2011 International Conference on Innovations in Information Technology

(IIT 2011)

Abu Dhabi, United Arab Emirates
25-27 April 2011
Program

Monday, April 25

Registration

Light Breakfast

Student Poster

Opening Ceremony

Keynote:: The Internet: Past, Present, and Future

Prof. Mostafa Ammar, Georgia Institute of Technology, USA

Coffee Break

Keynote:: From Crowdsourcing to Crowdservicing

Professor Joseph G. Davis, School of Information Technologies, University of Sydney

Lunch

Tutorial I: Software engineering of video Games

Prof. Boumediene Belkhouche, Faculty of Information Technology, UAE University

Tutorial II: Cyber Security and Trust: Cooperative Autonomous Resilient Defenses (CARD)

Dr. Mohamed Eltoweissy, Pacific Northwest National Laboratory, USA

Student Poster

Trip

Tuesday, April 26

Registration

Light Breakfast

Tutorial III: Security in Intelligent Transportation Systems

Prof. Abderrahim Benslimane, University of Avignon, France

D2-S1: Network-1

Successive Iterative Decoding of Reed Solomon Codes Using Cryptographic Hash Codes as Parity

Obaidur Rehman (University of Siegen, Germany); Natasa Zivic (University of Siegen, Germany)

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Efficient Use of Partially Overlapped Channels in 2.4 GHz WLAN Backhaul Links

Shazia Abbasi (University of Sindh, Pakistan); Quratulain Kalhoro (University of Surrey, United Kingdom); Masood Kalhoro (Technotronix, Pakistan)

pp. 7-11
On the Generation of Correlated Rayleigh Fading Envelopes for Multi-Antenna Systems
Walid Al-Hussaibi (University of Sussex, United Kingdom); Falah H. Ali (University of Sussex, United Kingdom)
pp. 12-17

Novel Pseudorandom Phase Generation in Transform Domain Communication Systems
Haixin Sun (Jilin University, P.R. China); Guoan Bi (Nanyang Technological University, Singapore); Yong Liang Guan (Nanyang Technological University, Singapore); Yaowu Shi (Jilin University, P.R. China)
pp. 18-22

Non-Uniform Signal Constellation for Iteratively Decoded Bit Interleaved Coded Modulation (BICM-ID) with Convolution and LDPC Codes
Tarek Arafa (University of Kaiserslautern, Germany); Wolfgang Sauer-Greff (University of Kaiserslautern, Germany); Ralf Urbansky (University of Kaiserslautern, Germany)
pp. 23-28

The Unequal Protection of Network Coding with Multi-generation Mixing
Mohammed D Halloush (Yarmouk University, Jordan); Hayder Radha (Michigan State University, USA)
pp. 29-34

Towards a Cloud-based Framework for Context Management
Elarbi Badidi (UAE University, UAE); Ikbal Taleb (UAE University, UAE)
pp. 35-40

Distributing Resource Intensive Mobile Web Services
Feda AlShahwan (University, United Kingdom); Francois Carrez (University of Surrey, United Kingdom); Klaus Moessener (University, United Kingdom)
pp. 41-46

Integration of Web Service Interfaces Via Decision Tree
Jakub Stárka (Charles University, Czech Republic); Irena Mlýnková (Charles University, Prague, Czech Republic); Jakub Klímek (Charles University, Prague, Czech Republic); Martin Nečaský (Charles University, Prague, Czech Republic)
pp. 47-52

A Fault Tolerant Architecture for Web Services
Sareh Aghaei (University of Isfahan, Iran); MohamadReza KhayyamBashi (; Iran); Mohammad Ali Nematabkhsh (University of Isfahan, Iran)
pp. 53-56

A Context Aware Approach to Semantic Query Expansion
Najmeh Ahmadian (Islamic Azad University-Dehaghan Branch, Iran); Mohammad Ali Nematabkhsh (University of Isfahan, Iran); Hamed Vahdat-Nejad (University of Isfahan, Iran)
pp. 57-60

Supervision and Control Tool for E-learning Virtual Laboratory
Djamila Mechta (Université Ferhat Abbas de Sétif, Algeria); Mahieddine Djoudi (University of Poitiers, France); Saad Harous (UAE University, UAE); Amel Douar (Université Ferhat Abbas de Sétif, Algeria); Raouf Belmahdi (Université Ferhat Abbas de Sétif, Algeria)
pp. 61-66

Coffee Break

Keynote:: Innovative Services for a Smarter Planet
Dr. David L. Cohn, Program Director, Smarter Cloud, IBM T. J. Watson Research Center, Yorktown Heights, New York
**D2-S3: (Arabic Language Processing)**

*What is a Modern Arabic Dictionary?*
Boumediene Belkhouche (UAE University, UAE); Harmain Harmain (United Arab Emirates University, UAE); Huda Al Taha (UAE University, UAE); Latifa Al Najjar (UAE University, UAE)
pp. 67-70

*Enhancement Tools for Arabic Web Search a Statistical Approach*
Adnan Yahya (Birzeit University, Palestine); Ali Salhi (Birzeit University, Palestine)
pp. 71-76

*GENESTEM: a Novel Approach for an Arabic Stemmer Using Genetic Algorithms*
Anas Y Boubas (UAE University, UAE); Leena Lulu (UAEU, UAE); Boumediene Belkhouche (UAE University, UAE); Saad Harous (UAE University, UAE)
pp. 77-82

*An Interactive Arabic Dictionary*
Ghaida Rebdawi (HIAST, Syria); Nada Ghneim (Researcher, Syria); Said Desouki (Higher Institute of Applied Sciences and Technology, Syria); Riad Sonbol (Engineer, Syria)
pp. 83-86

*Extracting Person Names From Arabic Newspapers*
Ali Elsebai (Al-Imam Muhammad Ibn Saud University, Saudi Arabia); Farid Meziane (University of Salford, United Kingdom)
pp. 87-89

**D2-S4: (Smart Grid)**

*Smart Home Gateway for Smart Grid*
Abdul-Rahman Al-Ali (American University of Sharjah, UAE); Ayman El-Hag (American University of Sharjah, UAE); Rached Dhaouad (American University of Sharjah, UAE)
pp. 90-93

*A Multilayer Control Framework for Distribution Systems with High DG Penetration*
Hany Farag (University of Waterloo, Canada); Ehab El-Saadany (Waterloo University, Canada); Lana R El Chaar (Petroleum Institute, UAE)
pp. 94-99

*A Cooperative Agent-Based Architecture for Self-Healing Distributed Power Systems*
Aboelsood Zidan (University of Waterloo, Canada); Ehab El-Saadany (Waterloo University, Canada); Lana R El Chaar (Petroleum Institute, UAE)
pp. 100-105

*IT Integration in Power Distribution Substation, AADC Substations’ Automation and Management*
Khalid W. Darwish (Al Ain Distribution Company, UAE)
pp. 106-109

**D2-S6: (Video Techniques)**

*A New Approach to Emotion Recognition*
Dammak Majdi (REGIM: REsearch Group on Intelligent Machines, University of Sfax, Tunisia)
pp. 110-113

*Graph Modeling Based Video Event Detection*
Najib Ben Aoun (REGIM: REsearch Group on Intelligent Machines, Tunisia); Haytham Elghazel (GAMA Laboratory, France); Chokri Ben Amar (University of Sfax, National School of Engineers, Tunisia)
pp. 114-117
Hierarchical Categorization Tree Based on a Combined Unsupervised-Supervised Classification
Mahmoud Mejdoub (I3S Sophia ANTIPOLIS, France); Chokri Ben Amar (University of Sfax, National School of Engineers, Tunisia)
pp. 118-123

Characterization of Ancient Document Images Composed by Arabic and Latin Scripts
Nizar Zaghdan (REGIM/L3i, Tunisia); Rémy Mullot (L3i, France); Adel M. Alimi (University of Sfax, National Engineering School of Sfax, Tunisia)
pp. 124-127

Incremental Learning Approach for Human Detection and Tracking
Boudour Ammar (University of Sfax, Tunisia); Wali Ali (University of Sfax, Tunisia); Adel M. Alimi (University of Sfax, National Engineering School of Sfax, Tunisia)
pp. 128-133

D2-S5: (E-Health)

e-HTAM: a Technology Acceptance Model for Electronic Health
Abdul Hakim H. M. Mohamed (Liverpool Hope University, United Kingdom); Hissam Tawfik (Liverpool Hope University, United Kingdom); Dhiya Al-Jumeily (Liverpool John Moores University, United Kingdom)
pp. 134-138

Evaluation in Health Technology Projects
Farath Arshad (Liverpool John Moores University, United Kingdom)
pp. 139-144

Using E-Learning for Helping Children with Diabetes
Mona Al-Mansoori (British University in Dubai, UAE); Khaled F. Shaalan (The British University in Dubai (BUiD), UAE); Hissam Tawfik (Liverpool Hope University, United Kingdom)
pp. 145-149

Cross-Boundary Knowledge-based Decision Support in e-Health
Obinna Anya (Liverpool Hope University, United Kingdom); Hissam Tawfik (Liverpool Hope University, United Kingdom); Atulya K Nagar (Liverpool Hope University, United Kingdom)
pp. 150-155

Lunch

Keynote: Computational epidemiology: a new paradigm in the fight against infectious diseases
Prof. Vittoria Colizza, ISI Foundation, Turin, Italy

Coffee Break

Tutorial IV: The Evolved Packet System
Dr. Tarik Taleb, NEC Europe Ltd.

D2-S8: Network-2

Ahmed Badi (Florida Atlantic University, USA); Imad Mahgoub (Florida Atlantic University, USA); Fadi Sibai (UAE University, UAE)
pp. 156-161

Efficient Flooding Based on Node Position for Mobile Ad Hoc Network
Efficient Flooding Based on Node Position for Mobile Ad Hoc Network

Sofian Hamad (Brunel University, United Kingdom); Hadi Noureddine (Brunel University, United Kingdom); Nazar Radhi (Brunel University, United Kingdom); Ibrar Shah (Brunel University London UK, United Kingdom); Hamed Saffa Al-Raweshidy (University of Brunel, United Kingdom)

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An Overview of Localization Techniques for Wireless Sensor Networks

Ahmed Kulaib (Khalifa University, UAE); Raed Shubair (Khalifa University of Science, Technology and Research, UAE); Mahmoud Al-Qutayri (Khalifa University of Science Technology and Research, UAE); Jason Ng (British Telecom, United Kingdom)

pp. 167-172

Experimental Evaluation of Image Compression and Transmission for TinyOS-Based Imote2 Platform

Moad Y Mowafi (Jordan University of Science and Technology, Jordan); Fahed H Awad (Jordan University of Science and Technology, Jordan); Eyad Taqieddin (Jordan University of Science and Technology, Jordan); Omar Banimelhem (Jordan University of Science and Technology, Jordan)

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The Cubes: a Tangible Game-Based Learning System

Jamshaid Mohebzada (University of Calgary, Canada); Arsalan Bhojani (American University of Sharjah, UAE)

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A Survey of Indoor Positioning Systems and Algorithms

Klaithem Al nuaimi (UAEU, UAE); Hesham Kamel (UAE University, UAE)

pp. 185-190

A Survey of Wireless Multimedia Sensor Networks Challenges and Solutions

Maryam Al Nuaimi (United Arab Emirates University, UAE); Farag Sallabi (UAE University, UAE); Khaled Shuaib (United Arab Emirates University, UAE)

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D2-S9: Security-1

Forensic Analysis of Private Browsing Artifacts

Huwida Said (Zayed University, UAE); Noora Al Mutawa (Forensic Engineer, UAE); Ibtesam Al Awadhi (Forensic Engineer, UAE); Mario Guimaraes (Kennesaw State University, USA)

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A Survey on Firewall’s Early Packet Rejection Techniques

Zouheir Trabelsi (UAE University, UAE)

pp. 203-208

Improved Neural Network-Based Recognition of Irises with Sector and Block Partitioning

Fadi Sibai (UAE University, UAE)

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Revocation in VANETs: a Survey

Hind Al Falasi (United Arab Emirates University, UAE); Ezedin Barka (UAE University, UAE)

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Evaluation of Security Methods for Ensuring the Integrity of Digital Evidence

Shahzad Saleem (Stockholm University, Sweden); Oliver Popov (Stockholm University, Sweden); Rami Dahman (Stockholm University, Sweden)

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Wormhole Attack Detection Protocol Using Hound Packet

Saurabh Gupta (Indian Institute of Technology Delhi, India)

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Gala Dinner
Wednesday, April 27

Registration

Light Breakfast

Tutorial V: Target Surveillance Using Mobile Wireless Sensor Networks: Models, Theories, and Applications

Dr. Mohamed Hamdi, Communication Networks and Security Research Lab. SUPCOM, University of Carthage, Tunis

D3-S2: Data Mining-1

*Incremental Evolution of Collective Network of Binary Classifier for Content-Based Image Classification and Retrieval*

Serkan Kiranyaz (Tampere University of Technology, Finland); Stefan Uhlmann (Tampere University of Technology, Finland); Jenni Pulkkinen (Tampere University of Technology, Finland); Turker Ince (. Turkey); Moncef Gabbouj (Tampere University of Technology, Finland)

pp. 232-237

*A Method for Solving the Cold Start Problem in Recommendation Systems*

Ossama Embarak (Heriot-Watt University, United Kingdom)

pp. 238-243

*Integration of Users Preferences and Semantic Structure to Solve the Cold Start Problem*

Ossama Embarak (Heriot-Watt University, United Kingdom)

pp. 244-249

*Learning to Sort by Using Evolution*

Igor Trajkovski (Faculty of Electrical Engineering and Information Technologies, Macedonia); Zharko Aleksovski (Philips Research, The Netherlands)

pp. 250-254

*A Spatial Index Structure Using Dynamic Recursive Space Partitioning*

Amer F Al-Badarneh (Jordan University of Science & Technology, Jordan); Abdullah Al-Alaj (Jordan University of Science & Technology, Jordan)

pp. 255-260

*FCM-Fuzzy Rule Base: a New Rule Extraction Mechanism*

Hossein Khosravi R. (Ferdowsi University of Mashhad, Iran); Mohammad Hossien Yaghmaee (Ferdowsi University of Mashhad, Iran); Amirhossein Baradaran Shahroodi (Islamic Azad University, Mashhad Branch, Iran); Hadi Sadoghi Yazdi (Ferdowsi University of Mashhad, Iran)

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D3-S1: Web-2

*Countermeasures Against Consistency Anomalies in Distributed Integrated Databases with Relaxed ACID Properties*

Lars Frank (Copenhagen Business School, Denmark)

pp. 266-270

*A Roadmap for Success in the Clouds*

Nabeel A Al-Qirim (UAE University, UAE)

pp. 271-275

*Qualifying Semantic Graphs Using Model Checking*

Mahdi Gueffaz (Bourgogne, France); Sylvain Rampacek (Bourgogne, France); Christophe Nicolle (University of Burgundy, France)

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Applicability of RESTful Web Services in Control Center Software Integrations
Ervin Varga (University of Novi Sad, Serbia); Imre Lendak (University of Novi Sad, Serbia); Milan Gavrić (Telvent DMS, Serbia); Aleksandar Erdeljan (University of Novi Sad, Serbia)
pp. 282-286

A Framework for SLA-Based Cloud Services Verification and Composition
Asma Falasi (UAE University, UAE); Mohamed Adel Serhani (UAE University, UAE)
pp. 287-292

A Pilot Study for Evaluating Arabic Websites Using Automated WCAG 2.0 Evaluation Tools
Hend S. Al-Khalifa (King Saud University, Saudi Arabia)
pp. 293-296

Coffee Break

Keynote:: Service Computing: Engineering the Service Science
Prof. Athman Bouguettaya, CSIRO ICT Centre, Canberra, Australia

Lunch

Keynote:: Living in the WAM Continuum: Unified Design and Operation of Wireless and Mobile Networks
Prof. Mostafa Ammar, Georgia Institute of Technology, USA

D3-S4: Data Mining-2

Searching Data Streams for Variable Length Anomalies
Amany Abu Safia (University of Sharjah, UAE); Zaher Aghbari (University of Sharjah, UAE)
pp. 297-302

Decision Tree Discovery for the Diagnosis of Type II Diabetes
Asma AlJarullah (King Saud University, Saudi Arabia)
pp. 303-307

Toward Forming an Effective Team Using Social Network
Kareem Kamel (University of Sharjah, UAE); Zaher Aghbari (University of Sharjah, UAE)
pp. 308-312

Exploring Web Search Behavior of Arab Internet Users
Wissam Tawileh (Dresden University of Technology, Germany)
pp. 313-318

An Overview of the Challenges and Progress in PeEn-SMT: First Large Scale Persian-English SMT System
Mahsa Mohaghegh (Massey University, New Zealand); Abdolhossein Sarrafzadeh (Unitec, New Zealand)
pp. 319-323

An Automated Assessment and Reporting Tool for Introductory Java Programs
Fatima AlShamsi (University of Sharjah, UAE); Ashraf Elnagar (Sharjah University, UAE)
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D3-S5: Embedded Systems

Detecting Matrix Multiplication Faults in Many-Core Systems
Fadi Sibai (UAE University, UAE)
pp. 330-335
First-order Theorem Proving Based Verification of the PCI-X Bus Architecture
Amjad Gawanmeh (Khalifa University of Science, Technology and Research, UAE)
pp. 336-341

The Impact of Modeling the Overshooting Effect in Subthreshold Region for Nanoscale CMOS Inverter
Abedalsalam Bani-Ahmed (Jordan University of Science and Technology, Jordan)
pp. 342-345

Intelligent Techniques for Image Segmentation in Cell Tracking and Mobility Analysis
Ashraf Aly (Universiti Teknologi Malaysia, Malaysia)
pp. 346-349

Self-Optimizing Resource Management in High Throughput Computing Systems
Zaib Imran (Kinnaird College For Women, Pakistan); Saba Z Bhatti (Kinnaird College for Women, Pakistan); Anam Tahir (Kinnaird College For Women, Pakistan); Malik Jahan Khan (LUMS, Pakistan)
pp. 350-355

Thresholding Using Quantum-dot Cellular Automata
Bibhash Sen (National Institute of Technology, Durgapur, India); Anshu Anand (National Institute of Technology, Durgapur, India); Tanumoy Adak (National Institute of Technology Durgapur, India); Biplab K Sikdar (Bengal Engineering and Science University, India)
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A Simulation of Life in a Medieval Town for Edutainment and Touristic Promotion
Lucio T De Paolis (Salento University, Lecce, Italy); Giovanni Aloisio (University of Lecce, Italy); Luigi Oliva (Scuola Superiore ISUFI - Salento University, Italy); Pietro Vecchio (Scuola Superiore ISUFI - Salento University, Italy); Maria Celentano (Scuola Superiore ISUFI - Salento University, Italy)
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Low Leakage Power SRAM Cell for Embedded Memory
Baker Mohammad (Khalifa University of Science Technology and Research, UAE)
pp. 367-370

The Distance-to-Mean Broadcast Method for Vehicular Wireless Communication Systems
Michael J Slavik (Florida Atlantic University, USA); Imad Mahgoub (Florida Atlantic University, USA); Fadi Sibai (UAE University, UAE)
pp. 371-374

An Adaptive Bandwidth Borrowing-Based Call Admission Control Scheme for Multi-Class Service Wireless Cellular Networks
Sharifa Al Khanjari (German University of Technology in Oman, Oman); Bassel Arafah (Sultan Qaboos University, Oman); Khaled Day (Sultan Qaboos University, Oman); Nasser Alzeidi (Sultan Qaboos University, Oman)
pp. 375-380

Estimate Primary User Localization Using Cognitive Radio Networks
Nazar Radhi (Brunel University, United Kingdom); Kahtan Aziz (Al-Ghurair University, UAE); Sofian Hamad (Brunel University, United Kingdom); Hamed Saffa Al-Raweshidy (University of Brunel, United Kingdom)
pp. 381-385

A Novel Location Service Protocol in Multi-Hop Clustering Vehicular Ad Hoc Networks
Liren Zhang (United Arab Emirates University, UAE); Hesham Elsayed (UAE University, UAE); Ezedin Barka (UAE University, UAE)
pp. 386-391

Adaptive Scheduling in Mobile Ad Hoc Networks Using Reinforcement Learning Approach
Malika Bourenane (University of Senia, Algeria)
pp. 392-397

Network Coding with Multi-generation Mixing for Scalable and Non-Scalable Video Communication
Mohammed D Halloush (Yarmouk University, Jordan); Hayder Radha (Michigan State University, USA)
pp. 398-403

Adaptive Rate Control in Object-Based Video Coding Using Non-Cooperative Game Theory
Mohamed Khedr (Arab Academy for Science and Technology, Egypt); Nour El din Elmadany (AAST, Egypt)
pp. 404-408

D3-S6: Security-2

A View on Latest Audio Steganography Techniques
Fatiha Djebbar (UAEU, UAE); Baghdad Ayad (Al Ain University, UAE); Habib Hamam (Moncton University, Canada); Karim Abed-Meraim (Dept TSI, Télécom Paris, France)
pp. 409-414

Recognizing Characters in Saudi License Plates Using Character Boundaries
Khaled Almustafa (Prince Sultan University, Saudi Arabia); Rached N Zantout (Prince Sultan University, Saudi Arabia); Hasan R. Obeid (Zawya, Lebanon); Fadi Sibai (UAE University, UAE)
pp. 415-420

Distributed Worm Confinement Based on Cost-Benefit Analysis
Maha Sliti (Communication Networks and Security Research Lab., Tunisia); Mohamed Hamdi (Carthage University, Tunisia); Noureddine A. Boudriga (University of Carthage, Tunisia)
pp. 421-426

Security Estimation in Streaming Protocols
Samir Ouchani (Concordia University, Canada); Yosr Jarraya (Concordia University, Canada); Otmane Ait Mohamed (Concordia University, Canada); Mourad Debbabi (Concordia University, Montreal, Canada)
pp. 427-432

High Capacity Diacritics-based Method for Information Hiding in Arabic Text
Mohamed Lahcen Bensaad (University of Laghouat, Algeria); Mohamed Yagoubi (University of Laghouat, Algeria)
pp. 433-436

Preventing Shoulder-Surfing When Selecting Pass-Images in Challenge Set
Salem Jebriel (University of Glasgow, United Kingdom); Ron Poet (University of Glasgow, United Kingdom)
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