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Speaker: Charles Elkan, Professor, University of California, San Diego, USA

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Speaker: Mihaela van der Schaar, Chancellor's Professor, University of California, Los Angeles, USA

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Ibtissem Boulanouar (LIGM - University Paris-Est, France); Stephane Lohier (University of Paris-Est, France); Abderrezak Rachedi (University Paris-Est Marne-la-Vallée, France); Gilles Roussel (Université Paris-Est, France)  
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Speaker: Mehmet Yavuz, Senior Director, Qualcomm, USA

## Invited Position Talks I

### **Dealing with Exponential Growth in Wireless Video**

Jerry D Gibson (University of California, Santa Barbara, USA)

### **PHY-APP Cross-Layer Wireless Video Transmission**

Pamela Cosman (University of California, San Diego, USA)

### **Detection for Two-Dimensional Magnetic Recording Systems**

Seyed Mehrdad Khatami (University of Arizona & Sharif University, USA); Bane Vasić (University of Arizona, USA)  
pp. 535-539

## Invited Papers I

### **Testing Access Control and Obligation Policies**

Dianxiang Xu (Dakota State University, USA); Michael Sanford (Dakota State University, USA);  
Zhaoliang Liu (Dakota State University, USA); Mark Emry (Sioux Falls School District, USA); Brad Brockmueller (Sioux Falls School District, USA); Spencer Johnson (Pomona College, USA); Michael To (Georgia State University, USA)  
pp. 540-544

### **Traffic Classification: Issues and Challenges**

Yibo Xue (Tsinghua university, P.R. China); Dawei Wang (National Computer Network Emergency Response Technical Team / Coordination Center of China, P.R. China); Luoshi Zhang (Harbin University of Science and Technology, P.R. China)  
pp. 545-549

### **Channel Capacity and Soft-Decision Decoding of LDPC Codes for Spin-Torque Transfer Magnetic Random Access Memory (STT-MRAM)**

Kui Cai (Data Storage Institute, Singapore); Zhiliang Qin (Data Storage Institute, Singapore);  
Bingjin Chen (Data Storage Institute, Singapore)  
pp. 550-554

### **QoE Evaluations for Video Streaming over eMBMS**

Utsaw Kumar (University of Notre Dame, USA); Ozgur Oyman (Intel Corporation, USA)  
pp. 555-559

## GCNC: Green Computing, Networking and Communications

### **Energy Saving Improvements in IP Networks Through Table Lookup Bypass in Router Line Cards**

Angelo Coiro (University of Rome "La Sapienza", Italy); Marco Polverini (University "La Sapienza" Roma, Italy); Antonio Cianfrani (University of Roma "La Sapienza", Italy); Marco Listanti (University of Rome "La Sapienza", Italy)  
pp. 560-566

### **A robust optimization approach for energy-aware routing in MPLS networks**

Bernardetta Addis (Università degli Studi di Torino, Italy); Antonio Capone (Politecnico di Milano, Italy); Giuliana Carello (Politecnico di Milano, Italy); Luca Gianoli (Politecnico di Milano & École Polytechnique de Montréal, Canada); Brunilde Sansò (Ecole Polytechnique de Montreal, Canada)  
pp. 567-572

### **Impact of Mobile Transmitter Sources on Radio Frequency Wireless Energy Harvesting**

Antonio Hernandez Coarasa (Northeastern University, Spain); Prusayon Nintanavongsa (Northeastern University, USA); Sugata Sanyal (Tata Institute of Fundamental Research Mumbai, India); Kaushik Chowdhury (Northeastern University, USA)  
pp. 573-577

### **Energy-efficient IPTV Simulcast over Fixed WiMAX Access Systems**

Yi Zhu (Hawaii Pacific University, USA); Xiaofeng Gao (Shanghai Jiao Tong University, P.R. China); Weili Wu (UT Dallas, USA); Jason P. Jue (University of Texas at Dallas, USA)

pp. 578-584

#### **Energy Budget Simulation for Deep Packet Inspection**

Lorenzo Di Gregorio (Intel Mobile Communications GmbH & Lantiq Deutschland GmbH, Germany)  
pp. 585-589

#### **Analysis of Energy Efficiency in Dynamic Optical Networks Employing Solar Energy Sources**

Jiayuan Wang (Technical University of Denmark, Denmark); Anna Manolova Fagertun (Technical University of Denmark, Denmark); Sarah Ruepp (Technical University of Denmark, Denmark); Lars Dittmann (Technical University of Denmark, Denmark)  
pp. 590-593

## **WN I: Wireless Networks I**

#### **Towards 60GHz Wireless Switching Interconnect**

Hars Vardhan (University of Texas at Dallas, USA); Ravi Prakash (University of Texas at Dallas, USA)  
pp. 594-598

#### **Efficient Support for Video Communications in Wireless Home Networks**

Andrea Vesco (Istituto Superiore Mario Boella, Italy); Enrico Masala (Politecnico di Torino, Italy); Riccardo M. Scopigno (Istituto Superiore Mario Boella, Italy)  
pp. 599-604

#### **Study on Real Energy Consumption of Large-scale Campus Wireless Network**

Wenqi Sun (Tsinghua University, P.R. China); Hewu Li (Tsinghua University, P.R. China); Jianping Wu (Tsinghua University, P.R. China)  
pp. 605-609

#### **Protocol Independent Multicast: from Wired to Wireless Networks**

Alessandro Russo (University of Trento, Italy); Renato Lo Cigno (University of Trento, Italy); Izhak Rubin (University of California at Los Angeles, USA)  
pp. 610-615

#### **Novel DCF-based Multi-User MAC Protocol and Dynamic Resource Allocation for OFDMA WLAN Systems**

Takuya Mishima (Osaka University, Japan); Shinichi Miyamoto (Osaka University, Japan); Seiichi Sampei (Osaka University, Japan); Wenjie Jiang (NTT Network Innovation Laboratories, NTT Corporation & Research Engineer, Japan)  
pp. 616-620

## **Keynote Talk: Architecture for High Speed, Large Volume and Low Delay Data Transport Networks**

Speaker: Vincent W. S. Chan, Joan and Irwin Jacobs Professor, MIT, USA

## **Qualcomm Distinguished Lecture V: Emerging topics in LTE-Advanced Networks**

Speaker: Yongbin Wei, Director, Qualcomm, USA

## **CIS II: Communications and Information Security II**

#### **A Hierarchical PCA-based Anomaly Detection**

Tian Biming (Curtin University, Australia); Kathryn E Merrick (University of New South Wales & Australian Defence Force Academy, Australia); Shui Yu (Deakin University, Australia); Jiankun Hu (University of New South Wales, Australia)  
pp. 621-625

#### **HIDEINSIDE - A Novel Randomized & Encrypted Antiforensic Information Hiding**

Avinash Srinivasan (George Mason University, USA); Srinath Thirthahalli Nagaraj (George Mason University, USA); Angelos Stavrou (George Mason University, USA)

**Towards Secure and Context-Aware Information Lookup for the Internet of Things**

Michalis Giannikos (AUEB, Greece); Korina Kokoli (AUEB, Greece); Nikos Fotiou (Mobile Multimedia Lab, Athens University of Economics and Business, Greece); Giannis F. Marias (Athens University of Economics and Business, Greece); George C. Polyzos (Athens University of Economics and Business, Greece)  
pp. 632-636

**Harnessing Many-core Processors for Scalable, Highly Efficient, and Adaptable Firewall Solutions**

Robert E Benner (Sandia National Laboratories, USA); Victor Echeverria (Sandia National Laboratories, USA); Uzoma Onunkwo (Sandia National Lab, USA); Jay Patel (Sandia National Laboratories, USA); David J Zage (Sandia National Laboratories, USA)  
pp. 637-641

**Automated Malware Classification based on Network Behavior**

Saeed Nari (University of New Brunswick, Canada); Ali A. Ghorbani (University of New Brunswick, Canada)  
pp. 642-647

## MCC: Multimedia Computing and Communications

**Intra Frame Constant Rate Control Scheme for High Efficiency Video Coding**

Yimin Zhou (University of Electronic Science and Technology of China, P.R. China); Ling Tian (University of Electronic Science and Technology of China, P.R. China); Xuecheng Ning (University of Electronic Science and Technology of China, P.R. China)  
pp. 648-652

**Mitigating the Asymmetric Interests Among Peers in Peer-to-Peer Video-on-Demand Systems**

Saikat Sarkar (University of Calgary, Canada); Mea Wang (University of Calgary, Canada)  
pp. 653-659

**A New Video Sharing by Communication and Analysis of Region of Interest on Panoramic Video**

Daisuke Ochi (NTT Corporation, Japan); Hideaki Kimata (NTT Corporation, Japan); Hajime Noto (NTT Corporation, Japan); Akira Kojima (Nippon Telegraph and Telephone Corporation, Japan)  
pp. 660-664

**Multi-Source IPTV Networks: Zap Time and Bandwidth Optimization**

Daniel Bailey (University of Oklahoma, USA); Yuh-Rong Chen (University of Oklahoma, USA); Sridhar Radhakrishnan (University of Oklahoma, USA); Suleyman Karabuk (University of Oklahoma, USA)  
pp. 665-670

**Low-Complexity FPGA Implementation of Compressive Sensing Reconstruction**

Jerome Stanislaus (University of Maryland, Baltimore County, USA); Tinoosh Mohsenin (University of Maryland Baltimore County, USA)  
pp. 671-675

**A Novel Scalable Video Streaming System on P2P Networks**

Kai-Lung Hua (National Taiwan University of Science and Technology, Taiwan); Ge-Ming Chiu (National Taiwan University of Science and Technology, Taiwan); Tai-Lin Chin (National Taiwan University of Science and Technology, Taiwan); Hsing-Kuo Pao (National Taiwan University of Science and Technology, Taiwan); Yi-Chi Cheng (Apexx Technology Corp., Taiwan); Guan-Ming Su (Dolby Lab, USA)  
pp. 676-680

## WC II: Wireless Communications II

**Passenger Influence on the Performance of Time Reversal in Intra-Vehicular Environment**

François Bellens (Université Libre de Bruxelles (ULB), Belgium); David Lautru (UniversityParis 06, France); Jean-Michel Dricot (Université Libre de Bruxelles, Belgium); François Horlin (Université Libre de Bruxelles, Belgium); Aziz Benlarbi-Delaï (UPMC University Paris 06, France); Philippe De Doncker (ULB, Belgium)

pp. 681-685

**Relay Selection and Power Allocation in Amplify-and-Forward Cognitive Radio Systems**

Krishna Ram Budhathoki (The University of Akron, USA); Mehdi Maleki (The University of Akron, USA); Hamid Reza Bahrami (The University of Akron, USA)  
pp. 686-690

**Closing the Gap to the Capacity of APSK: Constellation Shaping and Degree Distributions**

Xingyu Xiang (West Virginia University, USA); Matthew Valenti (West Virginia University, USA)  
pp. 691-695

**Exploiting Cross-Layer Packet Overhearing for Opportunistic Distributed STC in Wireless Relay Networks**

Antonios Argyriou (University of Thessaly & CERTH, Greece)  
pp. 696-700

**Optimal Pre-weighting Scheme for Spatially Correlated MIMO-OFDM Wireless System with Subcarrier Cluster Constraint**

John F. An (National Taiwan Ocean University, Taiwan)  
pp. 701-707

**Transmit Precoding based on Outdated Interference Alignment for Two Users Multi Cell MIMO System**

Danish Aziz (Alcatel-Lucent Bell Labs, Germany); Andreas Weber (Alcatel-Lucent, Germany)  
pp. 708-713

## Plenary Talk: Evolution of Digital Video Compression - from Primordial Soup to Homo sapiens

Speaker: Ajay Luthra, Vice President, Motorola Mobility, USA

## COG: Cognitive Computing and Networking

**Effective Capacity Optimization for Cognitive Radio Network Based on Underlay Scheme in Gamma Fading Channels**

Mohamed Elalem (Ryerson Canada, Canada); Lian Zhao (Ryerson University, Canada)  
pp. 714-718

**An Improved LFS Engine for Physical Layer Security Augmentation in Cognitive Networks**

Paul Harmer (Air Force Institute of Technology, USA); Michael A Temple (Air Force Institute of Technology, USA)  
pp. 719-723

**Cooperative Resource Allocation in OFDM-Based Multicell Cognitive Radio Systems**

Qianyu Yang (Nanjing University, P.R. China); Shaowei Wang (Nanjing University, P.R. China); Mengyao Ge (Nanjing University, P.R. China)  
pp. 724-728

**A Location-Aided Routing Protocol for Cognitive Radio Networks**

Karim Habak (Egypt-Japan University of Science and Technology, Egypt); Mohammed Abdelatif (Egypt-Japan University of Science and Technology (EJUST), Egypt); Hazem Hagrass (Egypt-Japan University of Science and Technology (EJUST), Egypt); Karim Rizc (Egypt-Japan University of Science and Technology (EJUST), Egypt); Moustafa Youssef (Egypt-Japan University of Science and Technology (EJUST), USA)  
pp. 729-733

**A Priority-aware Channel Selection Scheme for Real-time Data Transmission in Cognitive Radio Networks**

Norooz Motamedi (San Diego State University, USA); Sunil Kumar (San Diego State University, USA); Fei Hu (University of Alabama, USA); Nathaniel W Rowe (Air Force Research Laboratory, USA)  
pp. 734-739

**A Neural Network Approach to Category Validation of Android Applications**

Mo Ghorbanzadeh (Virginia Tech & The Hume Center for National Security and Technology, USA); Yang Chen (Virginia Tech, USA); Kevin Ma (Virginia Tech, USA); T. Charles Clancy (Virginia Tech, USA); Robert McGwier (Virginia Tech, USA)  
pp. 740-744

**MCVC: Mobile Computing and Vehicle Communications****Clustering algorithm based on minimal path loss ratio for vehicular communication**

Yamini Harikrishnan (Samsung India Software Operations, India); Jianhua He (Aston University, United Kingdom)  
pp. 745-749

**Practical Provably Secure Key Sharing for Near Field Communication Devices**

Ahmed Elbagori (Alexandria University, Egypt); Ahmed Youssef (Alexandria University, Egypt); Mohamed Elnobi (Alexandria University, Egypt); Moustafa Youssef (Egypt-Japan University of Science and Technology (EJUST), USA)  
pp. 750-755

**MAC and Application-Level Broadcast Reliability in VANETs with Channel Fading**

Xiaomin Ma (Oral Roberts University, USA); Xiaoyan Yin (Duke University, USA); Matthew Wilson (Oral Roberts University, USA); Kishor S. Trivedi (Duke University, USA)  
pp. 756-761

**Near-Optimal Packet Allocation Algorithm for Content Uploading to Media Cloud via Collaborative Wireless Network**

Ge Zhang (Nanyang Technological University, Singapore); Yonggang Wen (Nanyang Technological University, Singapore); Yew Soon Ong (School of Computer Engineering, Nanyang Technological University, Singapore)  
pp. 762-767

**A Node Management Scheme for R2V Connections in RSU-Supported Vehicular Adhoc Networks**

Wen-Hsing Kuo (Yuan Ze University, Taiwan); Yen-Shien Tung (Yuan Ze University, Taiwan); Shih-Hau Fang (Yuan Ze University, Taiwan)  
pp. 768-772

**CAREFOR: Collision-Aware REliable FORwarding Technique for Vehicular Ad hoc Networks**

Anna Maria Vegni (University of ROMA TRE, Italy); Ahmad Mostafa (University of Cincinnati, USA); Dharma P Agrawal (University of Cincinnati, USA)  
pp. 773-777

**WAHS II: Wireless Ad Hoc and Sensor Networks II****EgyHet: An Energy-Saving Routing Protocol for Wireless Heterogeneous Sensor Networks**

Xiao Chen (Texas State University, USA); Zanxun Dai (Texas State University, USA); Hongchi Shi (Texas State University-San Marcos, USA)  
pp. 778-782

**Scheduling Problems in Interference-Aware Wireless Sensor Networks**

Nhat X Lam (University of Texas at Dallas, USA); Min Kyung An (University of Texas at Dallas, USA); Dung Huynh (University of Texas at Dallas, USA); Trac Ngoc Nguyen (Raytheon Systems, USA)  
pp. 783-789

**Scheduled Channel Access Using Geographical Classification**

Ashok N Masilamani (University of California, Santa Cruz, USA); Jj Garcia-Luna-Aceves (University of California at Santa Cruz, USA)  
pp. 790-796

**Measuring the Efficiency of the Sensing Process in a Wireless Sensor Network**

Bryan Larish (Georgia Institute of Technology, USA); George Riley (Georgia Institute of Technology, USA)  
pp. 797-801

**A Realistic and Stable Markov-based Model for WSNs**

Irfan S. Al-Anbagi (School of Electrical Engineering and Computer Science University of Ottawa, Canada); Mounib Khanafer (University of Ottawa, Canada); Hussein T Mouftah (University of Ottawa, Canada)  
pp. 802-807

**HarWSNet: A Co-Simulation Framework for Energy Harvesting Wireless Sensor Networks**

Amine Didioui (CEA/Leti - Minatec & University of Rennes 1, France); Carolyne Bernier (CEA/Leti - Minatec, France); Dominique Morche (CEA Leti, France); Olivier Sentieys (IRISA, University of Rennes 1, France)  
pp. 808-812

**Plenary Talk: Understanding Behavior in a Networked World via Social Media Data**

Speaker: Huan Liu, Professor, Arizona State University, USA

**Invited Position Talks II****Ad-Hoc Networks at Global Scale**

Rene L. Cruz (University of California, San Diego, USA)  
pp. 813-817

**Wireless Network Virtualization**

Xin Wang (University of Pittsburgh, USA); David Tipper (University of Pittsburgh, USA)  
pp. 818-824

**Trends in Survivable/Secure Cognitive Networks**

Erik Blasch (Air Force Research Lab, USA); Timothy Busch (Air Force Research Lab, USA); Sunil Kumar (San Diego State University, USA); Khanh D Pham (The U.S. Air Force Research Laboratory & Space Vehicles Directorate, USA)  
pp. 825-829

**Invited Papers II****Storage codes - coding rate and repair locality**

Henk D.L. Hollmann (Nanyang Technological University, Singapore)  
pp. 830-834

**Two Dimensional-IP Routing**

Mingwei Xu (Tsinghua University, P.R. China); Shu Yang (University of Tsinghua, P.R. China); Dan Wang (The Hong Kong Polytechnic University, Hong Kong); Jianping Wu (Tsinghua University, P.R. China)  
pp. 835-839

**Polar Codes for Data Storage Applications**

Gabi Sarkis (McGill University, Canada); Warren Gross (McGill University, Canada)  
pp. 840-844

**Resilient and Efficient MANET Aerial Communications for Search and Rescue Applications**

William H. Robinson (Vanderbilt University, USA); Adrian Lauf (University of Louisville, USA)  
pp. 845-849

**ISA: Internet Services and Applications****Storage Replication in Information-Centric Networking**

Paris Flegkas (University of Thessaly, Greece); Vasilis Sourlas (University of Thessaly & CERTH-ITI, Greece); George Parisis (University of Cambridge, United Kingdom); Dirk Trossen (University of Cambridge, United Kingdom)

**Efficient Real-time Information Delivery in Future Internet Publish-Subscribe Networks**

Christos Tsilopoulos (Athens University of Economics and Business, Greece); Ioannis Gasparis (Athens University of Economics and Business, Greece); George Xylomenos (Athens University of Economics and Business, Greece); George C. Polyzos (Athens University of Economics and Business, Greece)

pp. 856-860

**Characterizing Throughput Bottlenecks for Secure GridFTP Transfers**

Gayane Vardoyan (The Computation Institute at UChicago and Argonne National Labs, USA); Rajkumar Kettimuthu (Argonne National Lab, USA); Michael Link (Argonne National Laboratory, USA); Steve Tuecke (Deputy Director at The University of Chicago's Computation Institute, USA)

pp. 861-866

**A Highly-Extensible Architecture for Networked I/O**

Cynthia B Taylor (Oberlin College, USA); Joseph Pasquale (University of California, San Diego, USA)

pp. 867-871

**Reducing P2PSIP Session Setup Delays**

Jouni Mäenpää (Ericsson, Finland)

pp. 872-878

**SESAME: Smartphone Enabled Secure Access to Multiple Entities**

Ameya M Sanzgiri (University at Buffalo, USA); Anandatirtha Nandugudi (University at Buffalo, USA); Shambhu Upadhyaya (University at Buffalo, USA); Chunming Qiao (State University of New York at Buffalo, USA)

pp. 879-883

## WN II: Wireless Networks II

**An Efficient Algorithm to Optimize Interference and System Capacity for Cognitive Wireless Networks**

Manish Wadhwa (South University - Virginia Beach, USA); Min Song (The University of Toledo, USA); ChunSheng Xin (Norfolk State University, USA); Komalpreet Kaur (Old Dominion University, USA)

pp. 884-889

**Fairness Issue in Message Delivery in Delay- and Disruption-Tolerant Networks for Disaster Areas**

Asato Takahashi (Tohoku University, Japan); Hiroki Nishiyama (Tohoku University, Japan); Nei Kato (Tohoku University, Japan)

pp. 890-894

**Architecture and Protocols for LTE-based Device to Device Communication**

Balaji Raghothaman (InterDigital, USA); Eric Deng (InterDigital, USA); Ravikumar Pragada (InterDigital, USA); Gregory Sternberg (InterDigital Communications Corp., USA); Tao Deng (Interdigital, USA); Kiran Vanganuru (Intel, USA)

pp. 895-899

**A MAC Protocol for Wireless Personal Area Networks**

Gang Ding (Qualcomm, USA); Richard Farley (Qualcomm, Inc., USA)

pp. 900-904

**Mechanisms for Coexistence of Collocated WLAN and Bluetooth in the Same Device**

Ariton Xhafa (Texas Instruments Inc., USA); Yanjun Sun (Texas Instruments, USA)

pp. 905-910

**A Stackelberg Game for Cooperative Cognitive Radio Network with Active SUs**

Heejun Roh (Korea University, Korea); Cheoulhoon Jung (Korea University, Korea); Wonjun Lee (Korea University, Korea); Ding-Zhu Du (University of Texas, Dallas, USA)

pp. 911-915

## **Keynote Talk: Analytical and Experimental Methods for High-Performance Network Testing**

Speaker: Nageswara S. V. Rao, Corporate Fellow, Oak Ridge National Laboratory

## **Qualcomm Distinguished Lecture VI: Characterizing and Leveraging People Movement in Mobile Networks**

Speaker: Klara Nahrstedt, Professor, University of Illinois, Urbana-Champaign, USA

## **CQSM: Communication QoS and System Modeling**

### ***Caching for IPTV distribution with time-shift***

Henrik Abrahamsson (SICS, Sweden); Mats Björkman (Malardalen University, Sweden)  
pp. 916-921

### ***Enhanced Measurement-Based Admission Control for Flow-Aware Networks***

Robert Wójcik (AGH University of Science and Technology, Poland); Jerzy Domżała (AGH University of Science and Technology, Poland); Andrzej Jajszczyk (AGH University of Science and Technology, Poland)  
pp. 922-926

### ***Monitoring VoIP Call Quality Using Improved Simplified E-model***

Haytham Assem (NUI Maynooth, Ireland); David Malone (NUI Maynooth, Ireland); Jonathan Dunne (Systems and Performance Engineering, IBM Dublin, Software Lab, Ireland); Pat O'Sullivan (Systems and Performance Engineering, IBM Dublin, Software Lab, Ireland)  
pp. 927-931

### ***Assessment of speech quality degradation indicators for "continuity" dimension in super wideband telephony context***

Sibiri Tiemounou (Rennes 1 University & France Telecom, France); Régine Le Bouquin Jeannès (University of Rennes 1, France); Vincent Barriac (France Télécom, France)  
pp. 932-936

### ***Practical Multipath Load Balancing with QoS***

Brad Smith (University of California, Santa Cruz, USA); Lincoln Thurlow (University of California Santa Cruz, USA)  
pp. 937-943

### ***A Deterministic Loss Model Based Analysis of CUBIC***

Rodolfo Ignacio Ledesma Goyzueta (State University of New York - Binghamton, USA); Yu Chen (Binghamton University, USA)  
pp. 944-949

## **DTSA: Data Storage Technology and Applications**

### ***Design of LDPC Coding Schemes for Exploitation of Bit Error Rate Diversity across Dies in NAND Flash Memory***

Ravi Hiranand Motwani (Intel Corporation, USA); Chong Ong (Intel Corporation, USA)  
pp. 950-954

### ***Effective Cache Management and Performance Limits in Information-Centric Networks***

Vasilis Sourlas (University of Thessaly & CERTH-ITI, Greece); Leandros Tassiulas (University of Thessaly, Greece)  
pp. 955-960

### ***Modulation Coding for Flash Memories***

Yongjune Kim (Carnegie Mellon University, USA); Kyoung Lae Cho (Samsung Electronics, Korea); Hongrak Son (Samsung Electronics, Korea); Jaehong Kim (Samsung Electronics, Korea); Jun Jin Kong (Samsung Electronics Co., Ltd., Korea); Jaejin Lee (Soongsil University, Korea); B. V. K. Vijaya Kumar (Carnegie Mellon University, USA)  
pp. 961-967

***Storage and Network Resource Usage in Reactive and Proactive Replicated Storage Systems***

Rossana Motta (University of California, San Diego, USA); Joseph Pasquale (University of California, San Diego, USA)  
pp. 968-972

***LCS-MANET: A Mobile Storage Architecture with Location Centric Storage Algorithm in MANETs***

Shuai Zhao (Peking University, P.R. China); Le Chang (Peking University, P.R. China); Tong Zhao (Peking University, P.R. China); Wei Yan (Peking University, P.R. China)  
pp. 973-977

***Simple, Exact Placement of Data in Containers***

Thomas J.E. Schwarz (Universidad Catolica del Uruguay, Uruguay); Ignacio Corderi (UCSC, USA); Darrell Long (University of California at Santa Cruz, USA); Jehan-Francois Pâris (University of Houston, USA)  
pp. 978-982

**WC III: Wireless Communications III*****Performance Analysis of Hierarchical Selection Diversity Combining in Rayleigh Fading***

Sebastien Roy (University of Sherbrooke, Canada)  
pp. 983-987

***Turbo equalization of Precoded Collaborative MIMO for the Uplink of LTE-advanced***

Karim A. Banawan (Alexandria University, Egypt); Essam Sourour (Alexandria University, Egypt)  
pp. 988-993

***QoS-Aware Discrete Bit Loading for OFDMA Networks***

Aireza Sani (University of Tehran, Iran); Aliazam Abbasfar (University of Tehran, Iran)  
pp. 994-998

***A Queueing Theoretic Model For Opportunistic Network Coding***

J T Charith Gunasekara (University of Manitoba, Canada); Attahiru S. Alfa (University of Manitoba, Canada); Pradeepa Yahampath (University of Manitoba, Canada)  
pp. 999-1004

***Performance of Cooperative Relaying with Adaptive Modulation and Selection Combining***

Wei Song (University of New Brunswick, Canada); Peijian Ju (University of New Brunswick, Canada); Dizhi Zhou (University of New Brunswick, Canada)  
pp. 1005-1009

***Energy Balanced Chain in IEEE 802.15.4 Low Rate WPAN***

Kunjie Xu (University of Pittsburgh, USA); Mu Zhou (Chongqing University of Posts and Telecommunications & Chongqing Municipal Key Laboratory of Mobile Communications, P.R. China)  
pp. 1010-1015

**Plenary Talk: Vehicle Cloud Computing**

Speaker: Mario Gerla, Professor, University of California, Los Angeles, USA

**Invited Papers III*****Survivable Cloud Networking Services***

Feng Gu (University of New Mexico, USA); Hamed Alazemi (Kuwait University, Kuwait); Ammar Rayes (Cisco / San Jose State University, USA); Nasir Ghani (University of New Mexico, USA)  
pp. 1016-1020

***System Resilience Modeling and Enhancement for the Cloud***

Manghui Tu (Purdue University Calumet, USA); Dianxiang Xu (Dakota State University, USA)  
pp. 1021-1025

***Cross-Layer Detection of Stealthy Jammers in Multihop Cognitive Radio Networks***

Lijun Qian (Prairie View A&M University, USA); Xiangfang Li (Texas A&M University, USA); Shuangqing Wei (Louisiana State University, USA)

## NAPE: Network Algorithm & Performance Evaluation

### **Packet-Pair Sizing for Controlling Packet Dispersion on Wired Heterogeneous Networks**

Khondaker M. Salehin (New Jersey Institute of Technology, USA); Roberto Rojas-Cessa (New Jersey Institute of Technology, USA)  
pp. 1031-1035

### **Stability metrics and criteria for path-vector routing**

Dimitri Papadimitriou (Alcatel-Lucent Bell & UGent, Belgium); Albert Cabellos-Aparicio (Universitat Politècnica de Catalunya, Spain); Florin Coras (Universitat Politècnica de Catalunya (UPC), Spain)  
pp. 1036-1042

### **Uncovering the evolution from finite to infinite high-priority capacity in a priority queue**

Joris Walraevens (Ghent University - UGent, Belgium); Thomas Demoor (Ghent University, Belgium); Dieter Fiems (Ghent University, Belgium); Herwig Bruneel (Ghent University & Department of Telecommunications and Information Processing, Belgium)  
pp. 1043-1047

### **TCP-FITDC: An Adaptive Approach to TCP Incast Avoidance for Data Center Applications**

Jun Zhang (Tsinghua University, P.R. China); Jiangtao Wen (Tsinghua University, P.R. China); Jingyuan Wang (Beihang University, P.R. China); Wenlai Zhao (Tsinghua University, P.R. China)  
pp. 1048-1052

### **Analysis of Adaptive Queueing Policies via Adiabatic Approach**

Leena Zacharias (Broadcom Corporation, USA); Thinh Nguyen (Oregon State, USA); Yevgeniy Kovchegov (Oregon State University, USA); Kyle Bradford (Oregon State University, USA)  
pp. 1053-1057

### **Filtering Network Traffic Based on Protocol Encapsulation Rules**

Ivano Cerrato (Politecnico di Torino, Italy); Marco Leogrande (Politecnico di Torino, Italy); Fulvio Risso (Politecnico di Torino, Italy)  
pp. 1058-1063

## WNA: Wireless Networks Applications

### **A Quality of Experience Handover System for Heterogeneous Multimedia Wireless Networks**

Eduardo Cerqueira (Federal University of Para & UFPA, Brazil); Carlos Quadros (Federal University of Para, Brazil); Augusto Jose Venancio Neto, Ph. D. (Universidade Federal do Rio Grande do Norte & Centro de Ciências Exatas da Terra, Brazil); André Riker (University of Coimbra, Portugal); Roger Immich (University of Coimbra, Portugal); Marilia Curado (University of Coimbra, Portugal); Antonio Pescapé (University of Napoli Federico II, Italy)  
pp. 1064-1068

### **A Novel Optical Wireless MIMO Architecture and Its Application**

Mingbo Niu (University of British Columbia, Canada); Julian Cheng (University of British Columbia, Canada); Jonathan F Holzman (University of British Columbia (UBC) Okanagan, Canada)  
pp. 1069-1073

### **Multi-Objective QoS Routing for Wireless Sensor Networks**

Hind Alwan (University, Canada); Anjali Agarwal (Concordia University, Canada)  
pp. 1074-1079

### **Multiple Packet Reception in Asynchronous Wireless Networks**

Antonios Argyriou (University of Thessaly & CERTH, Greece)  
pp. 1080-1084

### **On Optimal Input Design and Model Selection for Communication Channels**

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Shu-Ching Chen, Professor, Florida International University, USA

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S. J. Ben Yoo (University of California, Davis, USA); Yawei Yin (University of California, Davis, USA); Roberto Proietti (University of California, Davis, USA)  
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Juzi Zhao (The George Washington University, USA); Suresh Subramaniam (The George Washington University, USA); Maite Brandt-Pearce (University of Virginia, USA)  
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**Spatio-temporal Analysis for Smart Grids with Wind Generation Integration**

Miao He (Arizona State University, USA); Lei Yang (Arizona State University, USA); Junshan Zhang (Arizona State University, USA); Vijay Vittal (Ira A. Fulton Chair, USA)  
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Yu-Ting Yu (University of California, Los Angeles, USA); Raheleh B Dilmaghani (IBM T. J. Watson Research Lab & University of California, San Diego, USA); Seraphin B Calo (IBM Research, USA); M. Y. Sanadidi (University of California, Los Angeles, USA); Mario Gerla (University of California at Los Angeles, USA)  
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Mario Gerla (University of California at Los Angeles, USA); Jui-Ting Weng (University of California, Los Angeles, USA); Giovanni Pau (UCLA, USA)  
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**NRQS: Network Routing, QoS and Security****SenSec: Mobile Security Through Passive Sensing**

Jiang Zhu (Carnegie Mellon University, USA); Pang Wu (Carnegie Mellon University, USA); Xiao Wang (Carnegie Mellon University, USA); Joy Zhang (Carnegie Mellon University, USA)  
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**Enhancing Dependability in Future Internet Systems by Applying Over-Provisioning Centric Resource Allocation Control**

Sandino Jardim (Federal University of Goias, Brazil); Augusto Jose Venancio Neto, Ph. D. (Universidade Federal do Rio Grande do Norte & Centro de Ciências Exatas da Terra, Brazil); José Castillo Lema (Universidade da Coruña, Spain); Eduardo Cerqueira (Federal University of Para & UFPA, Brazil); Hugo Barros (Federal University of Rio Grande do Norte, Brazil)  
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Sana Tariq (University of Central Florida, USA); Mostafa Bassiouni (University of Central Florida, USA); Guifang Li (University of Central Florida, USA)  
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Jae-Han Lim (University of California, Los Angeles, USA)  
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Nancy Diaa El-Din (Alexandria, Egypt); Essam Sourour (Alexandria University, Egypt); Karim G Seddik (American University in Cairo & Alexandria University, Egypt); Ibrahim Ghaleb (Alexandria University, Egypt)  
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Speaker: Flavio Bonomi, Cisco Fellow, Cisco, USA

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Valentina Pullano (University of Bologna, Italy); Cornelius Hellege (Fraunhofer Institute for Telecommunications - Heinrich-Hertz-Institute, Germany); Manuel Hensel (Fraunhofer Institute for Telecommunications - Heinrich-Hertz-Institute, Germany); Giovanni Emanuele Corazza (University of Bologna, Italy); Thomas Schierl (Fraunhofer HHI, Germany)  
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Speaker: Nei Kato, Professor, Tohoku University, Japan

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Erald Troja (CUNY Graduate Center, USA); Kenneth Ezirim (Graduate Center, City University of New York, USA); Shamik Sengupta (John Jay College of Criminal Justice, City University of New York (CUNY), USA); Michael Hannon (John Jay College, USA)  
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Kenneth Ezirim (Graduate Center, City University of New York, USA); Shamik Sengupta (John Jay College of Criminal Justice, City University of New York (CUNY), USA); Erald Troja (CUNY Graduate Center, USA)  
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Soma Bandyopadhyay (TATA Consultancy Services, India); Abhijan Bhattacharyya (Tata Consultancy Services Ltd., India)  
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Speaker: P. R. Kumar, Professor and College of Engineering Chair in Computer Engineering, Texas A&M University, USA

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Speaker: Charles Elkan, Professor, University of California, San Diego, USA

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***An Initial Study of DSA Cost and Capacity Trades under Imperfect Awareness***

Todd Martin (George Mason University & Science and Technology Associates, Inc., USA); Kuochu Chang (George Mason University, USA)  
pp. 431-436

**Plenary Talk: Strategic Design: Tripling the Spectrum Efficiency**

Speaker: Mihaela van der Schaar, Chancellor's Professor, University of California, Los Angeles, USA

**CLD: Cloud Computing and Networking*****e-Healthcare Cloud Computing Application Solutions***

Wei Liu (Georgia Gwinnett College, USA); Ek Park (CSU-Chico, USA)  
pp. 437-443

***Improved P2P Content Discovery by Exploiting User Social Patterns***

Reza Farahbakhsh (Institut Mines-Telecom, Telecom Sud-Paris & Paris VI, France); Noel Crespi (Institut Mines-Télécom, Télécom SudParis, France); Angel Cuevas (Universidad Carlos III de Madrid, Spain); Neetya Shrestha (Telecom SudParis, France); Mehdi Mani (Institut TELECCOM, Telecom SudParis, France); Poompat Saengudomlert (Asian Institute of Technology, Thailand)  
pp. 444-448

***Cloud-Hosted Key Sharing Towards Secure and Scalable Mobile Applications in Clouds***

Piotr Tysowski (University of Waterloo, Canada); Anwar Hasan (University of Waterloo, Canada)  
pp. 449-455

***DAROS: Distributed User-Server Assignment And Replication For Online Social Networking Applications***

Thuan Duong-Ba (Oregon State University, USA); Thinh Nguyen (Oregon State, USA); Duc A. Tran (University of Massachusetts Boston, USA)  
pp. 456-460

***Somersault Cloud: Toward a cloud-of-clouds Service for Personal Backup***

Huajian Mao (National University of Defense and Technology, P.R. China); Nong Xiao (National University of Defense Technology, P.R. China); Lu Yutong (NUDT, P.R. China); Haifeng Xu (WuLuMuQi General Hospital of LanZhou Military Region, P.R. China)  
pp. 461-464

***Profit Maximization and Power Management of Green Data Centers Supporting Multiple SLAs***

Mahdi Ghamkari (University of California at Riverside, USA); Hamed Mohsenian-Rad (University of California at Riverside, USA)  
pp. 465-469

**SPC: Signal Processing for Communications*****A Low Power 100 Gbps DP-QPSK Receiver Using Analog Domain Signal Processing***

Nandakumar Nambath (Indian Institute of Technology, Bombay, India); Anita Gupta (Bhabha Atomic Research Centre, India); Shalabh Gupta (IIT Bombay, India)  
pp. 470-473

***Novel Fast MUSIC Algorithm for Spectral Estimation with High Subspace Dimension***

Hongting Zhang (Louisiana State University, USA); Hsiao-Chun Wu (Louisiana State University, USA); Shih Yu Chang (National Tsing Hua University of Taiwan, Taiwan)  
pp. 474-478

***Clustered Linear Precoding for Downlink Network MIMO Systems With Partial CSI***

Mehdi Sadeghzadeh (The University of Akron, USA); Hamid Reza Bahrami (The University of Akron, USA); Nghi H Tran (University of Akron, USA)  
pp. 479-483

***Reduced Complexity Super-Trellis Decoding for Convolutionally Encoded Transmission Over ISI-Channels***

Fabian Schuh (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Andreas Schenk (University of Erlangen-Nuremberg, Germany); Johannes Huber (University of Erlangen-Nuremberg, Germany)  
pp. 484-489

***Exact Trigonometric Superfast Inverse Covariance Representations***

Ricardo Merched (Universidade Federal do Rio de Janeiro, Brazil)  
pp. 490-495

***Performance-Complexity Trade-offs of the 2-D Iterative Feedback Signal Detection Algorithm***

Yiming Chen (Western Digital Corporation, USA); Shayan Garani Srinivasa (Indian Institute of Science, India)  
pp. 496-501

**WAHS I: Wireless Ad Hoc and Sensor Networks I*****Channel Capacity Related Power Allocation for distributed Sensor Networks with Application in Object Classification***

Gholamreza Alirezaei (RWTH Aachen University, Germany); Rudolf Mathar (RWTH Aachen University, Germany)  
pp. 502-507

***Ambiguity Resolution in RSS-Based Emitter Geolocation***

Sichun Wang (Communications Research Centre, Industry Canada, Canada); Robert J. Inkol (Defence R&D Canada, Canada); Brad Jackson (Defence R&D Canada, Canada); Shanzeng Guo (Defence R&D Canada, Canada)  
pp. 508-513

***A Novel Socially-Aware Opportunistic Routing Algorithm in Mobile Social Networks***

Gary K. W. Wong (The Hong Kong Institute of Education, Hong Kong); Xiaohua Jia (City University of Hong Kong, Hong Kong)  
pp. 514-518

***On the Optimal Transmission Distance for Power-aware Routing in Ad hoc Networks***

Ahmed E.A.A. Abdulla (Tohoku University, Japan); Zubair Md. Fadlullah (Tohoku University, Japan); Hiroki Nishiyama (Tohoku University, Japan); Nei Kato (Tohoku University, Japan)  
pp. 519-523

***RFID Range Extension with Low-power Wireless Edge Devices***

Li Chen (University of Rochester, USA); He Ba (University of Rochester, USA); Wendi Heinzelman (University of Rochester, USA); Andre Cote (Omni-ID Corporation, USA)  
pp. 524-528

***CTA: a Collaborative Tracking Algorithm in Wireless Sensor Networks***

Ibtissem Boulanouar (LIGM - University Paris-Est, France); Stephane Lohier (University of Paris-Est, France); Abderrezak Rachedi (University Paris-Est Marne-la-Vallée, France); Gilles Roussel (Université Paris-Est, France)  
pp. 529-534

**Plenary Talk: 1000x Capacity Gain by Small Cell Densification**

Speaker: Mehmet Yavuz, Senior Director, Qualcomm, USA

## Invited Position Talks I

### **Dealing with Exponential Growth in Wireless Video**

Jerry D Gibson (University of California, Santa Barbara, USA)

### **PHY-APP Cross-Layer Wireless Video Transmission**

Pamela Cosman (University of California, San Diego, USA)

### **Detection for Two-Dimensional Magnetic Recording Systems**

Seyed Mehrdad Khatami (University of Arizona & Sharif University, USA); Bane Vasić (University of Arizona, USA)  
pp. 535-539

## Invited Papers I

### **Testing Access Control and Obligation Policies**

Dianxiang Xu (Dakota State University, USA); Michael Sanford (Dakota State University, USA);  
Zhaoliang Liu (Dakota State University, USA); Mark Emry (Sioux Falls School District, USA); Brad Brockmueller (Sioux Falls School District, USA); Spencer Johnson (Pomona College, USA); Michael To (Georgia State University, USA)  
pp. 540-544

### **Traffic Classification: Issues and Challenges**

Yibo Xue (Tsinghua university, P.R. China); Dawei Wang (National Computer Network Emergency Response Technical Team / Coordination Center of China, P.R. China); Luoshi Zhang (Harbin University of Science and Technology, P.R. China)  
pp. 545-549

### **Channel Capacity and Soft-Decision Decoding of LDPC Codes for Spin-Torque Transfer Magnetic Random Access Memory (STT-MRAM)**

Kui Cai (Data Storage Institute, Singapore); Zhiliang Qin (Data Storage Institute, Singapore);  
Bingjin Chen (Data Storage Institute, Singapore)  
pp. 550-554

### **QoE Evaluations for Video Streaming over eMBMS**

Utsaw Kumar (University of Notre Dame, USA); Ozgur Oyman (Intel Corporation, USA)  
pp. 555-559

## GCNC: Green Computing, Networking and Communications

### **Energy Saving Improvements in IP Networks Through Table Lookup Bypass in Router Line Cards**

Angelo Coiro (University of Rome "La Sapienza", Italy); Marco Polverini (University "La Sapienza" Roma, Italy); Antonio Cianfrani (University of Roma "La Sapienza", Italy); Marco Listanti (University of Rome "La Sapienza", Italy)  
pp. 560-566

### **A robust optimization approach for energy-aware routing in MPLS networks**

Bernardetta Addis (Università degli Studi di Torino, Italy); Antonio Capone (Politecnico di Milano, Italy); Giuliana Carello (Politecnico di Milano, Italy); Luca Gianoli (Politecnico di Milano & École Polytechnique de Montréal, Canada); Brunilde Sansò (Ecole Polytechnique de Montreal, Canada)  
pp. 567-572

### **Impact of Mobile Transmitter Sources on Radio Frequency Wireless Energy Harvesting**

Antonio Hernandez Coarasa (Northeastern University, Spain); Prusayon Nintanavongsa (Northeastern University, USA); Sugata Sanyal (Tata Institute of Fundamental Research Mumbai, India); Kaushik Chowdhury (Northeastern University, USA)  
pp. 573-577

### **Energy-efficient IPTV Simulcast over Fixed WiMAX Access Systems**

Yi Zhu (Hawaii Pacific University, USA); Xiaofeng Gao (Shanghai Jiao Tong University, P.R. China); Weili Wu (UT Dallas, USA); Jason P. Jue (University of Texas at Dallas, USA)

pp. 578-584

#### **Energy Budget Simulation for Deep Packet Inspection**

Lorenzo Di Gregorio (Intel Mobile Communications GmbH & Lantiq Deutschland GmbH, Germany)  
pp. 585-589

#### **Analysis of Energy Efficiency in Dynamic Optical Networks Employing Solar Energy Sources**

Jiayuan Wang (Technical University of Denmark, Denmark); Anna Manolova Fagertun (Technical University of Denmark, Denmark); Sarah Ruepp (Technical University of Denmark, Denmark); Lars Dittmann (Technical University of Denmark, Denmark)  
pp. 590-593

## **WN I: Wireless Networks I**

#### **Towards 60GHz Wireless Switching Interconnect**

Hars Vardhan (University of Texas at Dallas, USA); Ravi Prakash (University of Texas at Dallas, USA)  
pp. 594-598

#### **Efficient Support for Video Communications in Wireless Home Networks**

Andrea Vesco (Istituto Superiore Mario Boella, Italy); Enrico Masala (Politecnico di Torino, Italy); Riccardo M. Scopigno (Istituto Superiore Mario Boella, Italy)  
pp. 599-604

#### **Study on Real Energy Consumption of Large-scale Campus Wireless Network**

Wenqi Sun (Tsinghua University, P.R. China); Hewu Li (Tsinghua University, P.R. China); Jianping Wu (Tsinghua University, P.R. China)  
pp. 605-609

#### **Protocol Independent Multicast: from Wired to Wireless Networks**

Alessandro Russo (University of Trento, Italy); Renato Lo Cigno (University of Trento, Italy); Izhak Rubin (University of California at Los Angeles, USA)  
pp. 610-615

#### **Novel DCF-based Multi-User MAC Protocol and Dynamic Resource Allocation for OFDMA WLAN Systems**

Takuya Mishima (Osaka University, Japan); Shinichi Miyamoto (Osaka University, Japan); Seiichi Sampei (Osaka University, Japan); Wenjie Jiang (NTT Network Innovation Laboratories, NTT Corporation & Research Engineer, Japan)  
pp. 616-620

## **Keynote Talk: Architecture for High Speed, Large Volume and Low Delay Data Transport Networks**

Speaker: Vincent W. S. Chan, Joan and Irwin Jacobs Professor, MIT, USA

## **Qualcomm Distinguished Lecture V: Emerging topics in LTE-Advanced Networks**

Speaker: Yongbin Wei, Director, Qualcomm, USA

## **CIS II: Communications and Information Security II**

#### **A Hierarchical PCA-based Anomaly Detection**

Tian Biming (Curtin University, Australia); Kathryn E Merrick (University of New South Wales & Australian Defence Force Academy, Australia); Shui Yu (Deakin University, Australia); Jiankun Hu (University of New South Wales, Australia)  
pp. 621-625

#### **HIDEINSIDE - A Novel Randomized & Encrypted Antiforensic Information Hiding**

Avinash Srinivasan (George Mason University, USA); Srinath Thirthahalli Nagaraj (George Mason University, USA); Angelos Stavrou (George Mason University, USA)

**Towards Secure and Context-Aware Information Lookup for the Internet of Things**

Michalis Giannikos (AUEB, Greece); Korina Kokoli (AUEB, Greece); Nikos Fotiou (Mobile Multimedia Lab, Athens University of Economics and Business, Greece); Giannis F. Marias (Athens University of Economics and Business, Greece); George C. Polyzos (Athens University of Economics and Business, Greece)  
pp. 632-636

**Harnessing Many-core Processors for Scalable, Highly Efficient, and Adaptable Firewall Solutions**

Robert E Benner (Sandia National Laboratories, USA); Victor Echeverria (Sandia National Laboratories, USA); Uzoma Onunkwo (Sandia National Lab, USA); Jay Patel (Sandia National Laboratories, USA); David J Zage (Sandia National Laboratories, USA)  
pp. 637-641

**Automated Malware Classification based on Network Behavior**

Saeed Nari (University of New Brunswick, Canada); Ali A. Ghorbani (University of New Brunswick, Canada)  
pp. 642-647

## MCC: Multimedia Computing and Communications

**Intra Frame Constant Rate Control Scheme for High Efficiency Video Coding**

Yimin Zhou (University of Electronic Science and Technology of China, P.R. China); Ling Tian (University of Electronic Science and Technology of China, P.R. China); Xuecheng Ning (University of Electronic Science and Technology of China, P.R. China)  
pp. 648-652

**Mitigating the Asymmetric Interests Among Peers in Peer-to-Peer Video-on-Demand Systems**

Saikat Sarkar (University of Calgary, Canada); Mea Wang (University of Calgary, Canada)  
pp. 653-659

**A New Video Sharing by Communication and Analysis of Region of Interest on Panoramic Video**

Daisuke Ochi (NTT Corporation, Japan); Hideaki Kimata (NTT Corporation, Japan); Hajime Noto (NTT Corporation, Japan); Akira Kojima (Nippon Telegraph and Telephone Corporation, Japan)  
pp. 660-664

**Multi-Source IPTV Networks: Zap Time and Bandwidth Optimization**

Daniel Bailey (University of Oklahoma, USA); Yuh-Rong Chen (University of Oklahoma, USA); Sridhar Radhakrishnan (University of Oklahoma, USA); Suleyman Karabuk (University of Oklahoma, USA)  
pp. 665-670

**Low-Complexity FPGA Implementation of Compressive Sensing Reconstruction**

Jerome Stanislaus (University of Maryland, Baltimore County, USA); Tinoosh Mohsenin (University of Maryland Baltimore County, USA)  
pp. 671-675

**A Novel Scalable Video Streaming System on P2P Networks**

Kai-Lung Hua (National Taiwan University of Science and Technology, Taiwan); Ge-Ming Chiu (National Taiwan University of Science and Technology, Taiwan); Tai-Lin Chin (National Taiwan University of Science and Technology, Taiwan); Hsing-Kuo Pao (National Taiwan University of Science and Technology, Taiwan); Yi-Chi Cheng (Apexx Technology Corp., Taiwan); Guan-Ming Su (Dolby Lab, USA)  
pp. 676-680

## WC II: Wireless Communications II

**Passenger Influence on the Performance of Time Reversal in Intra-Vehicular Environment**

François Bellens (Université Libre de Bruxelles (ULB), Belgium); David Lautru (UniversityParis 06, France); Jean-Michel Dricot (Université Libre de Bruxelles, Belgium); François Horlin (Université Libre de Bruxelles, Belgium); Aziz Benlarbi-Delaï (UPMC University Paris 06, France); Philippe De Doncker (ULB, Belgium)

pp. 681-685

**Relay Selection and Power Allocation in Amplify-and-Forward Cognitive Radio Systems**

Krishna Ram Budhathoki (The University of Akron, USA); Mehdi Maleki (The University of Akron, USA); Hamid Reza Bahrami (The University of Akron, USA)  
pp. 686-690

**Closing the Gap to the Capacity of APSK: Constellation Shaping and Degree Distributions**

Xingyu Xiang (West Virginia University, USA); Matthew Valenti (West Virginia University, USA)  
pp. 691-695

**Exploiting Cross-Layer Packet Overhearing for Opportunistic Distributed STC in Wireless Relay Networks**

Antonios Argyriou (University of Thessaly & CERTH, Greece)  
pp. 696-700

**Optimal Pre-weighting Scheme for Spatially Correlated MIMO-OFDM Wireless System with Subcarrier Cluster Constraint**

John F. An (National Taiwan Ocean University, Taiwan)  
pp. 701-707

**Transmit Precoding based on Outdated Interference Alignment for Two Users Multi Cell MIMO System**

Danish Aziz (Alcatel-Lucent Bell Labs, Germany); Andreas Weber (Alcatel-Lucent, Germany)  
pp. 708-713

## Plenary Talk: Evolution of Digital Video Compression - from Primordial Soup to Homo sapiens

Speaker: Ajay Luthra, Vice President, Motorola Mobility, USA

## COG: Cognitive Computing and Networking

**Effective Capacity Optimization for Cognitive Radio Network Based on Underlay Scheme in Gamma Fading Channels**

Mohamed Elalem (Ryerson Canada, Canada); Lian Zhao (Ryerson University, Canada)  
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**An Improved LFS Engine for Physical Layer Security Augmentation in Cognitive Networks**

Paul Harmer (Air Force Institute of Technology, USA); Michael A Temple (Air Force Institute of Technology, USA)  
pp. 719-723

**Cooperative Resource Allocation in OFDM-Based Multicell Cognitive Radio Systems**

Qianyu Yang (Nanjing University, P.R. China); Shaowei Wang (Nanjing University, P.R. China); Mengyao Ge (Nanjing University, P.R. China)  
pp. 724-728

**A Location-Aided Routing Protocol for Cognitive Radio Networks**

Karim Habak (Egypt-Japan University of Science and Technology, Egypt); Mohammed Abdelatif (Egypt-Japan University of Science and Technology (EJUST), Egypt); Hazem Hagrass (Egypt-Japan University of Science and Technology (EJUST), Egypt); Karim Rizc (Egypt-Japan University of Science and Technology (EJUST), Egypt); Moustafa Youssef (Egypt-Japan University of Science and Technology (EJUST), USA)  
pp. 729-733

**A Priority-aware Channel Selection Scheme for Real-time Data Transmission in Cognitive Radio Networks**

Norooz Motamedi (San Diego State University, USA); Sunil Kumar (San Diego State University, USA); Fei Hu (University of Alabama, USA); Nathaniel W Rowe (Air Force Research Laboratory, USA)  
pp. 734-739

**A Neural Network Approach to Category Validation of Android Applications**

Mo Ghorbanzadeh (Virginia Tech & The Hume Center for National Security and Technology, USA); Yang Chen (Virginia Tech, USA); Kevin Ma (Virginia Tech, USA); T. Charles Clancy (Virginia Tech, USA); Robert McGwier (Virginia Tech, USA)  
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**MCVC: Mobile Computing and Vehicle Communications****Clustering algorithm based on minimal path loss ratio for vehicular communication**

Yamini Harikrishnan (Samsung India Software Operations, India); Jianhua He (Aston University, United Kingdom)  
pp. 745-749

**Practical Provably Secure Key Sharing for Near Field Communication Devices**

Ahmed Elbagori (Alexandria University, Egypt); Ahmed Youssef (Alexandria University, Egypt); Mohamed Elnobi (Alexandria University, Egypt); Moustafa Youssef (Egypt-Japan University of Science and Technology (EJUST), USA)  
pp. 750-755

**MAC and Application-Level Broadcast Reliability in VANETs with Channel Fading**

Xiaomin Ma (Oral Roberts University, USA); Xiaoyan Yin (Duke University, USA); Matthew Wilson (Oral Roberts University, USA); Kishor S. Trivedi (Duke University, USA)  
pp. 756-761

**Near-Optimal Packet Allocation Algorithm for Content Uploading to Media Cloud via Collaborative Wireless Network**

Ge Zhang (Nanyang Technological University, Singapore); Yonggang Wen (Nanyang Technological University, Singapore); Yew Soon Ong (School of Computer Engineering, Nanyang Technological University, Singapore)  
pp. 762-767

**A Node Management Scheme for R2V Connections in RSU-Supported Vehicular Adhoc Networks**

Wen-Hsing Kuo (Yuan Ze University, Taiwan); Yen-Shien Tung (Yuan Ze University, Taiwan); Shih-Hau Fang (Yuan Ze University, Taiwan)  
pp. 768-772

**CAREFOR: Collision-Aware REliable FORwarding Technique for Vehicular Ad hoc Networks**

Anna Maria Vegni (University of ROMA TRE, Italy); Ahmad Mostafa (University of Cincinnati, USA); Dharma P Agrawal (University of Cincinnati, USA)  
pp. 773-777

**WAHS II: Wireless Ad Hoc and Sensor Networks II****EgyHet: An Energy-Saving Routing Protocol for Wireless Heterogeneous Sensor Networks**

Xiao Chen (Texas State University, USA); Zanxun Dai (Texas State University, USA); Hongchi Shi (Texas State University-San Marcos, USA)  
pp. 778-782

**Scheduling Problems in Interference-Aware Wireless Sensor Networks**

Nhat X Lam (University of Texas at Dallas, USA); Min Kyung An (University of Texas at Dallas, USA); Dung Huynh (University of Texas at Dallas, USA); Trac Ngoc Nguyen (Raytheon Systems, USA)  
pp. 783-789

**Scheduled Channel Access Using Geographical Classification**

Ashok N Masilamani (University of California, Santa Cruz, USA); Jj Garcia-Luna-Aceves (University of California at Santa Cruz, USA)  
pp. 790-796

**Measuring the Efficiency of the Sensing Process in a Wireless Sensor Network**

Bryan Larish (Georgia Institute of Technology, USA); George Riley (Georgia Institute of Technology, USA)  
pp. 797-801

**A Realistic and Stable Markov-based Model for WSNs**

Irfan S. Al-Anbagi (School of Electrical Engineering and Computer Science University of Ottawa, Canada); Mounib Khanafer (University of Ottawa, Canada); Hussein T Mouftah (University of Ottawa, Canada)  
pp. 802-807

**HarWSNet: A Co-Simulation Framework for Energy Harvesting Wireless Sensor Networks**

Amine Didioui (CEA/Leti - Minatec & University of Rennes 1, France); Carolyne Bernier (CEA/Leti - Minatec, France); Dominique Morche (CEA Leti, France); Olivier Sentieys (IRISA, University of Rennes 1, France)  
pp. 808-812

**Plenary Talk: Understanding Behavior in a Networked World via Social Media Data**

Speaker: Huan Liu, Professor, Arizona State University, USA

**Invited Position Talks II****Ad-Hoc Networks at Global Scale**

Rene L. Cruz (University of California, San Diego, USA)  
pp. 813-817

**Wireless Network Virtualization**

Xin Wang (University of Pittsburgh, USA); David Tipper (University of Pittsburgh, USA)  
pp. 818-824

**Trends in Survivable/Secure Cognitive Networks**

Erik Blasch (Air Force Research Lab, USA); Timothy Busch (Air Force Research Lab, USA); Sunil Kumar (San Diego State University, USA); Khanh D Pham (The U.S. Air Force Research Laboratory & Space Vehicles Directorate, USA)  
pp. 825-829

**Invited Papers II****Storage codes - coding rate and repair locality**

Henk D.L. Hollmann (Nanyang Technological University, Singapore)  
pp. 830-834

**Two Dimensional-IP Routing**

Mingwei Xu (Tsinghua University, P.R. China); Shu Yang (University of Tsinghua, P.R. China); Dan Wang (The Hong Kong Polytechnic University, Hong Kong); Jianping Wu (Tsinghua University, P.R. China)  
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**Polar Codes for Data Storage Applications**

Gabi Sarkis (McGill University, Canada); Warren Gross (McGill University, Canada)  
pp. 840-844

**Resilient and Efficient MANET Aerial Communications for Search and Rescue Applications**

William H. Robinson (Vanderbilt University, USA); Adrian Lauf (University of Louisville, USA)  
pp. 845-849

**ISA: Internet Services and Applications****Storage Replication in Information-Centric Networking**

Paris Flegkas (University of Thessaly, Greece); Vasilis Sourlas (University of Thessaly & CERTH-ITI, Greece); George Parisis (University of Cambridge, United Kingdom); Dirk Trossen (University of Cambridge, United Kingdom)

**Efficient Real-time Information Delivery in Future Internet Publish-Subscribe Networks**

Christos Tsilopoulos (Athens University of Economics and Business, Greece); Ioannis Gasparis (Athens University of Economics and Business, Greece); George Xylomenos (Athens University of Economics and Business, Greece); George C. Polyzos (Athens University of Economics and Business, Greece)

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**Characterizing Throughput Bottlenecks for Secure GridFTP Transfers**

Gayane Vardoyan (The Computation Institute at UChicago and Argonne National Labs, USA); Rajkumar Kettimuthu (Argonne National Lab, USA); Michael Link (Argonne National Laboratory, USA); Steve Tuecke (Deputy Director at The University of Chicago's Computation Institute, USA)

pp. 861-866

**A Highly-Extensible Architecture for Networked I/O**

Cynthia B Taylor (Oberlin College, USA); Joseph Pasquale (University of California, San Diego, USA)

pp. 867-871

**Reducing P2PSIP Session Setup Delays**

Jouni Mäenpää (Ericsson, Finland)

pp. 872-878

**SESAME: Smartphone Enabled Secure Access to Multiple Entities**

Ameya M Sanzgiri (University at Buffalo, USA); Anandatirtha Nandugudi (University at Buffalo, USA); Shambhu Upadhyaya (University at Buffalo, USA); Chunming Qiao (State University of New York at Buffalo, USA)

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## WN II: Wireless Networks II

**An Efficient Algorithm to Optimize Interference and System Capacity for Cognitive Wireless Networks**

Manish Wadhwa (South University - Virginia Beach, USA); Min Song (The University of Toledo, USA); ChunSheng Xin (Norfolk State University, USA); Komalpreet Kaur (Old Dominion University, USA)

pp. 884-889

**Fairness Issue in Message Delivery in Delay- and Disruption-Tolerant Networks for Disaster Areas**

Asato Takahashi (Tohoku University, Japan); Hiroki Nishiyama (Tohoku University, Japan); Nei Kato (Tohoku University, Japan)

pp. 890-894

**Architecture and Protocols for LTE-based Device to Device Communication**

Balaji Raghothaman (InterDigital, USA); Eric Deng (InterDigital, USA); Ravikumar Pragada (InterDigital, USA); Gregory Sternberg (InterDigital Communications Corp., USA); Tao Deng (Interdigital, USA); Kiran Vanganuru (Intel, USA)

pp. 895-899

**A MAC Protocol for Wireless Personal Area Networks**

Gang Ding (Qualcomm, USA); Richard Farley (Qualcomm, Inc., USA)

pp. 900-904

**Mechanisms for Coexistence of Collocated WLAN and Bluetooth in the Same Device**

Ariton Xhafa (Texas Instruments Inc., USA); Yanjun Sun (Texas Instruments, USA)

pp. 905-910

**A Stackelberg Game for Cooperative Cognitive Radio Network with Active SUs**

Heejun Roh (Korea University, Korea); Cheoulhoon Jung (Korea University, Korea); Wonjun Lee (Korea University, Korea); Ding-Zhu Du (University of Texas, Dallas, USA)

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## **Keynote Talk: Analytical and Experimental Methods for High-Performance Network Testing**

Speaker: Nageswara S. V. Rao, Corporate Fellow, Oak Ridge National Laboratory

## **Qualcomm Distinguished Lecture VI: Characterizing and Leveraging People Movement in Mobile Networks**

Speaker: Klara Nahrstedt, Professor, University of Illinois, Urbana-Champaign, USA

## **CQSM: Communication QoS and System Modeling**

### ***Caching for IPTV distribution with time-shift***

Henrik Abrahamsson (SICS, Sweden); Mats Björkman (Malardalen University, Sweden)  
pp. 916-921

### ***Enhanced Measurement-Based Admission Control for Flow-Aware Networks***

Robert Wójcik (AGH University of Science and Technology, Poland); Jerzy Domżała (AGH University of Science and Technology, Poland); Andrzej Jajszczyk (AGH University of Science and Technology, Poland)  
pp. 922-926

### ***Monitoring VoIP Call Quality Using Improved Simplified E-model***

Haytham Assem (NUI Maynooth, Ireland); David Malone (NUI Maynooth, Ireland); Jonathan Dunne (Systems and Performance Engineering, IBM Dublin, Software Lab, Ireland); Pat O'Sullivan (Systems and Performance Engineering, IBM Dublin, Software Lab, Ireland)  
pp. 927-931

### ***Assessment of speech quality degradation indicators for "continuity" dimension in super wideband telephony context***

Sibiri Tiemounou (Rennes 1 University & France Telecom, France); Régine Le Bouquin Jeannès (University of Rennes 1, France); Vincent Barriac (France Télécom, France)  
pp. 932-936

### ***Practical Multipath Load Balancing with QoS***

Brad Smith (University of California, Santa Cruz, USA); Lincoln Thurlow (University of California Santa Cruz, USA)  
pp. 937-943

### ***A Deterministic Loss Model Based Analysis of CUBIC***

Rodolfo Ignacio Ledesma Goyzueta (State University of New York - Binghamton, USA); Yu Chen (Binghamton University, USA)  
pp. 944-949

## **DTSA: Data Storage Technology and Applications**

### ***Design of LDPC Coding Schemes for Exploitation of Bit Error Rate Diversity across Dies in NAND Flash Memory***

Ravi Hiranand Motwani (Intel Corporation, USA); Chong Ong (Intel Corporation, USA)  
pp. 950-954

### ***Effective Cache Management and Performance Limits in Information-Centric Networks***

Vasilis Sourlas (University of Thessaly & CERTH-ITI, Greece); Leandros Tassiulas (University of Thessaly, Greece)  
pp. 955-960

### ***Modulation Coding for Flash Memories***

Yongjune Kim (Carnegie Mellon University, USA); Kyoung Lae Cho (Samsung Electronics, Korea); Hongrak Son (Samsung Electronics, Korea); Jaehong Kim (Samsung Electronics, Korea); Jun Jin Kong (Samsung Electronics Co., Ltd., Korea); Jaejin Lee (Soongsil University, Korea); B. V. K. Vijaya Kumar (Carnegie Mellon University, USA)  
pp. 961-967

***Storage and Network Resource Usage in Reactive and Proactive Replicated Storage Systems***

Rossana Motta (University of California, San Diego, USA); Joseph Pasquale (University of California, San Diego, USA)  
pp. 968-972

***LCS-MANET: A Mobile Storage Architecture with Location Centric Storage Algorithm in MANETs***

Shuai Zhao (Peking University, P.R. China); Le Chang (Peking University, P.R. China); Tong Zhao (Peking University, P.R. China); Wei Yan (Peking University, P.R. China)  
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***Simple, Exact Placement of Data in Containers***

Thomas J.E. Schwarz (Universidad Catolica del Uruguay, Uruguay); Ignacio Corderi (UCSC, USA); Darrell Long (University of California at Santa Cruz, USA); Jehan-Francois Pâris (University of Houston, USA)  
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**WC III: Wireless Communications III*****Performance Analysis of Hierarchical Selection Diversity Combining in Rayleigh Fading***

Sebastien Roy (University of Sherbrooke, Canada)  
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***Turbo equalization of Precoded Collaborative MIMO for the Uplink of LTE-advanced***

Karim A. Banawan (Alexandria University, Egypt); Essam Sourour (Alexandria University, Egypt)  
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***QoS-Aware Discrete Bit Loading for OFDMA Networks***

Aireza Sani (University of Tehran, Iran); Aliazam Abbasfar (University of Tehran, Iran)  
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***A Queueing Theoretic Model For Opportunistic Network Coding***

J T Charith Gunasekara (University of Manitoba, Canada); Attahiru S. Alfa (University of Manitoba, Canada); Pradeepa Yahampath (University of Manitoba, Canada)  
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***Performance of Cooperative Relaying with Adaptive Modulation and Selection Combining***

Wei Song (University of New Brunswick, Canada); Peijian Ju (University of New Brunswick, Canada); Dizhi Zhou (University of New Brunswick, Canada)  
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***Energy Balanced Chain in IEEE 802.15.4 Low Rate WPAN***

Kunjie Xu (University of Pittsburgh, USA); Mu Zhou (Chongqing University of Posts and Telecommunications & Chongqing Municipal Key Laboratory of Mobile Communications, P.R. China)  
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**Plenary Talk: Vehicle Cloud Computing**

Speaker: Mario Gerla, Professor, University of California, Los Angeles, USA

**Invited Papers III*****Survivable Cloud Networking Services***

Feng Gu (University of New Mexico, USA); Hamed Alazemi (Kuwait University, Kuwait); Ammar Rayes (Cisco / San Jose State University, USA); Nasir Ghani (University of New Mexico, USA)  
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***System Resilience Modeling and Enhancement for the Cloud***

Manghui Tu (Purdue University Calumet, USA); Dianxiang Xu (Dakota State University, USA)  
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***Cross-Layer Detection of Stealthy Jammers in Multihop Cognitive Radio Networks***

Lijun Qian (Prairie View A&M University, USA); Xiangfang Li (Texas A&M University, USA); Shuangqing Wei (Louisiana State University, USA)

## NAPE: Network Algorithm & Performance Evaluation

### **Packet-Pair Sizing for Controlling Packet Dispersion on Wired Heterogeneous Networks**

Khondaker M. Salehin (New Jersey Institute of Technology, USA); Roberto Rojas-Cessa (New Jersey Institute of Technology, USA)  
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### **Stability metrics and criteria for path-vector routing**

Dimitri Papadimitriou (Alcatel-Lucent Bell & UGent, Belgium); Albert Cabellos-Aparicio (Universitat Politècnica de Catalunya, Spain); Florin Coras (Universitat Politècnica de Catalunya (UPC), Spain)  
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### **Uncovering the evolution from finite to infinite high-priority capacity in a priority queue**

Joris Walraevens (Ghent University - UGent, Belgium); Thomas Demoor (Ghent University, Belgium); Dieter Fiems (Ghent University, Belgium); Herwig Bruneel (Ghent University & Department of Telecommunications and Information Processing, Belgium)  
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### **TCP-FITDC: An Adaptive Approach to TCP Incast Avoidance for Data Center Applications**

Jun Zhang (Tsinghua University, P.R. China); Jiangtao Wen (Tsinghua University, P.R. China); Jingyuan Wang (Beihang University, P.R. China); Wenlai Zhao (Tsinghua University, P.R. China)  
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### **Analysis of Adaptive Queueing Policies via Adiabatic Approach**

Leena Zacharias (Broadcom Corporation, USA); Thinh Nguyen (Oregon State, USA); Yevgeniy Kovchegov (Oregon State University, USA); Kyle Bradford (Oregon State University, USA)  
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### **Filtering Network Traffic Based on Protocol Encapsulation Rules**

Ivano Cerrato (Politecnico di Torino, Italy); Marco Leogrande (Politecnico di Torino, Italy); Fulvio Risso (Politecnico di Torino, Italy)  
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## WNA: Wireless Networks Applications

### **A Quality of Experience Handover System for Heterogeneous Multimedia Wireless Networks**

Eduardo Cerqueira (Federal University of Para & UFPA, Brazil); Carlos Quadros (Federal University of Para, Brazil); Augusto Jose Venancio Neto, Ph. D. (Universidade Federal do Rio Grande do Norte & Centro de Ciências Exatas da Terra, Brazil); André Riker (University of Coimbra, Portugal); Roger Immich (University of Coimbra, Portugal); Marilia Curado (University of Coimbra, Portugal); Antonio Pescapé (University of Napoli Federico II, Italy)  
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### **A Novel Optical Wireless MIMO Architecture and Its Application**

Mingbo Niu (University of British Columbia, Canada); Julian Cheng (University of British Columbia, Canada); Jonathan F Holzman (University of British Columbia (UBC) Okanagan, Canada)  
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### **Multi-Objective QoS Routing for Wireless Sensor Networks**

Hind Alwan (University, Canada); Anjali Agarwal (Concordia University, Canada)  
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### **Multiple Packet Reception in Asynchronous Wireless Networks**

Antonios Argyriou (University of Thessaly & CERTH, Greece)  
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### **On Optimal Input Design and Model Selection for Communication Channels**

Yanyan Li (University of Tennessee, USA); Seddik M. Djouadi (University of Tennessee, USA); Mohammed M. Olama (Oak Ridge National Laboratory, USA)  
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**An Efficient Hybrid Model and Dynamic Performance Analysis for Multihop Wireless Networks**

Kunjie Xu (University of Pittsburgh, USA); David Tipper (University of Pittsburgh, USA); Prashant Krishnamurthy (University of Pittsburgh, USA); Yi Qian (University of Nebraska-Lincoln, USA)  
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**Plenary Talk: Research and Challenges of Multimedia Data Management and Computing**

Shu-Ching Chen, Professor, Florida International University, USA

**Invited Position Talks III****Elastic Optical Networking and Low-Latency High-Radix Optical Switches for Future Cloud Computing**

S. J. Ben Yoo (University of California, Davis, USA); Yawei Yin (University of California, Davis, USA); Roberto Proietti (University of California, Davis, USA)  
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**Inter-domain QoT-aware RWA for Translucent Optical Networks**

Juzi Zhao (The George Washington University, USA); Suresh Subramaniam (The George Washington University, USA); Maite Brandt-Pearce (University of Virginia, USA)  
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**Spatio-temporal Analysis for Smart Grids with Wind Generation Integration**

Miao He (Arizona State University, USA); Lei Yang (Arizona State University, USA); Junshan Zhang (Arizona State University, USA); Vijay Vittal (Ira A. Fulton Chair, USA)  
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**Towards An Enterprise Self-healing System against Botnets Attacks**

Adeeb Alhomoud (University of Bradford, United Kingdom); Irfan Awan (University of Bradford, United Kingdom); Jules Ferdinand Pagna Disso, de Muila (EADS Innovations Works, United Kingdom)  
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**Invited Papers IV****Interest Propagation In Named Data MANETs**

Yu-Ting Yu (University of California, Los Angeles, USA); Raheleh B Dilmaghani (IBM T. J. Watson Research Lab & University of California, San Diego, USA); Seraphin B Calo (IBM Research, USA); M. Y. Sanadidi (University of California, Los Angeles, USA); Mario Gerla (University of California at Los Angeles, USA)  
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**Pics-On-Wheels: Photo Surveillance in the Vehicular Cloud**

Mario Gerla (University of California at Los Angeles, USA); Jui-Ting Weng (University of California, Los Angeles, USA); Giovanni Pau (UCLA, USA)  
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**NRQS: Network Routing, QoS and Security****SenSec: Mobile Security Through Passive Sensing**

Jiang Zhu (Carnegie Mellon University, USA); Pang Wu (Carnegie Mellon University, USA); Xiao Wang (Carnegie Mellon University, USA); Joy Zhang (Carnegie Mellon University, USA)  
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**Enhancing Dependability in Future Internet Systems by Applying Over-Provisioning Centric Resource Allocation Control**

Sandino Jardim (Federal University of Goias, Brazil); Augusto Jose Venancio Neto, Ph. D. (Universidade Federal do Rio Grande do Norte & Centro de Ciências Exatas da Terra, Brazil); José Castillo Lema (Universidade da Coruña, Spain); Eduardo Cerqueira (Federal University of Para & UFPA, Brazil); Hugo Barros (Federal University of Rio Grande do Norte, Brazil)  
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**Multiple Object Tracking in Sensor Networks using Distributed Clique Finding**

Nauman Javed (University of Massachusetts, USA); Tilman Wolf (University of Massachusetts, USA)  
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**Improving Fairness of OBS Routing Protocols in Multimode Fiber Networks**

Sana Tariq (University of Central Florida, USA); Mostafa Bassiouni (University of Central Florida, USA); Guifang Li (University of Central Florida, USA)  
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**ROUTE-O-MATIC: A Comprehensive Framework for Reactive Mesh Routing Protocols**

Mohamad Sbeiti (Dortmund University of Technology, Germany); Carsten Vogel (Dortmund University of Technology, Germany); Andreas Wolff (TU Dortmund University, Germany); Christian Wietfeld (TU Dortmund University & Communication Networks Institute, Germany)  
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**Interplay Between TVWS and DSRC: Optimal Strategy for QoS of Safety Message Dissemination in VANET**

Jae-Han Lim (University of California, Los Angeles, USA)  
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## WN III: Wireless Networks III

**Coordinated Partial Co-Channel Deployment in Two-Layer Networks**

Nancy Diaa El-Din (Alexandria, Egypt); Essam Sourour (Alexandria University, Egypt); Karim G Seddik (American University in Cairo & Alexandria University, Egypt); Ibrahim Ghaleb (Alexandria University, Egypt)  
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**Rate Adaptation based on Inherent Frame Delivery Ratio for Wireless Networks**

ChaoYi Bian (Peking University, P.R. China); Shanbo Lu (Peking University, P.R. China); Tong Zhao (Peking University, P.R. China); XiaoMing Li (Peking University, P.R. China); Wei Yan (Peking University, P.R. China)  
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**Throughput Enabled Rate Adaptation in Wireless Networks**

Duy D Nguyen (University of California, Santa Cruz, USA); Jj Garcia-Luna-Aceves (University of California at Santa Cruz, USA); Cedric Westphal (Huawei Innovation Center, USA)  
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**Optimal Density and Power Allocation of D2D Communication Under Heterogeneous Networks on Multi-Bands with Outage Constraints**

Ziyang Liu (Beijing University of Post and Telecommunication, P.R. China); Hao Chen (Beijing University of Posts and Telecommunications, P.R. China); Tao Peng (Beijing University of Posts & Telecommunications, P.R. China); Wenbo Wang (Beijing University of Posts and Telecommunications, P.R. China)  
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**Rate Selection Analysis under Semi-Persistent Scheduling in LTE Networks**

Donald Parruca (RWTH Aachen University, Germany); James Gross (Royal Institute of Technology (KTH), Sweden)  
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