

# ICCCN 2008 Workshops Technical Program

Thu (August 7)	7:00-8:00	RBF: Breakfast					
	8:00 – 9:15	R1: Keynote IV: GENI - Global Environment for Network Innovations (Harbor I) Speakers: Dr. Chip Elliot, BBN Technologies and GENI Project Director Chair: Xiaolin Li, Oklahoma State University					
	9:15-9:25	R2: Workshop Opening Remarks (Harbor I)					
	9:25-9:40	WB1: Break					
	9:40-10:40		R3.1: PMECT Ia: Performance Analysis in Heterogonous Wireless Networks Chair: Iain Phillips (Loughborough University, United Kingdom)	R3.2: SN Ia: Applications Chair: Jose Esteban Garcia Ruiz (Telefonica I+D, Spain)	R3.3: IPMC I: Multimedia Networking & Streaming Chair: Fernando Silva (Instituto Superior Tecnico, Lisbon, Portugal, Portugal)	R3.4: IMAP I: Video Processing & Communication Chair: Jiannong Cao (Hong Kong Polytechnic Univ, Hong Kong)	R3.5: SoCCaN I: Cryptography and Data Security Chair: Depeng Li (Dalhousie University, Canada)
	10:40-12:00		R4.1: PMECT Ib Performance Analysis in Heterogonous Wireless Networks Chair: Iain Phillips (Loughborough University, United Kingdom)	R4.2: SN Ib: Applications Chair: Jose Esteban Garcia Ruiz (Telefonica I+D, Spain)			
	12:00-13:30	RL: Lunch (on your own)					
	13:30-14:30	R5: IPMC-IMAP II: Joint Plenary Talk: Video Quality and Video Databases Speaker: Al Bovik, The University of Texas at Austin Chair: Fan Zhai (Texas Instruments, USA)		R5.2: SN IIa: Energy Efficiency and Network Lifetime Chair: Bouabdellah Kechar (University of Oran, Algeria)			
	14:30-14:45	RB2: Break					
	14:45-15:45		R6.1: PMECT III: Performance Modeling of QoS and Platforms Chair: Lin Guan (Loughborough University, United Kingdom)	R6.2: SN IIb: Efficiency and Network Lifetime Chair: Bouabdellah Kechar (University of Oran, Algeria)	R6.3: IPMC III: Multimedia Coding and Analysis Chair: Ghassan AlRegib (Georgia Institute of Technology, USA)	R6.4: IMAP III: Audio/Visual Info Processing Chair: Changxue Ma (Motorola INC, USA)	R6.5: NGASHPC I: Storage System Chair: Lei Liu (Sun Microsystems, Inc., USA)
	15:45-16:00	RB3: Break					
	16:00-18:00		R7.1: SN III: Architecture, Control, and Service Chair: Kuang-Ching Wang (Clemson University, USA)	R7.2: SN IV Localization, Positioning and Routing Chair: Faruk Bagci (University of Augsburg, Germany)	R7.3: IPMC IV: Multimedia Networking, Streaming, and Coding Chair: Jun Kyun Choi (Information Communication University, Korea)	R7.4: IMAP IV: Intelligent Image/Video Processing Chair: Chang Wen Chen (State University of New York at Buffalo, USA)	R7.5: SoCCaN III: Network Security Chair: Weisi Lin (Nanyang Technological University)

**Thursday, Aug 7, 2008**

**8:00 AM - 9:15 AM**

## **R1: Keynote IV: GENI - Global Environment for Network Innovations**

Dr. Chip Elliot (IEEE Fellow, AAAS Fellow); Chief Engineer, BBN Technologies and GENI Project Director

Room: Harbor I

Chair: Xiaolin Li (Oklahoma State University, USA)

## **9:15 AM - 9:25 AM**

### **R2: Workshop Opening Remarks**

Room: Harbor I

## **9:25 AM - 9:40 AM**

### **RB1: Break (15 min)**

## **9:40 AM - 10:40 AM**

### **R3.1: PMECT Ia: Performance Analysis in Heterogonous Wireless Networks**

Room: Harbor II      Chair: Iain Phillips (Loughborough University, United Kingdom)

CAC-RD: A Call Admission Control For UMTS Networks

Carlos Storck (PUC Minas, Brazil); Anna Rbeiro (PUC Minas, Brazil); Fátima Duarte-Figueiredo (Pontifical Catholic University of Minas Gerais, PUC Minas, Brazil)

AEETC — Adaptive Energy-Efficient Timing Control in Wireless Networks with Network Coding

Guihai Chen (Nanjing University, P.R. China)

Analytical Models for Complete and Partial Channel Allocation Schemes

Irfan Awan (University of Bradford, United Kingdom)

### **R3.2: SN Ia: Applications**

Room: Harbor III      Chair: Jose Esteban García Ruiz (Telefonica I+D, Spain)

The AmICriM Project: A Truly Body Area Network Application

Jose Esteban García Ruiz (Telefonica I+D, Spain); Jean-Pierre George (Université Paul Sabatier, France); Gauthier Picard (École des Mines de Saint-Etienne, France)

Autonomic Management of Hybrid Sensor Grid Systems and Applications

Xiaolin Li (Oklahoma State University, USA); Xinxin Liu (Oklahoma State University, USA);

Huanyu Zhao (Oklahoma State University, USA); Nanyan Jiang (Rutgers University, USA);

Manish Parashar (Rutgers, The State University of New Jersey, USA)

Standard-based Middleware Platform for Medical Sensor Networks and u-Health

Ignacio Martínez-Ruiz (University of Zaragoza, Spain); Javier Escayola (University of Zaragoza, Spain); Miguel Martínez-Espronedá (Public University of Navarre, Spain); Luis Serrano (Public

University of Navarre, Spain); Jesús Trigo (University of Zaragoza, Spain); Santiago Led (Public

University of Navarre, Spain); José García (University of Zaragoza, Spain)

### **R3.3: IPMC I: Multimedia Networking & Streaming**

Room: Island I/II      Chair: Fernando Silva (Instituto Superior Tecnico, Lisbon, Portugal, Portugal)

Web-based Personalized IPTV Services over NGN

Jun Kyun Choi (Information Communication University, Korea); Gyu Myoung Lee (NIST, USA);

Hyo-Jin Park (Information and Communications University, Korea)

Channel-Aware Peer Selection in Multi-View Peer-to-Peer Multimedia Streaming

Miao Wang (UNL, USA); Lisong Xu (University of Nebraska-Lincoln, USA); Byrav

Ramamurthy (University of Nebraska-Lincoln, USA)

A Mathematical Model for Evaluating the Performance of Multicast Systems

Syed Rizvi (University of Bridgeport, USA); Aasia Riasat (Institute of Business Management, Pakistan); Khaled Elleithy (University of Bridgeport, USA)

### **R3.4: IMAP I: Video Processing & Communication**

Room: Island III/IV      Chair: Jiannong Cao (Hong Kong Polytechnic Univ, Hong Kong)

Robust Video Transmission over Packet Erasure Wireless Channels based on Wyner-Ziv Coding of Motion Regions

Tao Sheng (Huazhong University of Science and Technology, P.R. China); ByungJoon Oh (Florida Institute of Technology, USA); Guogang Hua (Qualcomm Inc., USA); Chang Wen Chen (State University of New York at Buffalo, USA)

Traffic Prioritization of H.264/SVC Video over 802.11e Ad Hoc Wireless Networks

Attilio Fiandrotti (Politecnico di Torino, Italy); Dario Gallucci (Politecnico di Torino, Italy); Enrico Masala (Politecnico di Torino, Italy); Enrico Magli (Politecnico di Torino, Italy)

Coding of Multiple H.264 Video streams using SSIM as quality metric

Luis Teixeira (INESC Porto, Portugal)

### **R3.5: SoCCaN I: Cryptography and Data Security**

Room: Island V/VI      Chair: Depeng Li (Dalhousie University, Canada)

A General Algorithm for Constructing Ideal Visual Cryptography Schemes with Reversing

Chih-Ming Hu (Diwan University, Taiwan); Wen-Guey Tzeng (National Chiao Tung University, Taiwan)

Efficient Periodic Batch Group Rekeying for Dynamic Peer Groups

Depeng Li (Dalhousie University, Canada); Srinivas Sampalli (Dalhousie University, Canada)

Internet Voting Protocol Based on Implicit Data Security

Abhishek Parakh (Oklahoma State University, USA); Subhash Kak (Oklahoma State University, USA)

## **10:40 AM - 12:00 PM**

### **R4.1: PMECT Ib Performance Analysis in Heterogonous Wireless Networks**

Room: Harbor II      Chair: Iain Phillips (Loughborough University, United Kingdom)

Performance Analysis of the IEEE 802.11e with TCP ACK Prioritization

Aruna Thangaraj (University of Cincinnati, USA); Qing-An Zeng (University of Cincinnati, USA); Xiaolong Li (Morehead State University, USA)

Armor-LEACH – Energy Efficient, Secure Wireless Networks Communication

Abdelshakour Abuzneid (University of Bridgeport, USA); Mohammed Abuhelaleh (University of Bridgeport, USA); Thabet Mismar (University of Bridgeport, USA)

Data Gathering Algorithm based Load Balance for Wireless Sensor Networks

GUAN Xin (Heilongjiang University, P.R. China); Lin Guan (Loughborough University, United Kingdom)

Adaptive Interference Cancellation: Cancellation Performance vs. Computational Overhead

Cheolgi Kim (University of Illinois at Urbana-Champaign, USA); Joong Soo Ma (Information and Communications University, Korea)

### **R4.2: SN Ib: Applications**

Room: Harbor III      Chair: Jose Esteban García Ruiz (Telefonica I+D, Spain)

A Weak Process Approach to Anomaly Detection in Wireless Sensor Networks

Annarita Giani (UC Berkeley, USA)

A Message Complexity Oriented Design of Distributed Algorithm for Long-lived Multicasting in Wireless Sensor Networks

Song Guo (The University of British Columbia, Canada)

Indoor Mobile Entity Tracking using Wireless Sensor Networks

Hongli Xu (University of Science and Technology of China, P.R. China)

## **12:00 PM - 1:30 PM**

**RL: Lunch (on your own)**

## **1:30 PM - 2:30 PM**

### **R5: IPMC-IMAP II: Joint Plenary Talk: Video Quality and Video Databases**

Speaker: Al Bovik (IEEE Fellow, OSA Fellow, SPIE Fellow), Curry/Cullen Trust Endowed Chair Professor, The University of Texas at Austin

Room: Harbor I      Chair: Fan Zhai (Texas Instruments, USA)

### **R5.2: SN IIa: Energy Efficiency and Network Lifetime**

Room: Harbor III      Chair: Bouabdellah Kechar (University of Oran, Algeria)

Maximizing Network Lifetime for Estimation in Multi Hop Wireless Sensor Networks

Junlin Li (Georgia Institute of Technology, USA); Ghassan AlRegib (Georgia Institute of Technology, USA)

SOR revisited: Partitioning and Recovering after Shrinking

Manki Min (South Dakota State University, USA); Austin O'Brien (South Dakota State University, USA); Sung Shin (South Dakota State University, USA)

CL-MAC: an Energy Efficient Cross-Layer MAC Protocol with Latency improvement in Wireless Sensor Networks

Bouabdellah Kechar (University of Oran, Algeria); Louazani Ahmed (Master Student, Algeria)

## **2:30 PM - 2:45 PM**

**RB2: Break (15 mins)**

## **2:45 PM - 3:45 PM**

### **R6.1: PMECT III: Performance Modeling of QoS and Platforms**

Room: Harbor II      Chair: Lin Guan (Loughborough University, United Kingdom)

Modeling the Execution Time of Reed-Solomon Decoding on an ARM9-based Mobile Platform

Kyungtae Kang (University of Illinois at Urbana-Champaign, USA)

On the Fairness of TCP Throughput Under Loss

Steven Wright (BellSouth, USA); Anna Cui (ATT, USA)

Time-domain Sending Rate and Response Function of eXplicit Control Protocol  
Cheng Shuangmei (Shanghai Jiaotong University, P.R. China); Chuan-xiong Guo (Microsoft Research Asia, P.R. China)

## **R6.2: SN IIb: Efficiency and Network Lifetime**

Room: Harbor III      Chair: Bouabdellah Kechar (University of Oran, Algeria)  
A Power-Preserving Broadcast Protocol with DoS Resistance for WSNs  
Chien-Chun Ni (National Taiwan University of Science and Technology, Taiwan); Tien-Ruey Hsiang (National Taiwan University of Science and Technology, Taiwan); Doug Tygar (University of California, Berkeley, USA)  
Modeling and adapting JPEG to the energy requirements of VSN  
Abdelhamid Mammeri (University of Sherbrooke, Canada)  
Energy Efficient Spanning Tree for Data Aggregation in Wireless Sensor Networks  
Zahra Eskandari (Ferdowsi, Iran); Mohammad Hossien Yaghmaee (Ferdowsi University of Mashad, Iran); AmirHossien Mohajezadeh (Ferdowsi University of Mashhad, Iran)

## **R6.3: IPMC III: Multimedia Coding and Analysis**

Room: Island I/II      Chair: Ghassan AlRegib (Georgia Institute of Technology, USA)  
3-D Position and Amplitude VLC Coding in H.264/AVC  
Junlin Li (Georgia Institute of Technology, USA); Ghassan AlRegib (Georgia Institute of Technology, USA); Dihong Tian (Cisco System, Inc., USA); Pi Sheng Chang (Cisco System, Inc., USA); Wen H. Chen (Cisco System, Inc., USA)  
Arm Movement Prediction with Neural Networks  
Fred Stakem (Georgia Institute of Technology, USA); Ghassan AlRegib (Georgia Institute of Technology, USA)  
A New Integrated Spatio-Temporal Framework for Video Error Concealment  
Ee Sin Ng (Institute for Infocomm Research, Singapore); Jo-Yew Tham (Institute for Infocomm Research, A\*STAR, Singapore); Susanto Rahardja (Institute for Infocomm Research, Singapore)

## **R6.4: IMAP III: Audio/Visual Info Processing**

Room: Island III/IV      Chair: Changxue Ma (Motorola INC, USA)  
Uniterm Voice Indexing and Search for Mobile Devices  
Changxue Ma (Motorola INC, USA)  
Reliable Automatic Recognition for Pitch-Shifted Audio  
Carlo Bellettini (University of Ferrara, Italy); Gianluca Mazzini (University of Ferrara, Italy)  
Real-Time Facial Animation Driven By Emotional Speech  
Jia Liu (Zhejiang University, P.R. China); Chun Chen (Zhejiang University, P.R. China); Mingli Song (Zhejiang University, P.R. China); Jiajun Bu (Zhejiang University, P.R. China); Bo Wang (Zhejiang University, P.R. China); Yifan Peng (Zhejiang University, P.R. China)

## **R6.5: NGASHPC I: Storage System**

Room: Island V/VI      Chair: Lei Liu (Sun Microsystems, Inc., USA)  
Energy Conservation for Real-Time Disk Systems with I/O Burstiness  
Xiao Qin (Auburn University, USA); Adam Manzanares (Auburn University, USA); Kiranmai Bellam (Auburn University, USA)

Bandwidth Management For Distributed Systems

Andrzej Tucholski (Polish Telekom, Poland)

An Autonomous Search Method for Pervasive Storage Virtualization

Lei Liu (Sun Microsystems, Inc., USA)

A dynamic multi-dimensional monitoring of a grid

Imene Elloumi (Paul Sabatier University, France)

### **3:45 PM - 4:00 PM**

**RB3: Break (15 min)**

### **4:00 PM - 6:00 PM**

#### **R7.1: SN III: Architecture, Control, and Service**

Room: Harbor II      Chair: Kuang-Ching Wang (Clemson University, USA)

A Flexible Approach to WSN Deployment

Luis Pedrosa (Instituto de Telecomunicações, Portugal); Pedro Melo (Instituto Superior Técnico / Technical University of Lisbon, Portugal); Rui Rocha (Instituto de Telecomunicações, Portugal); Rui Neves (Technical University of Lisbon, Portugal)

Transmission Error Avoidance for IEEE 802.15.4 Wireless Sensors on Rotating Structures

Kuang-Ching Wang (Clemson University, USA); Jobin Jacob (Clemson University, USA); Lei Tang (Clemson University, USA); Yong Huang (Clemson University, USA)

On the Connectivity of Finite Wireless Networks with Multiple Base Stations

Sergio Bermudez (Cornell University, USA); Stephen Wicker (Cornell University, USA)

IEEE 802.15.4 : An Implementation Perspective

Haffiz Shuaib (King's College London, United Kingdom); Hamid Aghvami (King's College London, United Kingdom)

Using Wireless Sensor-Controller Networks for Distributed Control in High Reliability Applications

Daniel Curiac ("Politehnica" University Timisoara, Romania); Constantin Volosencu ("Politehnica" University Timisoara, Romania); Dan Pescaru ("Politehnica" University Timisoara, Romania); Alex Doboli (SUNY Stony Brook, USA)

A Model for Differentiated Service Support in Wireless Multimedia Sensor Networks

Mohammad Hossien Yaghmaee (Ferdowsi University of Mashad, Iran)

#### **R7.2: SN IV Localization, Positioning and Routing**

Room: Harbor III      Chair: Faruk Bagci (University of Augsburg, Germany)

A Study of Directional Sensor Localization

Juo-Yu Lee (UCLA, USA)

LocSens - An Indoor Location Tracking System using Wireless Sensors

Faruk Bagci (University of Augsburg, Germany)

Two Dimensional Localization Algorithm Based on Received Signal Strength Ratio

Xinyu Yang (Xi'an Jiaotong University, P.R. China)

ESD: A Novel Optimization Algorithm for Positioning Estimation in Wireless Sensor Networks - Analysis and Experimental Validation via a Testbed Platform

Stefano Tennina (University of L'Aquila, Italy); Marco Di Renzo (Telecommunications Technological Center of Catalonia, Spain)

A Robust Routing Algorithm with Fair Congestion Control in Wireless Sensor Network

Yunlu Liu (Beihang University, P.R. China)

Integrated Placement and Routing of Relay Nodes for Fault-Tolerant Hierarchical Sensor Networks

Ataul Bari (School of Computer Science, University of Windsor, Canada); Yufei Xu (University of Windsor, Canada); Arunita Jaekel (School of Computer Science, University of Windsor, Canada)

### **R7.3: IPMC IV: Multimedia Networking and Streaming II**

Room: Island I/II      Chair: Jun Kyun Choi (Information Communication University, Korea)

On the Delivery of Scalable Video over Heterogenous P2P Networks

Yih Han Tan (National University of Singapore, Singapore)

Performance Evaluation of Video Streaming Over High-density Wireless Mesh Network

Liu Yong (Tsinghua University, P.R. China)

IP Traffic Classification for QoS Guarantees: the Independence of Packets

Maurizio Dusi (University of Brescia, Italy); Francesco Gringoli (University of Brescia, Italy);

Luca Salgarelli (University of Brescia, Italy)

A Simulation of IEEE1394c-based Multi-channel Home Streaming Service with Fast Ethernet and IEEE1394a

Gi Hoon Jung (Kyungpook National University, Daegu, Korea, Korea); Soon Ju Kang (Kyungpook National University, Korea)

Dynamic QoS Adaptation for Multimedia Traffic

Laercio Cruvinel (Inesc-ID/Instituto Superior Técnico, Portugal); Teresa Vazao (Inesc-ID/Instituto Superior Técnico, Portugal); Fernando Silva (Instituto Superior Tecnico, Lisbon, Portugal, Portugal); António Fonseca (Inesc-ID/Instituto Superior Técnico, Portugal)

Scalable Video Streaming with automatic content adaptation

Livio Lima (University of Brescia, Italy); Nicola Adami (University of Brescia, Italy); Riccardo Leonardi (University of Brescia, Italy)

### **R7.4: IMAP IV: Intelligent Image/Video Processing**

Room: Island III/IV      Chair: Chang Wen Chen (State University of New York at Buffalo, USA)

Defocus Estimation from A Single Image

Shiqian Wu (Institute for Infocomm Research, Singapore); Weisi Lin (Nanyang Technological University, Singapore)

A Novel Block Classification Method for H.264 Compressed Video

Yin Zhang (Tsinghua University, P.R. China); Zengxiang Lu (Tsinghua University, P.R. China); Haiming Lu (Tsinghua University, P.R. China)

Latent Topic Discovery for Moving People Detection in Visual Surveillance

Peng Zhang (Nanyang Technological University, Singapore); Sabu Emmanuel (Nanyang Technological University, Singapore); Mohan Kankanhalli (National University of Singapore, Singapore)

A New Image Quality Assessment Metrics Based on Human Visual System

Wen Lu (School of Electronic Engineering, Xidian University, Xi'an 710071, China, P.R. China); Dacheng Tao (The Hong Kong Polytechnic University, Hong Kong); Xinbo Gao (School of Electronic Engineering, Xidian University, Xi'an 710071, China, P.R. China); Xuelong Li (University of London, United Kingdom)

A Kd-tree Based Dynamic Indexing Scheme For Video Retrieval And Geometry Matching

Li Gao (Northwestern University, USA); Zhu Li (Hong Kong Polytechnic University, Hong Kong); Aggelos K. Katsaggelos (Northwestern University, USA)

## **R7.5: SoCCaN III: Network Security**

Room: Island V/VI      Chair: Weisi Lin (Nanyang Technological University, Singapore)

Using Optical Signal Processing to Provide Information Security in Data Networks

Paul Prucnal (Princeton University, USA); Mable P. Fok (Princeton University, USA);

Konstantin Kravtsov (Princeton University, USA); Yanhua Deng (Princeton University, USA);

Zhenxing Wang (Princeton University, USA); Natalie Kostinski (Princeton University, USA)

An Efficient and Scalable Pattern Matching Scheme for Network Security Applications

Tsern-Huei Lee (National Chiao Tung University, Taiwan); Nai-Lun Huang (National Chiao Tung University, Taiwan)

A Lightweight Protocol Analysis and Modification for Secure RFID System

Hyun-Seok Kim (Korea Military Academy, Korea)

A Personalized Group Trust Management System for Collaborative Services

Huanyu Zhao (Oklahoma State University, USA); Xiaolin Li (Oklahoma State University, USA)

Group-Oriented Communication: Concept and Network Architecture

Yosuke Takahashi (Osaka University, Japan); Kouhei Sugiyama (Osaka University, Japan);

Hiroyuki Ohsaki (Osaka Univ., Japan); Takeshi Yagi (Nippon Telegraph and Telephone

Corporation, Japan); Makoto Imase (Osaka Univ., Japan); Junichi Murayama (NTT Corporation, Japan)