

2013 Computing, Communications and IT Applications Conference

(ComComAp 2013)

**Hong Kong, China
1-4 April 2013**



**IEEE Catalog Number: CFP1321R-PRT
ISBN: 978-1-4673-6043-2**

TABLE OF CONTENTS

Communication & Networking

Chair: Sajal Das, *University Texas at Arlington, USA*

A Troubleshooting Home Internet Connection Framework for Malaysian Service Provider	1
<i>Ali Jalooli, Asia Pacific University of Technology and Innovation, Malaysia</i>	
<i>Nor Azlina Bt Abd Rahman, Asia Pacific University of Technology and Innovation, Malaysia</i>	
<i>Khalida Shajaratuddur Bt Harun, Asia Pacific University of Technology and Innovation, Malaysia</i>	
<i>Nurul Haniza Bt Mohtar, Asia Pacific University of Technology and Innovation, Malaysia</i>	
The Design and Development of Infrastructured Mutual Assistant Networks	7
<i>Chia-Kuan Yen, National Chung Cheng University, Taiwan</i>	
<i>Sheng-Yang Peng, National Chung Cheng University, Taiwan</i>	
<i>Yi-Chyuan Hwang, National Chung Cheng University, Taiwan</i>	
<i>Ren-Song Ko, National Chung Cheng University, Taiwan</i>	
Trust and Exclusion in Vehicular Ad Hoc Networks: An Economic Incentive Model based Approach	13
<i>Nadia Haddadou, Université Paris-Est Marne-la-Vallée, France</i>	
<i>Abderrezak Rachedi, Université Paris-Est Marne-la-Vallée, France</i>	
<i>Yacine Ghamri-Doudane, Université Paris-Est Marne-la-Vallée and ENSIIE, France</i>	
Video Streaming over Content Centric Networking: Experimental Studies on PlanetLab	19
<i>Suphakit Awiphan, Waseda University, Japan</i>	
<i>Takeshi Muto, Waseda University, Japan</i>	
<i>Yu Wang, Waseda University, Japan</i>	
<i>Zhou Su, Waseda University, Japan</i>	
<i>Jiro Katto, Waseda University, Japan</i>	
A Conceptual Model of Intention to Use Health Information Associated with Online Social Network	25
<i>Waransanang Boontarig, King Mongkut's University of Technology Thonburi, Thailand</i>	
<i>Wichian Chutimasakul, King Mongkut's University of Technology Thonburi, Thailand</i>	
<i>Borworn Papisratorn, King Mongkut's University of Technology Thonburi, Thailand</i>	
Minimum Distance Based Precoding for Closed-Loop QO-STBC Systems with Single-Symbol Decodable ML Receiver	30
<i>Jaesin Kim, Agency for Defense Development, Korea</i>	
<i>Junghun Ryu, Agency for Defense Development, Korea</i>	
<i>Suil Kim, Agency for Defense Development, Korea</i>	
<i>Ui-Young Pak, Agency for Defence Development, Korea</i>	

Wireless Sensors

Chair: Nidal Nasser, *Alfaisal University, SA*

Tree-based Data Aggregation Mechanism using Center of Gravity in Wireless Sensor Networks 10E

Kuo-Feng Huang, *Taipei College of Maritime Technology, Taiwan*

ChenChe Hung, *Tamkang University, Taiwan*

Wei-Chih Su, *Tamkang University, Taiwan*

Ying-Hong Wang, *Tamkang University, Taiwan*

On the Feasibility of making Intelligent Antenna Selection Decision in IEEE 802.15.4 Wireless Sensor Networks 41

Mubashir Husain Rehmani, *Université Paris-Est Marne-la-Vallée, France and*

COMSATS Institute of Information Technology, Pakistan

Abderrezak Rachedi, *Université Paris-Est Marne-la-Vallée, France*

Stéphane Lohier, *Université Paris-Est Marne-la-Vallée, France*

Thierry Alves, *Université Paris-Est Marne-la-Vallée, France*

Benoit Poussot, *Université Paris-Est Marne-la-Vallée, France*

Distributed Composition Services for Self-adaptation Wireless Sensor Networks 47

Lei Zhang, *Tianjin University, P.R. China*

Maode Ma, *Tianjin University, P.R. China*

Gang Zhang, *Tianjin University, P.R. China*

Alvin S. Lim, *Auburn University, USA*

A New Routing Mechanism based on Virtual Coordination Anchor Node for WSNs 10E

Chih-Hsiao Tsai, *Takming University of Science and Technology, Taiwan*

Cheng-Han Tsai, *Tamkang University, Taiwan*

Shou-Li Liao, *Tamkang University, Taiwan*

Ying-Hong Wang, *Tamkang University, Taiwan*

A Two-Threshold Cooperative Spectrum Sensing Algorithm using Swarm Intelligence 59

Fahham Mohammed, *King Fahd University of Petroleum & Minerals, Saudi Arabia*

Mohamed Deriche, *King Fahd University of Petroleum & Minerals, Saudi Arabia*

IT Applications

Chair: Lei Chen, *Hong Kong University of Science and Technology, Hong Kong*

Visualizing Geolocation of Spam Email 63

Asmah Muallem, *Tennessee State University, USA*

Sachin Shetty, *Tennessee State University, USA*

S.K. Hargrove, *Tennessee State University, USA*

A Supervised Learning Method Combine with Dimensionality Reduction in Vietnamese Text Summarization 69

Ha Nguyen Thi Thu, *Vietnam Electric Power University, Vietnam*

Quynh Nguyen Huu, *Vietnam Electric Power University, Vietnam*

Tu Nguyen Thi Ngoc, *Vietnam Electric Power University, Vietnam*

Runking: A Mobile Social Persuasion System for Running Exercise	74
Zongjian He, <i>Tongji University, P.R. China</i>	
Yigui Luo, <i>Tongji University, P.R. China</i>	
Guanqing Liang, <i>The Hong Kong Polytechnic University, Hong Kong</i>	
Elastic Correction of Altitude Errors in Indoor Location System	79
Yingzheng Hong, <i>Shanghai Fire Research Institute of the Ministry of Public Security, P.R. China</i>	
Yang Yang, <i>Fuzhou University, P.R. China</i>	
Chunhui Sun, <i>Shanghai Fire Research Institute of the Ministry of Public Security, P.R. China</i>	
Improving the Evaluation of Generator Matrix G by Initial Upper Bound Estimation	85
H. Harun, <i>University Putra Malaysia, Malaysia</i>	
U.A.N. Ungku Chulan, <i>University Putra Malaysia, Malaysia</i>	
U.A.I. Ungku Chulan, <i>Developing Reality, Malaysia</i>	
K. Khazani, <i>Developing Reality, Malaysia</i>	
Arabic Sign Language Recognition by Decisions Fusion using Dempster-Shafer Theory of Evidence	90
Mohamed Mohandes, <i>King Fahd University of Petroleum & Minerals, Saudi Arabia</i>	
Mohamed Deriche, <i>King Fahd University of Petroleum & Minerals, Saudi Arabia</i>	
Wireless Networking	
Chair:	Wei Chen, <i>Tsinghua University, China</i>
Time-Spreading Wavelength-Hopping OCDMA System Using LDPC Code	95
Maw-Yang Liu, <i>National Ilan University, Taiwan</i>	
Yi-Kai Hsu, <i>National Ilan University, Taiwan</i>	
Chien-Hsien Chiang, <i>National Ilan University, Taiwan</i>	
A Novel Peak-to-Average Power Ratio Reduction Method for Amplitude Phase Shift Keying	100
Jun Wang, <i>Tsinghua University, P.R. China</i>	
Zhenyu Liu, <i>Tsinghua University, P.R. China</i>	
Ziwei Luo, <i>Tsinghua University, P.R. China</i>	
Zhaocheng Wang, <i>Tsinghua University, P.R. China</i>	
Distributed Spatial-Temporal Compressive Data Gathering for Large-scale WSNs	105
Xuangou Wu, <i>University of Science and Technology of China, P.R. China</i>	
Yan Xiong, <i>University of Science and Technology of China, P.R. China</i>	
Mingxi Li, <i>University of Science and Technology of China and State Key Laboratories of Transducer Technology, P.R. China</i>	
Wenchao Huang, <i>University of Science and Technology of China, P.R. China</i>	
Energy Efficient and Fairness Scheduling of Periodic Real-Time Tasks for Wireless Embedded Systems	111
Wilawan Rukpakavong, <i>Loughborough University, United Kingdom</i>	
Peter Bull, <i>Loughborough University, United Kingdom</i>	
Lin Guan, <i>Loughborough University, United Kingdom</i>	
Alan Grigg, <i>Rolls Royce Aero-Engine Controls, United Kingdom</i>	

Linear FIR Precoding for Frequency Selective MIMO Channels Using Gaussian Randomization	115
Xiaodong Xu, <i>University of Science and Technology of China, P.R. China</i>	
Zilong Zhang, <i>University of Science and Technology of China, P.R. China</i>	
Qiang Gu, <i>University of Science and Technology of China, P.R. China</i>	
Baisheng Du, <i>University of Science and Technology of China, P.R. China</i>	
A Review on Adaptive Frequency Selective Surfaces (AFSS) based Patch Antennas	120
Sonam Thakur, <i>Galgotias College of Engineering & Technology, India</i>	
R.L. Yadava, <i>Galgotias College of Engineering & Technology, India</i>	
Sushrut Das, <i>Indian School of Mines, India</i>	
Systems Security and Embedded Architectures	
Chair:	<i>Abderrezak Rachedi, Université Paris-Est Marne-la-Vallée, France</i>
Proxy Re-Encryption Conjunctive Keyword Search against Keyword Guessing Attack	125
Yang Yang, <i>Fuzhou University, P.R. China</i>	
Maode Ma, <i>Fuzhou University, P.R. China and Nanyang Technological University, Singapore</i>	
Bogang Lin, <i>Fuzhou University, P.R. China</i>	
Risk Assessment of the Individual Housing Loans by Grey Data Mining based on AHP-GRAP	131
Size Li, <i>Beijing Jiaotong University, P.R. China</i>	
Yuanyuan Shi, <i>Beijing Jiaotong University, P.R. China</i>	
Zhangdui Zhong, <i>Beijing Jiaotong University, P.R. China</i>	
Gang Zhu, <i>Beijing Jiaotong University, P.R. China</i>	
Bo Ai, <i>Beijing Jiaotong University, P.R. China</i>	
A Load-Balanced Pipeline Architecture for IP Route Lookup	136
Shengqing Hu, <i>Sun Yat-sen University, P.R. China</i>	
Yi Wu, <i>Sun Yat-sen University, P.R. China</i>	
Ge Nong, <i>Sun Yat-Sen University, P.R. China</i>	
Performance Evaluation/Modeling and Simulation	
Chair:	<i>Mohsin Iftikhar, King Saud University, Saudi Arabia</i>
The Explicit Analysis of Polling Systems Combined with Non-Preemptive Priority Scheduling under Self-Similar Traffic Input	141
Mohsin Iftikhar, <i>King Saud University, Saudi Arabia</i>	
Ijaz Ali Shoukat, <i>King Saud University, Saudi Arabia</i>	
Hussain Salman, <i>King Saud University, Saudi Arabia</i>	
Sghaier Guizani, <i>Alfaisal University, Saudi Arabia</i>	
Delay Minimization for Reliable Data Collection on Overhead Transmission Lines in Smart Grid	147
Peng Li, <i>The University of Aizu, Japan</i>	
Song Guo, <i>The University of Aizu, Japan</i>	
An Iterative MVDR CFO Estimation for Interleaved OFDMA Uplink Systems	153
Ann-Chen Chang, <i>Ling Tung University, Taiwan</i>	
Shang-Heng Yang, <i>Ling Tung University, Taiwan</i>	

Capacity and Outage Performance of Asynchronous Alamouti Cooperative Diversity	159
Jianqing Chen, <i>Chongqing Communication Institute, P.R. China</i>	
Lijia Ge, <i>Chongqing Communication Institute, P.R. China</i>	
Network Coding	
Chair: Pingyi Fan, <i>Tsinghua University, P.R. China</i>	
Concatenated Coded OFDM System over AWGN Channel with H.264 Source Coding	164
Maw-Yang Liu, <i>National Ilan University, Taiwan</i>	
Chien-Hsien Chiang, <i>National Ilan University, Taiwan</i>	
Yi-Kai Hsu, <i>National Ilan University, Taiwan</i>	
Chia-Fu Yang, <i>Public Television Service Foundation, Taiwan</i>	
Revisiting Two-Way Channel: Opportunistic Network Coding Scheduling in Fading Channels	169
Zhi Chen, <i>National University of Singapore, Singapore</i>	
Pingyi Fan, <i>Tsinghua University, P.R. China</i>	
Khaled Ben Letaief, <i>Hong Kong University of Science & Technology, Hong Kong</i>	
Efficient Relay Selection in Multi-Source Cooperative Networks	175
Wei-Yi Shen, <i>National Cheng Kung University, Taiwan</i>	
Kuang-Hao Liu, <i>National Cheng Kung University, Taiwan</i>	
On the Performance of Multi-Way Relay Communications via Complex Field Network Coding	180
Wei Li, <i>Xi'an Jiaotong University, China</i>	
Guobing Li, <i>Xi'an Jiaotong University, China</i>	
Shihua Zhu, <i>Xi'an Jiaotong University, China</i>	
Tao Liu, <i>Xi'an Jiaotong University, China</i>	
Water-filling Capacity Analysis in Large MIMO Systems	186
Yi Lu, <i>The University of New South Wales, Australia</i>	
Wei Zhang, <i>The University of New South Wales, Australia</i>	