, A.J. Hussain, and Paul Griffiths</i>	
eEntertainment and Creative Technologies	
Framework for Distributed Network Simulation and State Propagation	143
<i>Chris Dennett, Abdennour El Rhalibi, and Madjid Merabti</i>	
Development and Deployment of Cross-Platform 3D Web-based Games	149
<i>Chris Carter, Abdennour El Rhalibi, and Madjid Merabti</i>	
Situation Calculus for HCI Design	155
<i>David England, Martin Randles, and A. Taleb-Bendiab</i>	
eScience and eCollabroration	
Jinv: A Parallel Method for Distributed Matrix Inversion	163
<i>Vijay Sahota and Richard Bayford</i>	
Information Enrichment for Decision Support in Virtual Collaboration	168
<i>Obinna Anya, Hissam Tawfik, and Atulya Nagar</i>	
Supporting Cloud Computing Management through an Object Mapping Declarative Language	175
<i>G. Hughes, D. Al-Jumeily, and A. Hussain</i>	
Significance of Healthy Organizational Culture for Superior Risk Management During Software Development	182
<i>Charu Verma and Saad Ali Amin</i>	
eBuilt Environment	
A Computer-based LCA Tool for Sustainable Building Design	193
<i>Ahmed M. Azmy</i>	
Face Recognition Based on Mixed between Selected Feature by Multiwavelet and Particle Swarm Optimization	199
<i>Adil Abdulwahhab Ghidan Azzawi and Muneera Abed Hmdi Al-Saedi</i>	
eSystems and AI	
A Proactive Personalized Mobile News Recommendation System	207
<i>Kam Fung Yeung and Yanyan Yang</i>	
The Prediction of Non-Stationary Physical Time Series Using the Application of Regularization Technique in Self-organised Multilayer Perceptrons Inspired by the Immune Algorithm	213
<i>Asmaa Abdullhussein Mahdi, Abir Jaafar Hussain, and Dhiya Al-Jumeily</i>	

Application of Fuzzy Analytic Hierarchy Process to Evaluate the Quality of E-Government Web Sites	219
<i>Ourania I. Markaki, Dimitris E. Charilas, and Dimitris Askounis</i>	
Web Structural Metrics Evaluation	225
<i>Izzat Alsmadi, Ahmad T. Al-Taani, and Nahed Abu Zaid</i>	
Facilitating Semantic Adaptation of Web Services at Runtime Using a Meta-Data Layer	231
<i>Thar Baker, David Lamb, A. Taleb-Bendiab, and Dhiya Al-Jumeily</i>	
eBusiness and eServices	
Bank Loan Processes Modelling Using BPMN	239
<i>George Mpardis and Theodore Kotsilieris</i>	
Robustness in Autonomic E-Service Systems	243
<i>Martin Randles, A. Taleb-Bendiab, and D. Lamb</i>	
e-System for Public Administration Reporting Services	249
<i>Andreea Marin, Irina Constantinescu, Ciprian Dobre, Dana Boldeanu, and Valentin Cristea</i>	
eSecurity and eForensics	
Revisiting Secure Documents with XML Security: A Component-based Approach	257
<i>Galoh Rashidah Haron, Dharmadharshni Maniam, and Shawn Tan Ser Ngiap</i>	
Footprinting: A Methodology for Auditing eSystem Vulnerabilities	263
<i>Chris Wren, Denis Reilly, and Tom Berry</i>	
Author Index	268