PROGRAM AT A GLANCE

WOCC, Friday, April 15, 2011

Time			
08:00–17:00	Registration		
08:30–10:10	**O1** — **Optical Network Architecture: Long Haul, Metro and Access** *Chair: Philip N. Ji* *NEC Labs USA*	**W1** — **Wireless Communication Systems** *Chair: Zheng Li* *Alcatel-Lucent*	**M1** — **Multimedia Indexing and Search** *Chair: Yuqing Gao* *IBM T.J. Watson Research Center*
10:10–10:30	Break		
10:30–10:45	**Opening Remarks:** Victor Lawrence, **Chair Professor**, **Stevens Institute of Technology**		
10:45–11:00	**Welcome Speech:** Ian Gatley, **Provost, New Jersey Institute of Technology**		
11:00–12:00	**P1** — **Plenary Session** (*Chair: Qinqing Zhang*) — Sheng-Lin Chou, **VP, ITRI-Taiwan** *"Development of WiMAX Service and Product in Taiwan"*; Paul Bloom, **CTO, IBM Telecom Research** *"Internet of Things"*		
12:00–13:30	Lunch		
13:30–15:10	**O2** — **Optical Passive and Active Components, Devices and Sensors** *Chair: Benyuan Zhu* *OFS Labs USA*	**W2** — **Wireless Communications and Networks** *Chair: Zheng Li* *Alcatel-Lucent* — **Panel** — **Future Internet: Mobility First** *Chairs: Wade Trappe, Yanyong Zhang* *Rutgers University*	**W6** — **Wireless Physical Layer** *Chair: Pingyi Fan* *Tsinghua University, China* — Poster Session
15:10–15:40	Break		
15:40–17:20	**O3** — **Optical Transport, 100G and Beyond** *Chair: Hidenori Taga* *National Sun-Yet Sen Univ.*	**W3** — **Wireless Networks and Applications** *Chair: Yiqing Zhou* *Chinese Academy of Science*	**M2** — **QoS for Multimedia Applications** *Chair: Fang-Chu Chen* *ITRI, Taiwan* — Poster Session

Exhibition

WOCC, Saturday, April 16, 2011

Time			
08:00–17:00	Registration		
9:00–10:30	**P2** — **Plenary Session** (*Chair: Hongya Ge*) — Tsuhan Chen, **Director, School of ECE, Cornell** *"Understand Images of People on Social Network"*; Qian Zhong, **Managing Director, TE SubCom** *"Connecting the World through Undersea Communication Systems"*; Yung Jui Chen, **Professor, Sun Yat-Sen Univ., Taiwan** *"Silicon Photonic Micro-ring Devices"*		
10:30–10:50	Break		
10:50–12:30	**S1** — **Tingye Li Session** (*Chair: Robert Tkach*) — Tingye Li, **AT&T Labs Research (retired)** *"From Mb/s to Tb/s: An Historical Glimpse of the Progress of Optical Fiber Communications"*; Robert Tkach, **Alcatel-Lucent Bell Labs** *"Optical Fiber Capacity: Keeping up with the Demand"*; Patrick Iannone, **AT&T Labs Research** *"Effective Research in Optical Access Systems"*; Connie J. Chang-Hasnain, **UC Berkeley** *"Nanolasers on Silicon for Chip-Scale Optoelectronics"*		
12:30–14:00	Lunch		
14:00–15:40	**S2** — **Robert Gallager Session** (*Chair: Vincent Chan*) — Vincent Chan, **MIT** *"Free space optical wireless network"*; David Tse, **UC Berkeley** *"A New Role of Feedback"*; Roy Yates, **Rutgers** *"The Fading Broadcast Channel with Channel State Known Only at the Receivers"*; Robert Gallager, **MIT** *"Information Theory and the Information Age"*		
15:40–16:00	Break		
16:00–17:40	**O4** — **Optical Network Design, Planning, and Modeling** *Chair: Mohcene Mezhoudi* *Bell Labs Alcatel-Lucent USA*	**W4** — **Cognitive Radios and Networks** *Chair: Yiqing Zhou* *Chinese Academy of Science* — **W5** — **3G/4G Wireless Communication Systems** *Chair: Michael J. Luddy* *Lockheed Martin*	**N1** — **Emerging Networks and Pervasive Computing** *Chair: Yanyong Zhang* *Rutgers University* — Poster Session

Exhibition

P – Plenary   S – Special   W – Wireless   N – Network   M –Multimedia   O – Optical

WOCC Technical Sessions – Friday, April 15, 2011, 08:30 – 10:10

O1 Optical Network Architecture: Long Haul, Metro and Access	W1 Wireless Communication Systems	M1 Multimedia Indexing and Search
Chair: Philip N. Ji *NEC Labs USA*	*Chair: Zheng Li* *Alcatel-Lucent*	*Chair: Yuqing Gao* *IBM T.J. Watson Research Center*

Optical Network Architecture	Wireless Communication Systems	Multimedia Indexing and Search

Next Generation ROADM Optical Network and Applications
     Brandon Collings
     JDSU
	Convergence of Distributed Iterative Algorithms for Distributed Cross-Layer Control of Wireless Networks
	     Vincent Lau
	     Hong Kong University of Science and Technology, Hong Kong, China
		Scaled Eigen Appearance Feature (SEAF) and Likelihood Pruning in Large Scale Video Duplicates Search
		     Zhu Li
		     Huawei Technology USA

3-D MEMS Based Large Scale Photonic Cross-Connect Switch: Progresses and Applications
     Shifu Yuan
     Calient Technologies Inc
	High-Order Modulation Scheme Based on Combinational QPSK Accelerators for HSPA Evolution in UE
	     Zheng Li, Doug Clark,
	     Hai Chen, Marc Shelton
	     Alcatel-Lucent, USA
	     Rong Zhang, Guoyong Chen,
	     Yu Wan, Jiaguan Leng
	     Alcatel-Lucent Shanghai-Bell, China
		Adaptive Streaming With Scalable Video Coding
		     Fang-Chu Chen
		     Industrial Technology Research Institute (ITRI), Taiwan

Progress and Challenges for High Speed Optical Access Networks
     Xin Jiang
     College of Staten Island, City University of New York
		Novel EFM-KNN Classifier and a New Color Descriptor for Image Classification
		     Abhishek Verma
		     Chengjun Liu
		     New Jersey Institute of Technology

The Next Frontier for Fiber Technologies: Fiber Networks in Buildings
     Seldon Benjamin
     Corning Inc.
	Resource Allocation in OFDM-Based Multi-Cell Cognitive Radio Systems
	     Fangjiang Huang
	     Shaowei Wang
	     Sidan Du
	     Nanjing University, China
		Evaluating Effectiveness of Latent Dirichlet Allocation Model for Scene Classification
		     Shizhi Chen
		     YingLi Tian
		     The City College, City University of New York

Topology Analysis of Auto Load-Balancing RWA in Optical Burst-Switched Networks
     Joan Triay
     Cristina Cervelló-Pastor
     Universitat Politècnica de Catalunya (UPC), Spain
	Maximize Sum Capacity of Multiuser Cognitive OFDM Systems
	     Hualai Gu
	     Shaowei Wang
	     Bo Li
	     Nanjing University, China	

WOCC Technical Sessions – Friday, April 15, 2011, 13:30 – 15:10

O2 Optical Passive and Active Components, Devices & Sensors	**W2** Wireless Communications and Networks	**Panel** Future Internet: Mobility First	**W6** Wireless Physical Layer
Chair: Benyuan Zhu *OFS Labs USA*	Chair: Zheng Li *Alcatel-Lucent*	Chairs: Wade Trappe, Yanyong Zhang *Rutgers University*	Chair: Pingyi Fan *Tsinghua University, China*
Ultra-Low Power Dense WDM Silicon Photonic Interconnects Xuezhe Zheng, Guoliang Li, Ying Luo, Hiren Thacker, Ivan Shubin, Jin Yao, Frankie Liu Jon Lexau, Kannan Raj, Ron Ho, John E. Cunningham, Ashok V. Krishnamoorthy **Oracle Labs** *Recent Advances in Fiber-Based Parametric Devices* Colin J. McKinstrie **Bell Laboratories, Alcatel-Lucent** *Silicon Photonics Application* Mehdi Asghari **Kotura, Inc.** *Demonstration of Optical Fiber Sensors for Water Immersion Detection* Hsuan-Hung Lin **Tamkang University, Taiwan**	*Channel-Oblivious Counting Algorithms for Large-Scale RFID Systems* Wing Cheong Lau **The Chinese Univ. of Hong Kong** *Broadband Wireless Communications on High Speed Trains* Yiqing Zhou, Jinlong Hu, Jinglin Shi **Chinese Academy of Sciences** Zhengang Pan **University of Hong Kong** Xinwei Mo **Huaxin Post&Telecom Designing Institute Corp., China** *IMS-Based Performance Analysis of a MANET Controlled by the Delay-Aware NUM System* Andrzej Szwabe Pawel Misiorek Przemyslaw Walkowiak **Poznan University of Technology, Poland** *On Throughput Enhancement of Multi-hop Wireless Networks Using Interference Alignment* Wenxuan Guo Xinming Huang **Worcester Polytechnic Institute**	*Technology and Application Trend for Internet of Things* Ming-Whei Feng **Institute for Information Industry, Taiwan** Sam Nelson **Rutgers University** Jon Li **Rutgers University** Wade Trappe **Rutgers University** Yanyong Zhang **Rutgers University**	*When An Extra Bit Is A Waste* Shan-Yuan Ho **MIT** *Study of BER Fairness and PAPR for Interleaved OFDMA System* Sabbir Ahmed, Makoto Kawai **Ritsumeikan University, Japan** *A Precoding Technique Based on Time Reversal for Single-Carrier IDMA Systems* Xingzhong Xiong, Jianhao Hu **University of Electronic Science and Technology of China** *An Extension Scheme from Low Speed Field Test System to High Speed Field Test System Based on Doppler Shift* Zaixue Wei, Yanhua Mou, Shuibing Wen, Dacheng Yang **Beijing University of Posts and Telecommunications, China** Lijun Zhao, Peng Dong, Guanghua Yang, Yingnan Liu, Jia Kong **China Mobile Research Institute**

WOCC Technical Sessions – Friday, April 15, 2011, 15:40 – 17:20

O3 Optical Transport, 100G and Beyond	W3 Wireless Networks and Applications	M2 QoS for MultiMedia Applications
Chair: Hidenori Taga *National Sun-Yet San Univ.*	*Chair: Yiqing Zhou* *Chinese Academy of Science*	*Chair: Fang-Chu Chen* *ITRI, Taiwan*
Superchannels – Next Generation High Speed Information Carriers at High Spectral Efficiencies <u>S. Chandrasekhar, Xiang Liu</u> **Bell Labs, Alcatel-Lucent** *Polarization Impairments and Their Compensation in Coherent PDM-QPSK Optical Communications Systems* <u>Chongjin Xie</u> **Bell Labs, Alcatel-Lucent** *Impact of Dispersion Map Design for 10Gb/s-based Long-Haul RZ-DPSK Transmission System* <u>Hidenori Taga</u> **National Sun Yat-Sen University** *4-Channel Incoherent MIMO Transmission over MM Fiber with Different Offset Light Launch* <u>Jerzy Siuzdak, Marcin Kowalczyk,</u> <u>Lukasz Maksymiuk</u> **Warsaw University of Technology, Poland** *CMA Misconvergence in Coherent Optical Communication for Signals Generated from a Single PRBS* <u>Johnny Karout, Henk Wymeersch, Henk Wymeersch, Pontus Johannisson, Erik Agrell, Martin Sjödin, Magnus Karlsson, Peter Andrekson</u> **Chalmers University of Technology, Sweden** *The Impact of Polarization-Dependent Loss on the Constant Modulus Algorithm for Varying Number of Fiber Spans Based on an Outage Criterion* <u>Mehrnaz Tavan, Henk Wymeersch</u> **Chalmers University of Technology, Sweden**	*Machine-to-Machine: An Emerging Communication Paradigm* <u>Jesús Alonso Zárate</u> **CTTC, Spain** *Fast Normalized Cross-Correlation Enhanced Floating Car Data Estimation* <u>Kai Chen</u> <u>Niki Pissinou</u> **Florida International University** <u>Kia Makki</u> **Technological University of America** *Human Walk Aware Mobility Resistant Efficient Clustering for Data Gathering in Cell Phone based Wireless Sensor Networks* <u>Mehul B Shah</u> <u>Prashant P Verma</u> <u>Shabbir N. Merchant</u> <u>Uday B Desai</u> **Indian Institute of Technology, India** *Performance Evaluation of Content Based Routing with In-Network Caching* <u>Lijun Dong</u> <u>Dan Zhang</u> <u>Yanyong Zhang</u> <u>Dipankar Raychaudhuri</u> **Rutgers University**	*Some Aspects of Multicoverage in Sensor Networks* <u>Chai Wah Wu</u> **IBM T. J. Watson Research Center** *Computer Vision Technology for Assisting Visually Impaired People* <u>YingLi Tian</u> **The City College, City University of New York** *A Comparison Between Peer-to-Peer and Server-Based Multi-Party Video Conferencing Systems* <u>Peter Westerink</u> <u>Frank Schaffa</u> **IBM T. J. Watson Research Center** *Robust and Effective Component-based Banknote Recognition by SURF Features* <u>Faiz M. Hasanuzzaman</u> <u>Xiaodong Yang</u> <u>YingLi Tian</u> **The City College, City University of New York** *Optimum Image Fusion via Sparse Representation* <u>Guang Yang</u> <u>Xingzhong Xu</u> <u>Hong Man</u> **Stevens Institute of Technology**

WOCC Technical Sessions – Saturday, April 16, 2011, 16:00 – 17:40

O4 Optical Network Design, Planning, and Modeling	**W4** Cognitive Radios and Networks	**W5** 3G/4G Wireless Communication Systems	**N1** Emerging Networks and Pervasive Computing
Chair: Mohcene Mezhoudi *Bell Labs Alcatel-Lucent USA*	*Chair:* Yiqing Zhou *Chinese Academy of Science*	*Chair: Michael J. Luddy* *Lockheed Martin*	*Chair: Yanyong Zhang* *Rutgers University*
Optical Regenerator Placement Strategy to Achieve Green Design of Translucent Optical Networks Zuqing Zhu **University of Science and Technology of China**	*Spectrum Sharing Based on Spectrum Heterogeneity and Multi-hop Handoff in Centralized Cognitive Radio Networks* Guoqin Ning **Huazhong Normal University, China**	*Group Decoding for Interference Channels* Xiaodong Wang **Columbia University**	*A Scalable and Elastic Publish/ Subscribe Service* Fan Ye **IBM T. J. Watson Research Center**
Economical Analysis of Converged IP Optical Metro Transport Network Ying (Emily) Hu Ben Tang Simon Delord **Bell Labs, Alcatel-Lucent**	*Cog-PRMA Protocol for CR Users Sharing a Common Channel with TDMA Primary Users* Sanqing Hu, Yu-Dong Yao, Zhuo Yang, Di Zheng **Stevens Institute of Technology**	*Overview of Interference Mitigation Techniques between WiMAX Networks and Ground Based Radar* Alex Lackpour, Michael Luddy **Lockheed Martin** Jack H. Winters **Jack Winters Communications, Inc.**	*Performing Joint Learning for Passive Intrusion Detection in Pervasive Wireless Environments* Yingying Chen **Stevens Institute of Technology**
Economical Analysis of NG-Optical Backbone Transport Network Ying (Emily) Hu Mohcene Mezhoudi **Bell Labs, Alcatel-Lucent**	*Distributed Reinforcement Learning Based MAC Protocols for Autonomous Cognitive Secondary Users* Mario Bkassiny,Sudharman K Jayaweera **University of New Mexico** Keith Avery **Air Force Research Laboratory**	*Understanding of Transmission Throughput and Channel Capacity In A Systematic Way* Pingyi Fan **Tsinghua University, China** Khaled Ben Letaief **Hong Kong University of Science and Technology, China**	*STAR: Storage Aware Routing Protocol for Generalized Delay Tolerant* Shweta Jain Snehapreethi Gopinath Dipankar Raychaudhuri **City University of New York**
Flexible Grid Optical Networks - A Networking Perspective Sashisekaran (Sashi) Thiagarajan **CIENA Corp.**	*A Decoupled Cross-layer Design for Symbiotic Cognitive Relaying with Time Incentive* Vinaykumar Thumar, Taskeen Nadkar, Uday B Desai, Shabbir N. Merchant **Indian Institute of Technology**	*Bootstrap Decoding for the Alamouti Space-Time Scheme with Imperfect Channel Estimation* Amir Laufer Yeheskel Bar-Ness **New Jersey Institute of Technology**	*An Integrated Network of Roadside Sensors and Vehicles for Driving Safety* Guiling Wang **New Jersey Institute of Technology**
Application-Aware Protection in DWDM Optical Networks Hamza Drid **Inria of Rennes, France** Nasir Ghani **University of New Mexico, USA** Bernard Cousin **University of Rennes 1, France**			