

The Eighteenth Wireless and Optical Communications Conference

May 1 – 2, 2009, NJIT, Newark, New Jersey, USA

Converging Broadband Communications

The 18th Annual Wireless and Optical Communications Conference (WOCC) will bring together technical experts and business leaders from the North America and Pacific Rim to discuss multimedia, optical, networking, and wireless communications technologies and business opportunities. The theme of WOCC 2009 is “Converging Broadband Communications” over public mobile wireless networks, public fixed broadband wireline networks, and private customer premises networks. The integration of these three networks is the focus of a new next-generation network providing convergent user-centric services that are no longer associated with the types of network access or content media. Instead, these convergent user-centric services will offer seamless delivery of multimedia applications including voice, data, image, and streaming video independent of any access technologies. The transport layer protocol is converging on Internet Protocol that propelled the growth of the world wide web. The network and service providers will need to deploy standard-compliant converged networks and offer these new value-added services to save operational cost and grow their revenue. Convergent Communications can truly be considered as the enabler for the next phase of growth for the telecommunication industry.

Welcome Message

On behalf of the Wireless and Optical Communications Conference (WOCC) Planning Committee, we welcome you to its 18th annual conference, WOCC 2009. Attracting researchers from industries as well as universities, WOCC has become a major event for telecommunications professionals in both the U.S. and the Asia-Pacific region. The conference provides an excellent forum and opportunity for presenting research results, exchanging new ideas, and networking among telecommunications professionals.

The theme of this year’s conference is “Converging Broadband Communications”, highlighting the advances and potentials of high-speed Internet services and applications over both mobile and fixed broadband networks. Technical issues and challenges range from wireless transmissions, distributions through optical channels, multimedia services, to network control and management.

WOCC 2009 features two keynote speeches, “Software Defined and Cognitive RF and Optical Communications” by Dr. J. Mitola of Stevens Institute of Technology and “Wireless Network Architecture: Where We Are, and Where We Should Be” by Dr. S. Corson of Qualcomm Flarion Technologies. Over sixty-five papers, covering topics in wireless communications, optical communications, network systems, and multimedia technologies, will be presented at technical sessions. The conference will offer two tutorials, addressing 4G wireless and wireless security. We hope your participation in WOCC 2009 is a productive and rewarding experience and thank you for your participation and contribution in making WOCC 2009 a successful conference.

Conference Chair

Junyi Li

Vice President

Qualcomm Flarion Technologies



Junyi Li is a Vice President of Technology at Qualcomm Flarion Technologies, responsible for conceptualizing and developing next-generation wireless networking solutions. He was a key inventor of Flash-OFDM and a founding member of Flarion Technologies. He holds over 60 U.S. patents and has more than 200 pending patent applications. He has a Ph.D. degree in E.E. from Purdue University and an MBA from the Wharton School at University of Pennsylvania.

Conference Organizer

Yu-Dong Yao

Associate Professor

*Department Chair of ECE
Stevens Institute of Technology*



Yu-Dong Yao is an Associate Professor and Department Chair of Electrical and Computer Engineering at Stevens Institute of Technology. He previously worked for Qualcomm Inc. and Spar Aerospace Ltd. He holds one Chinese patent and eleven U.S. patents. He received the Ph.D. degree in electrical engineering from Southeast University, Nanjing, China, in 1988.

Keynote Speeches

Software Defined and Cognitive RF and Optical Communications

Joseph Mitola, III

*Vice President
Stevens Institute of Technology*



Software radio provided the platform for dynamic spectrum, which are the near-term PHY-MAC layer opportunities for cognitive radio, software radios with embedded sensing and computational intelligence. Dr. Mitola wrote the seminal technical papers on architecture for both of these innovations. In his WOCC keynote address, he will look forward to greater integration of RF and optical wireless modalities, including an optical Universal Software Radio Peripheral, optical communications surfaces in lieu of large lenses, and policy languages that integrate across all of the wireless modalities from HF through optical communications.

BIOGRAPHY

Dr. Joe Mitola is Distinguished Professor in the Charles V. Schafer School of Engineering and Science and in the School of Systems and Enterprises at Stevens Institute of Technology where his research interests include software defined and cognitive radio and the scaling up of cognition technologies to the enterprise level. Previously, Dr. Mitola was Chief Scientist of the DoD Federally Funded R&D Center of The MITRE Corporation; special assistant to the Director, DARPA; program manager at DARPA; and Chief Scientist of Electronic Systems of E-Systems (now Raytheon). He holds the BS in EE from Northeastern University, the MSE from the Johns Hopkins University; and the Licentiate and Doctorate in Teleinformatics from KTH, The Royal Institute of Technology, Stockholm.

Wireless Network Architecture: Where We Are, and Where We Should Be

Scott Corson

*Vice President
Qualcomm Flarion Technologies*



The wireless industry continues to expand and prosper. Licensed and unlicensed technologies continue to proliferate, as do the numbers and types of devices that incorporate them. As capacity increases, “always on” Internet connectivity is becoming increasingly affordable. Riding atop this technological sea-change is a constantly evolving set of innovative Internet services. Yet, despite the rapid pace of change in many aspects of the industry, the underlying cellular network architecture remains remarkably the same today as it was 20 years ago. Is this a good or bad thing? We will explore this question, commenting on the present state of wireless architecture and positing a possible future direction.

BIOGRAPHY

Dr. Scott Corson is a Vice President of Engineering at Qualcomm Flarion Technologies. Prior to joining Qualcomm, Dr. Corson was Chief Network Architect at Flarion Technologies, where he was responsible for the design of the Flash-OFDM IP-based Cellular Network Architecture. He was previously on the faculties of the Universities of Illinois and Maryland, and was a consulting network architect for British Telecom working on the design of a Fixed/Mobile-Converged IP network architecture. He is active in the IETF, and co-founded the IETF Mobile Ad hoc Networks (manet) Working Group, a body chartered to standardize mobile routing technology for networks of wireless routers.

Tutorials

FREE to All Attendees

4G Mobile Telecommunications Systems and Standards

Dr. Raziq Yaqub

*Executive Director
Toshiba America Research, Inc.*



The talk will be in four parts: Part-1 will be a brief introduction to the Evolution of Wireless Technologies from 1st Generation through 4th Generation. Part-2 will cover some IEEE-based efforts towards 4G that include 802.16e and 802.16m. Part-3 will mainly focus on 3GPP and 3GPP2-based efforts in the standardization of 4G mobile telecommunications systems. It will include objectives of LTE (Long Term Evolution) and SAE (System Architecture Evolution). Part-4 will provide network deployment strategies, market drivers, opportunities, and challenges of 4G. Depending on time the talk may also lay out the LTE timeline, operators' strategies, and the migration plans. This talk will be semi-technical so that the audience from diversified backgrounds can grasp the overall picture, of how cellular technologies are advancing, and what lies ahead for cellular communications.

Data Forensics and Network Security

Yun-Qing Shi, Yanchao Zhang and Grace Wang

New Jersey Institute of Technology



In our digital age, digital media have been being massively produced, easily manipulated, and swiftly transmitted to almost anywhere in the world at anytime by the wired backbone networks and wireless access networks. While the great convenience has been appreciated, information assurance has become an urgent and critical issue faced by the digital world. The securities must be addressed by different parties involved in the handling of the digital media. On the data side, many security primitives such as encryption, digital signature, and keyed hash can be applied so that so that data integrity and confidentiality can be assured. On the network side, the access to the network must be authenticated so that the network can be secured. In this tutorial, the speakers will introduce to the audience the major issues in both data and network sides and present the latest solutions to these issues.

First is the digital data forensics, which gathers evidence of data composition, origin, and history. The data hiding, cryptography, and combination of both have been shown not sufficient in many applications. This tutorial addresses the first digit law and its applications to digital forensics.

Second is the intruder identification, which is very important to wireless networks, particularly to wireless sensor networks. In this tutorial, the speakers will give a survey on current countermeasures to packet dropping, introduce existing research on countering packet modification, and present a new scheme which can effectively catch both packet droppers and packet modifiers.

Third is the secure data access to the wireless networks. Secure and privacy issues are the key factors that determine the proper functioning of an unattended sensor network. In this tutorial, the speakers will discuss the latest solutions to the issues in secure data access.

Fundamentals will be introduced to the audience. Latest solutions including examples will be presented to demonstrate the significant advantages of the proposed solutions in data forensics and network securities over the existing methods.

Plenary Speeches

Evolution of Mobile Communications in China: 3G and LTE

Henry Ye
Director, Hong Kong Applied Science and Technology Research Institute



BIOGRAPHY: Dr. Henry Ye got his B.S. from the University of Science and Technology of China, M.S. and Ph.D. degrees from the University of Notre Dame. He joined Bell Labs of Lucent Technologies as a Member of Technical Staff in 1997. He was promoted to be a Distinguished Member of Technical Staff in 2000 and a Consulting Member of Technical Staff in 2006. During his service at Lucent and Alcatel-Lucent, he was the lead baseband modem architect for multiple products including IS95, CDMA2000, HSPA, and LTE. He received the Bell Labs President's Gold Award in 2000 and Silver Award in 2002.

Dr. Ye joined Hong Kong Applied Science and Research Institute in 2008 to lead the R&D activities in OFDM and MIMO technologies with applications in WiFi, WiMAX, and TD-LTE portable devices. His team's prototype work in TD-LTE was invited by four different companies to have joint demonstrations in the 2009 MWC.

Wireless and Fiber: Perfect Together

Stewart D. Personick
NJIT
Member of the National Academy of Engineering



BIOGRAPHY: Dr. Personick was born in Brooklyn NYC, and attended: the Bronx High School of Science, the City College of New York (BEE), and the Massachusetts Institute of Technology (ScD). Upon completing his Doctorate at MIT, he spent 15 years as an individual researcher and as a research manager at: Bell Laboratories, TRW, and Bell Communications Research (Bellcore), working in the field of optical communications technology and applications. In recognition of this work he was elected: a Fellow of the IEEE (1983), a Fellow of the Optical Society of America (1988), and a Member of the U.S. National Academy of Engineering (1992). He received the prestigious IEEE/OSA John Tyndall Award in 2000. Since 1985 he has focused his research and management activities on emerging and next-generation telecommunications systems, technologies, and applications. In February 2008, he joined NJIT as the first Ying Wu Endowed Chair Professor in the NJIT Newark College of Engineering, where he currently is Associate Dean for Research.

The Prospects of Taiwan Telecommunications Industry

Shya-Li Alice Chou
Director, Dept. of Information Services
Taiwan Institute of Economic Research



BIOGRAPHY: Alice Chou graduated from the Chung Yuang University Taiwan in 1979, and received M.S. degree in Computer Science from College of William and Mary Virginia in 1984. Joined Taiwan Institute of Economic Research in 1987, she was a system analyst and in charge of the database development for the R&D projects sponsored by the government. She was also doing the government project called the "Industrial Technology Information Services". After several years she became the chief librarian and managed more than 50 thousands books and periodicals in the library. Started from 1997, Alice was promoted to be the director of Department of Information Services and next year she created a new department, Department of Taiwan Industry & Enterprise Database. Alice now is in charge of several project leaders. She is also the Secretary-General of the Wireless and Information Technology CLUB (WIT CLUB), the association for promoting the 3G and beyond 3G technology development in Taiwan.

An Identifier-based Network Architecture for Pervasive Service

Jianguo Ma
University of Electronic Science and Technology of China



BIOGRAPHY: Dr. Jianguo Ma got his BSc & M.S. from Lanzhou University in 1982 and 1988, and Ph.D. from Duisburg University, Germany. His research areas are: RFICs and MMICs designs and applications; EMC/EMI for wireless RFID; Wireless sensing networks and applications. He has published 245 technical papers in journals and conferences, 18 granted/filed patents. He was often invited as a keynote speaker in many international conferences. He is one of the funding members of IEEE Chengdu Section and funding Chair of IEEE EDS Chengdu Chapter. He is serving the External Liaison Chair and the Technical Activity Chair for IEEE Chengdu Section.

Dr. Ma has been awarded the Changjiang Professor by Ministry of Education of China and he received the National Distinguished Young Investigator of China.

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PROGRAM AT A GLANCE

Friday, May 1, 2009

08:00–17:00	Registration						
09:15–09:30	Opening Remarks: Junyi Li, VP, Qualcomm Flarion						
09:30–09:40	Welcome Speech: Robert A. Altenkirch, President, NJIT						
09:40–11:00	Keynote Speeches:	Joseph Mitola, VP, Stevens Institute of Technology Scott Corson, VP, Qualcomm Flarion	"Software Defined and Cognitive RF and Optical Communications" "Wireless Network Architecture: Where We Are and Where We Should Be"				
11:00–11:10	Break						
11:10–12:10	P1 Plenary Session (Chair: Yu-Dong Yao)	Henry Ye, R&D Director, ASTRI, Hong Kong Stewart Personick, Associate Dean & Professor, NJIT	"Evolution of Mobile Communications in China: 3G and TD-LTE" "Wireless and Fiber: Perfect Together"				
12:10–13:40	Lunch						
13:40–15:20	O1 Optical Communication Network Technologies	N1 Network Planning, Design, and Operation	M1 New Trends in Multimedia Technologies	W1 Wide-Area and Fixed Wireless Communications	O2 Optical Communication Component Technologies	Poster Session	
	Chair: Angela Chiu AT&T Labs - Research	Chair: Ben Tang Bell Labs, Alcatel-Lucent	Chair: Junlan Feng AT&T Labs - Research	Chair: Yang Yang, Alcatel-Lucent Siun-chun Mau, Telcordia,	Chair: James Hwang Lehigh University		
15:20–15:40	Break						
15:40–17:20	O3 Optical Communication Subsystem Technologies	N2 Network Solution and Performance Enhancement	M2 Intelligent Multimedia Processing	W2 Fundamental Research in Mobile and Wireless	W3 Software Defined and Cognitive Radio	Exhibition	
	Chair: Xiang Liu Bell Labs, Alcatel-Lucent	Chair: Zhuangbo Tang Applied Physics Lab, JHU	Chair: Rong Duan AT&T Labs - Research	Chair: Jennifer Chen, Stevens, Xin Wang, Alcatel-Lucent	Chair: Hongbing Cheng Stevens		

Saturday, May 2, 2009

08:00–17:00	Registration						
09:20–10:20	P2 Plenary Session (Chair: Sigen Ye)	Alice Chou, Director, Taiwan Institute of Economic Research Jianguo Ma, Professor, UESTC, China	"The Prospects of Taiwan Telecommunications Industry" "An Identifier-based Network Architecture for Pervasive Service"				
10:20–10:30	Break						
10:30–12:10	O4 Optical Communication System Technologies	N3 Network Reliability & Security	M3 Novel Multimedia Applications	W4 Sensor Network & Distributed Mobile Computing	M4 Machine Learning for Info Management & Analysis	Poster Session	
	Chair: Dan Kilper Bell Labs, Alcatel-Lucent	Chair: Mehcene Mezhoudi Bell Labs, Alcatel-Lucent	Chair: Xiang Zhou Siemens	Chair: Yijie Han, Qualcomm Gang Li, Alcatel-Lucent	Chair: Yanjun Qi NEC Labs America		
12:10–13:40	Lunch						
13:40–17:00	Tutorial I 4G Mobile Telecommunications Systems and Standard Raziq Yaqub, Toshiba America Research, Inc. (Chair: Hongya Ge, NJIT)			Tutorial II Data Forensics and Network Security Yun-Qing Shi, Yanchao Zhang and Grace Wang, NJIT (Chair: Kevin Lu, Telcordia)			Exhibition

W – Wireless Program

N – Network Solution Program

M – Multimedia Program

O – Optical Program

WOCC Technical Sessions – Friday, May 1, 2009, 13:40 – 15:20

O1 Optical Communication Network Technologies Chair: Angela Chiu AT&T Labs - Research	N1 Network Planning, Design, and Operation Chair: Ben Tang Bell Labs, Alcatel-Lucent	M1 New Trends in Multimedia Technologies Chair: Junlan Feng AT&T Labs - Research	W1 Wide-Area and Fixed Wireless Communications Chair: Yang Yang, Alcatel-Lucent Siun-chun Mau, Telecordia	O2 Optical Communication Component Technologies Chair: James Hwang Lehigh University
<p><i>A System Dynamics Study of FTTH: Verizon FiOS</i> <u>Robert G. White</u> Telcordia Technologies</p> <p><i>Ultra-Long-Haul DWDM Core Network for Convergent Broadband Communications</i> <u>Dah-Min Hwang</u> AT&T Labs</p> <p><i>Dynamic Optical Switching for a Greener Internet</i> <u>Mario Baldi</u> Tech. Univ. of Turin, Italy</p> <p><i>Optical Power Management in Optical Wavelength Switched Core Networks</i> <u>Dan Kilper</u> Bell Labs, Alcatel-Lucent</p> <p><i>Wireless high-definition services over optical fiber network</i> <u>Zhensheng Jia</u> Telcordia Technologies</p>	<p><i>Network Optimization Tools for Complex Networks</i> <u>Ming-Jye Sheng, MITRE</u> <u>Thomas Mak, U.S. Army</u></p> <p><i>Additional Switching Nodes: Not a Panacea for Congested Wireless Networks</i> <u>Amit Mukhopadhyay</u> <u>John Zhao</u> Bell Labs, Alcatel-Lucent</p> <p><i>Packet Optical Transport Network Architecture Impact on Carrier Migration Strategy</i> <u>Mohcene Mezhoudi</u> <u>V. Poudyal</u> Bell Labs, Alcatel-Lucent</p> <p><i>IP/MPLS Traffic Engineering and Fast Reroute</i> <u>Connie Chen</u> WANDL</p>	<p><i>Natural Language Understanding for Mobile Voice Search</i> <u>Junlan Feng</u> AT&T Labs - Research</p> <p>Management</p> <p><i>Perceptual Quality Evaluation of Transmitted Videos</i> <u>Tao Liu</u> Poly. Inst. of NYU</p> <p><i>Multimedia Concept Detection: Cross Concept and Cross Modality</i> <u>Wei Jiang</u> Columbia University</p> <p><i>Modeling Rate and Perceptual Quality of Scalable Video and Its Application in Scalable Video Adaptation</i> <u>Zhan Ma</u> Poly. Inst. of NYU</p>	<p><i>The Case for a “Femto-cell like” solution for in-building coverage</i> <u>Asif D. Gandhi</u> Alcatel-Lucent</p> <p><i>Future U.S. Wireless Landscape and IMS Rollout</i> <u>Fuchun Joseph Lin</u> Telcordia</p> <p><i>Performance Evaluation of IEEE 802.11-based Wireless Mesh Networks</i> <u>Zhibin Wu</u> Qualcomm</p> <p><i>LTE Peak Rates Analysis</i> <u>Dongzhe Cui</u> Alcatel-Lucent</p> <p><i>Overview of E-UTRAN/CDMA2000 Interworking Air Interface Standard</i> <u>Jialin Zhou</u> Alcatel-Lucent</p>	<p><i>Nonlinear dynamics of engineered photons in nanostructures for energy and broadband communications</i> <u>Chee Wei Wong</u> Columbia University</p> <p><i>InP-based Quantum Dash Broadband Emitters</i> <u>Boon S. Ooi</u> Lehigh University</p> <p><i>Hybrid Photonic-integrated Electroabsorption Optical Vector Modulators for 80G/100G Applications</i> <u>Inuk Kang</u> Bell Labs, Alcatel-Lucent</p> <p><i>Chromatic and modal effect of Graded-index optical fiber in LAN context</i> <u>Iyad Dayoub</u> UHVC-IEMN/DOAE, France</p> <p><i>Specialty fibers for optical communication and industry application</i> <u>Benyuan Zhu</u> OFS Labs</p>

WOCC Technical Sessions – Friday, May 1, 2009, 15:40 – 17:20

<p>O3 Optical Communication Subsystem Technologies</p> <p>Chair: Xiang Liu Bell Labs, Alcatel-Lucent</p>	<p>N2 Network Solution and Performance Enhancement</p> <p>Chair: Zhuangbo Tang Applied Physics Lab, JHU</p>	<p>M2 Intelligent Multimedia Processing</p> <p>Chair: Rong Duan AT&T Labs - Research</p>	<p>W2 Fundamental Research in Mobile and Wireless</p> <p>Chair: Jennifer Chen, Stevens Xin Wang, Alcatel-Lucent</p>	<p>W3 Software Defined and Cognitive Radio</p> <p>Chair: Hongbing Cheng Stevens</p>
<p><i>Technologies for 40G and 100G Optical Subsystems</i> <u>Yannick K. Lize</u> Opnext Subsystems Inc.</p> <p><i>10Gbit/s Tunable-pluggable Transceivers for Long-haul and Metro Networks</i> <u>Shan Zhong</u> CIENA Corp.</p> <p><i>Advanced Broadband Optical Access Networks</i> <u>Lei Xu</u> NEC Labs America</p> <p><i>Extended Reach GPON Technologies</i> <u>Ruomei Mu</u> Tyco Telecommunications</p> <p><i>Digital Signal Processing for Coherent Optical Communication</i> <u>Xiang Zhou</u> AT&T Labs-Research</p>	<p><i>Simple Security Using Flow Data</i> <u>Kenichi Futamura</u> AT&T Labs</p> <p><i>IP Fast Reroute for Shared Risk Link Group Failure Recovery</i> <u>Kang Xi</u> Poly. Inst. of NYU</p> <p><i>View-Upload Decoupling: A Redesign of Multi-Channel P2P Video Systems</i> <u>Yong Liu</u> Poly. Inst. of NYU</p> <p><i>Admission Control for VoIP Calls with Heterogeneous Codecs</i> <u>Xiaowen Mang</u> <u>Yonatan Levy</u> <u>Carolyn Johnson</u> <u>David Hoeflin</u> AT&T Labs</p>	<p><i>Fast Rerouting for IP Multicast in Managed IPTV Networks</i> <u>Dongmei Wang</u> AT&T Labs - Research</p> <p><i>Attack Estimation in Multimedia Contents Sharing Systems</i> <u>Wei Wang</u> Stevens Inst. of Tech.</p> <p><i>Adaptive Mean Shift for Target Tracking in FLIR Imagery</i> <u>Yafeng Yin</u> Stevens Inst. of Tech.</p> <p><i>Learning Visual Features via the Neighbor-Constrained Hierarchical Network</i> <u>Yuhua Zheng</u> Stevens Inst. of Tech.</p>	<p><i>Cooperative Coding Implementation at the Physical Layer</i> <u>Mike Knox</u> Poly. Inst. of NYU</p> <p><i>Characterization of Individual Usage Patterns in Organizational Wireless Networks – A Case Study</i> <u>Huijun Xiong</u> <u>Danfeng Yao</u> Rutgers Univ.</p> <p><i>Performance Analysis of Adaptive Subcarrier Allocation Scheme to Support QoS in Multiuser OFDM System</i> <u>Jae Wook Kwon</u> Hanyang Univ., Korea</p> <p><i>Throughput and Delay Analysis of Two-Tier Slotted Aloha</i> <u>Di Zheng</u> Stevens Inst. of Tech.</p> <p><i>Localizing Jammer in Wireless Networks</i> <u>Hongbo Liu et al.</u> Stevens Inst. of Tech.</p>	<p><i>Cognitive-Relay-Based Inter-Cell Interference Cancellation in Cellular Systems</i> <u>Hongbing Cheng</u> Stevens Inst. of Tech.</p> <p><i>A Cyclostationarity-Based Blind OFDM Detection and Identification Method for Cognitive Radio Applications</i> <u>Ning Han</u> Stevens Inst. of Tech.</p> <p><i>Anomaly Spectrum Usage Detection in Dynamic Spectrum Access Networks</i> <u>Song Liu</u> Rutgers University</p> <p><i>Mitigating Primary User Emulation Attacks in Cognitive Radio Networks</i> <u>Anand Santhanakrishnan</u> Stevens Inst. of Tech.</p> <p><i>Slotted Aloha in a Cognitive Radio Environment with Capture Effects</i> <u>Zhuo Yang</u> Stevens Inst. of Tech.</p>

WOCC Technical Sessions – Saturday, May 2, 2009, 10:30 – 12:10

<p>O4 Optical Communication System Technologies Chair: Dan Kilper Bell Labs, Alcatel-Lucent</p>	<p>N3 Network Reliability and Security Chair: Mehcene Mezhoudi Bell Labs, Alcatel-Lucent</p>	<p>M3 Novel Multimedia Applications Chair: Xiang Zhou Siemens</p>	<p>W4 Sensor Network & Distributed Mobile Computing Chair: Yijie Han, Qualcomm Gang Li, Alcatel-Lucent</p>	<p>M4 Machine Learning for Info Management & Analysis Chair: Yanjun Qi NEC Labs America</p>
<p><i>Long-Haul Raman/ROPA-Assisted EDFA Systems Telecommunications</i> <u>Alan J. Lucero</u> Tyco Telecommunications</p> <p><i>Fiber Nonlinearities in WDM Coherent PDM-QPSK Systems</i> <u>Chongjin Xie</u> Bell Labs, Alcatel-Lucent</p> <p><i>High bit-rate data transmission in optical mesh networks</i> <u>Xiaohui Yang</u> Ciena Corporation</p> <p><i>Ultra-high-capacity DWDM transmission system by multilevel modulations and digital coherent detection</i> <u>Jianjun Yu</u> NEC Labs America</p>	<p><i>Crossing a Non-Jackson Network (With or Without a Map)</i> <u>Michael Tortorella</u> Rutgers University</p> <p><i>Detection of Spam Hosts and Spam Bots Using Network Flow Traffic Modeling</i> <u>Danielle Liu</u> <u>Willa Ehrlich</u> <u>David Hoeflin</u> <u>Anestis Karasaridis</u> AT&T Labs</p> <p><i>Network Vulnerability Identification via Network Interdiction Research</i> <u>Jose E. Ramirez-Marquez</u> Stevens Inst. of Tech.</p> <p><i>End-to-End Service Reliability Considerations for Converged Telecommunication Networks</i> <u>Xuemei Zhang</u> <u>Carolyn R. Johnson</u> AT&T Labs</p>	<p><i>Player Highlighting and Team Classification in Broadcast Soccer Videos for the Next Generation TV</i> <u>Yu Huang</u> Huawei Tech. USA</p> <p><i>Computer Graphics Classification Based on Markov Process Model</i> <u>Yun-Qing Shi</u> NJIT</p> <p><i>An Adaptive Bottom Up Clustering Approach for Web News Extraction</i> <u>Jinlin Chen</u> CUNY</p> <p><i>Computer Aided Detection of Anatomical Primitives in Medical Images and Its Applications</i> <u>Xiang Zhou</u> Siemens</p>	<p><i>Joint optimization of modulation order and packet size for wireless sensor networks</i> <u>Hongbin Cheng</u> Stevens Inst. of Tech.</p> <p><i>A Distributed Sensing Fram-ework for Primary Users in Broadband Cognitive Radio Networks</i> <u>Jing Lei</u> et al. Rutgers Univ.</p> <p><i>Load Balanced Multiple Gateway Support in Wireless Mesh Networks for Broadband Services</i> <u>Iqbal Muddesar</u> Kingston Univ. London</p> <p><i>Acoustic Sensor Coverage Variation Due to Water Stratification in Estuaries</i> <u>Hongyuan Shi</u> Stevens Inst. of Tech.</p> <p><i>Cooperative Communication and Networking</i> <u>Qinqing Zhang</u> Applied Physics Lab, JHU</p> <p><i>Detecting Sybil Attacks in Wireless and Sensor Networks Using Cluster Analysis</i> <u>Jie Yang</u> et al. Stevens Inst. of Tech.</p>	<p><i>Metric-Based Automatic Taxonomy Induction</i> <u>Hui Yang</u> CMU</p> <p><i>Non-Rigid Face Tracking with Enforced Convexity and Local Appearance Consistency Constraint</i> <u>Yang Wang</u> Siemens</p> <p><i>Supervised Semantic Indexing</i> <u>Bing Bai</u> NEC Labs America</p> <p><i>Probabilistic Knowledge Model for Document Retrieval</i> <u>Shuguang Wang</u> University of Pittsburgh</p>

Poster Sessions

Fri. May 1, 13:40 –15:20 and Sat. May 2, 10:30 –12:10

1. Di Zheng and Yu-Dong Yao, **Stevens Institute of Technology**
Performance Analysis of Slotted Aloha with Multi-Access-Point Diversity
2. Jie Yang, Xiuyuan Zheng, and Yingying Chen **Stevens Institute of Technology**
A Decentralized Location Verification Mechanism for Wireless Sensor Networks
3. Muhammad Akber Farooqui **Atlas Bank Limited, Pakistan**
Protocol Design Issues in WLAN
4. Jiawei Sun, Bernhard Firner, Danfeng Yao and Yanyong Zhang **Rutgers University**
Efficient and Fault-Tolerant Detection of Attacks in RFID Asset Tracking Systems
5. Phisan Kaewprapha, Nattakan Puttarak and Jing Li (Tiffany) **Lehigh University**
Receiver-Cooperation: Network Coding and Distributed Scheduling
6. Nattakan Puttarak, Phisan Kaewprapha and Jing Li (Tiffany) **Lehigh University**
Optimal Erasure Codes Based on Graphs: An MDS Array Construction
7. Ellen Shlossberg and Shilpa Srinivasan **Columbia University**
Traffic Light Network Queue Analysis in One Direction
8. Tariq Elkourdi and Osvaldo Simeone **New Jersey Institute of Technology**
Cooperative Spectrum Sharing in Cognitive Radio Networks
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