

WTS 2014 Paper Presentation Sessions
Waterview Conference Center, Arlington, Virginia
Friday, April 11, 2014

8:30 am – 10:00 am

Session 1-A

Wireless Telecommunications Systems I

Minimizing Energy Consumption for Cooperative Network and Diversity Coded Sensor Networks, Gabriel Arrobo (University of South Florida, USA), Richard D. Gitlin (University of South Florida, USA)

UE Power Saving with RRC Semi-Connected State in LTE, Jianke Fan (Broadcom Communication Finland, Finland), Seppo Alanara (Broadcom, Finland)

Covert Channels in 802.11e Wireless Networks, Hong (Hannah) Zhao (Fairleigh Dickinson University, USA)

A Low Power Receiver Architecture for Near Field Communication Readers, Nurcan Keskin (Oregon State University, USA); Huaping Liu (Oregon State University, USA)

An Efficient Multi-Parent Hierarchical Routing Protocol for WSNs, Carolina Del Valle (Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico); Carlos Mex (ITESM, Mexico); Aldo Orozco (CINVESTAV, Mexico); Giselle Galvan-Tejada (Cinvestav, Mexico); Mauricio Lara (Centro de Investigación y de Estudios Avanzados del IPN, Mexico); Oscar Olmedo (Centro de Investigación y de Estudios Avanzados del IPN, Mexico)

8:30 am – 10:00 am

Session 1-B

E-health & Telecommunications in

Healthcare

Multimedia Content Delivery for Remote Patient Monitoring using Cognitive Radio Networks, Dramane Ouattara (University of Bordeaux, France); Mohamed Aymen Chalouf (IRISA Lab - University of Rennes 1, France); Omessaad Hamdi (LaBRI, France); Francine Krief (University of Bordeaux, France)

CrowdHelp: m-Health Application for Emergency Response Improvement through Crowdsourced and Sensor-Detected Information, Liliya Besaleva (University of Virginia, USA); Alfred C. Weaver (University of Virginia, USA)

Patterns of Effective Medication Adherence: The Role of Wireless Interventions, Neetu Singh (Georgia State University, USA); Upkar Varshney (Georgia State University, USA)

Wireless Monitoring of Misuse of Prescription Medications, Upkar Varshney (Georgia State University, USA)

An Innovative Wireless Cardiac Rhythm Management (iCRM) System, Gabriel Arrobo (University of South Florida, USA); Calvin Perumalla (University of South Florida, USA); Stanley Hanke (University of South Florida, USA); Thomas Ketterl (University of South Florida, USA); Peter Fabri (University of South Florida, USA); Richard D. Gitlin (University of South Florida, USA)

8:30 am – 10:00 am

Session 1-C

Physical Layer I

Cognitive Radio Sensing Based on Joint Distribution of Pseudo Wishart Matrix Eigenvalues, Usama Y. Mohamad (University of Kassel, Germany); Dirk Dahlhaus (University of Kassel, Germany)

Non-Coherent detection of GFSK Using Extended Kalman Filtering for Non-Gaussian Noise, Ahmad Nsour (Oakland University, USA); Alhaj-Saleh Abdallah (Oakland University, USA); Mohamed Zohdy (Oakland University, USA)

Performance Analysis of AF Cooperative Networks with Time-Varying Links: Error Rate and Capacity, Yazid Khattabi (University of Mississippi, USA); Mustafa Muhammad Matalgah (University of Mississippi, USA)

Performance Improvement of Decode-and-Forward Relay Systems Using Dual Polarized Antenna, Maja Ilic-Delibasic (University of Montenegro, Montenegro); Milica Pejanovic-Djurisic (University of Montenegro, Montenegro)

Performance Analysis of AF Cooperative Networks with Time-Varying Links: Outage Probability, Yazid Khattabi (University of Mississippi, USA); Mustafa Muhammad Matalgah (University of Mississippi, USA)

10:00 am – 10:15 am

Break

10:15 am – 11:45 pm
Systems II

Session 2-A

Wireless Telecommunications

On Optimizing the Performance of Interference-Limited Cellular Systems, Rana A. Abdelaal (University of California, Irvine, USA); Alireza S. Behbahani (University of California, Irvine, USA); Ahmed M. Eltawil (University of California, Irvine, USA)

On the Performance of Massive MIMO Cellular Systems With Power Amplifiers, Rana A. Abdelaal (University of California, Irvine, USA); Alireza S. Behbahani (University of California, Irvine, USA); Ahmed M. Eltawil (University of California, Irvine, USA)

Energy Efficiency Metrics for Heterogenous Wireless Cellular Networks, Milica Pejanovic-Djurisic (University of Montenegro, Montenegro); Ana Aligrudic (University of Montenegro, Montenegro)

WiFi iLocate: WiFi based Indoor Localization for Smartphone, Xiang He (Oakland University, USA); Shirin Badiei (Oakland University, USA); Daniel Aloï (Oakland University, USA); Jia Li (Oakland University, USA)

Applying Spatial Diversity to Mitigate Partial Band Interference in Undersea Networks, James McGee (University of Rhode Island, USA); Josko Catipovic (NUWC, RI, USA); Peter Swaszek (University of Rhode Island, USA)

10:15 am – 11:45 pm

Session 2-B Wireless Business, Investments, and Applications

Telecommunications Service Providers in Transition: A Strategic Retrospective, Steven Powell (Cal Poly Pomona, USA)

Bring Your Own Device (BYOD): Benefits, Concerns, and Security Issues, J. P. Shim (Georgia State University, USA)

A Novel Methodology of Data Analytics and Modeling to Evaluate LTE Network Performance, Ye Ouyang (Stevens Institute of Technology, USA); M. Hosein Fallah (Stevens Institute of Technology, USA); Sanqing Hu (Stevens Institute of Technology, USA); Yong Ren (Stevens Institute of Technology, USA); Yirui Hu (Rutgers University, USA); Zhichang Lai (Harbin Engineering University, USA); Mingxin Guan (Stevens Institute of Technology, USA); Wenyuan Lu (VPIsystems, USA)

Logistic Statistics for Optimal Resource Allocation, Zory Marantz (NY City College of Technology, USA)

Emerging Mobile Technologies/Tools for E-learning, Benjamin Khoo (New York Institute of Technology, USA)

10:15 am – 11:45 pm

Session 2-C

Physical Layer II

Opportunistic Access in Frequency Hopping Cognitive Radio Networks, Ethan Hennessey (Air Force Institute of Technology, USA); Kenneth Mark Hopkinson (Air Force Institute of Technology, USA); Mark D. Silvius (Air Force Institute of Technology, USA)

Spectral Re-harvesting for 4G networks: Through low-complexity VAMOS receiver design, Muyeen Nawaz (Samsung Research India Bangalore, India); Arvind Chakrapani (Samsung R&D, India)

Analysis and Comparison of Fractional Frequency Reuse Schemes Based on Worst Case Signal to Interference Power Ratio in OFDMA Uplink, Sherief Hashima (Engineering Dept, EAEA, Cairo, Egypt); Osamu Muta (Kyushu University, Japan); Said M. Elnoubi (Alexandria University, Egypt); Masoud Alghoniemy (University of Alexandria, Egypt); Hossam Shalaby (Alexandria University, Egypt); Hiroshi Furukawa (Kyushu University, Japan); Imbaby Mahmoud (Egyptian Atomic Energy Authority, Egypt)

IEEE 802.11ac: A Performance Evaluation with Lattice-Based MMSE and Zero Forcing MIMO OFDM Receivers, Roger Pierre Fabris Hoefel (Federal University of Rio Grande do Sul, Brazil)

Successive Precoding and User Selection in MU-MIMO Broadcast Channel with Limited Feedback, Long Chen (UESTC, P.R. China); Zhi Chen (UESTC, P.R. China); Li Liu (University of Electronic Science and Technology of China, P.R. China); Bin Fu (University of Electronic Science and Technology of China, P.R. China)

11:45 am – 1:45 pm

Best Paper Awards Ceremony & Lunch

Guest Speaker: Dr. Henning Schulzrinne

Chief Technology Officer, U. S. Federal Communications Commission
Julian Clarence Levi Professor of Computer Science, Columbia University

1:45 pm – 3:15 pm
Systems III

Session 3-A

Wireless Telecommunications

Distributed Relay Beamforming for Fairness-Aware Amplify-and-Forward Relaying under Correlated Relays Noise, Basem M. ElHalawany (Egypt-Japan University of Science & Technology, Egypt); Maha Elsabrouty (Egypt Japan University for Science and Technology, Egypt); Osamu Muta (Kyushu University, Japan); Adel Abdel Rahman (Egypt-Japan University of Science & Technology, Egypt); Hiroshi Furukawa (Kyushu University, Japan)

Implementation of a Fine-Grained Parallel SE-SD Algorithm Accelerator on FPGA, Lei Guo (National University of Defense Technology, P.R. China); Shijie Li (National University of Defense Technology, P.R. China); Yong Dou (National University of Defense Technology (NUDT), P.R. China); Jingfei Jiang (National University of Defense Technology, P.R. China)

A Mathematical Analysis of Cellular Interference on the Performance of S-band Military Radar Systems, Awais Khawar (Virginia Tech, USA); Ahmed Abdelhadi (Virginia Tech, USA); T. Charles Clancy (Virginia Tech, USA)

Partial Sensing Coverage and Deployment Efficiency in Wireless Directional Sensor Networks, Yun Wang (Bradley University, USA); Zhifeng Xiao (Penn State Erie, the Behrend College, USA); Yanwei Wu (Western Oregon University, USA); Anthony Stephan (Bradley University, USA); Jacob Siegers (Bradley University, USA)

Source-Observation Weighted Fingerprinting for Machine Learning Based Localization, Thomas Ketseoglou (California State Polytechnic University, USA); Brian Mohtashemi (California State Polytechnic University, Pomona, USA)

1:45 pm – 3:15 pm

Session 3-B

Network Layer and Medium Access Control (MAC) Layer I

Mitigating Black Hole Attacks in Wireless Sensor Networks Using Node-Resident Expert Systems, Vincent F Taylor (University of Oxford, United Kingdom); Daniel T Fokum (University of the West Indies, Jamaica)

K-Centers Mean-shift Reverse Mean-shift Clustering Algorithm over Heterogeneous Wireless Sensor Networks, Qingyan Xie (University of Cincinnati, USA); Yizong Cheng (University of Cincinnati, USA)

Achieving Guaranteed Connected Coverage by Using Virtual Hexagonal Partition in Wireless Sensor Networks, Attapol Adulyasas (University of Surrey, United Kingdom); Zhili Sun (University of Surrey, United Kingdom); Ning Wang (University of Surrey, United Kingdom)

K-Centers Clustering Protocol for Heterogeneous Wireless Sensor Networks, Qingyan Xie (University of Cincinnati, USA); Yizong Cheng (University of Cincinnati, USA); Qing-An Zeng (North Carolina A&T State University, USA)

Many-to-All Priority-Based Network-Coding Broadcast in Wireless Multihop Networks, Jung-Chun Kao (National Tsing Hua University, Taiwan)

1:45 pm – 3:15 pm

Session 3-C

Physical Layer III

Bounds on Capacity in Multi-Channel Grid Networks, Amalya Mihnea (Florida Atlantic University, USA); Mihaela Cardei (Florida Atlantic University, USA)

HPA Nonlinearities Mitigation by Joint Predistorter and Constellation Rotation Using MIMO Communication Systems, Latif Jan (University of Engineering & Technology Peshawar, Pakistan); Mohammad Haseeb Zafar (University of Engineering and Technology, Peshawar, Pakistan); Ishtiaq Ahmed (Salman bin AbdulAziz University, Saudi Arabia); Mohammad Babar (, Pakistan); Sahibzada Ali Mahmud (University of Engineering and Technology, Peshawar, Pakistan); Gul Muhammad Khan (University of Engineering and Technology Peshawar, Pakistan); Syed Gilani (University of Engineering and Technology, Peshawar, Pakistan)

Effect of Discrete Constellations on Duality between the Gaussian Multiple Access and the Gaussian Broadcast Channel, Iram Abdur Rehman (National University of Sciences and Technology, Pakistan); Rizwan Ghaffar (Samsung US R&D Center, Canada); Saad B. Qaisar (School of Electrical Engineering and Computer Science (SECS), NUST, Pakistan); Imran Rashid (National University of Sciences and Technology, Pakistan)

On the Feasibility of Generalized Interference Alignment with Partial Interference Cancellation, Xinya Tu (University of Electronic Science and Technology of China, P.R. China); Zhi Chen (University of Electronic Science and Technology of China, P.R. China); Jun Fang (University of Electronic Science and Technology of China, P.R. China); Lingxiang Li (University of Electronic Science and Technology of China, P.R. China); Bo Qu (University of Electronic Science and Technology of China, P.R. China); Bin Fu (University of Electronic Science and Technology of China, P.R. China)

Blind Multiuser Detection Based on the Fast Relative Newton Algorithm, Zaid Albataineh (Michigan State University, USA); Fathi Salem (Michigan State University, USA)

3:00 pm – 3:15 pm

Break

3:15 pm – 5:00 pm

Session 4-A

Wireless Telecommunications

Systems IV

Solving Binary and Continuous Knapsack Problems for Radio Resource Allocation over High Altitude Platforms, Ahmed Ibrahim (University of Manitoba, Canada); Attahiru Alfa (University of Manitoba, Canada)

The Design of Indoor Positioning System for Emergency Evacuations, Liren Zhang (United Arab Emirates University, UAE)

Bayesian Quantized Network Coding via Generalized Approximate Message Passing, Mahdy Nabaee (McGill University, Canada); Fabrice Labeau (McGill University, Canada)

A MCS Adaptive Scheduling Algorithm for IEEE802.11ad Wireless Communications, Weijie Liu (Panasonic Corporation, Japan)

Towards Layer Adaptation for Audio Transmission, Jan Holub (FEE CTU Prague, Czech Republic); Oldrich Slavata (Faculty of Electrical Engineering, Czech Technical University, Czech Republic); Pavel Souček (FEE CTU, Czech Republic); Odysseas Zisimopoulos (University of Patras, Greece); Dimitris Toumpakaris (University of Patras, Greece); Stavros Kotsopoulos (Wireless Telecommunications Laboratory, Greece)

3:15 pm – 5:00 pm

Session 4-B

Medium Access Control Layer II

A New Anti-Collision Protocol for RFID Networks, Fariha Baloch (Wichita State University, USA); Ravi Pendse (Wichita State University, USA)

Throughput Analysis of Channel Surfing in Jammed Single-Hop Wireless Networks, Peng Wang (NRC PostDoc, USA); Brian Henz (US Army Research Laboratory, USA)

A Multi-channel Cooperative Clustering-Based MAC protocol for VANETs, Fan Yang (Xiamen University, P.R. China)

CBA-EVT: A Traffic-Adaptive Energy-Efficient MAC Protocol for Wireless Sensor Networks, Jung-Chun Kao (National Tsing Hua University, Taiwan)

Modeling and Simulation of Energy Efficient Enhancements for IEEE 802.15.4e DSME, Silvia Capone (CMC Labs, Italy); Riccardo Brama (CMC Labs, Italy); Fabio Ricciato (Austrian Institute of Technology (AIT), Italy); Gennaro Boggia (Politecnico di Bari, Italy); Angelo Malvasi (CMC Labs, Italy)

3:15 pm – 5:00 pm

Session 4-C

Wireless Telecommunications

Systems V

Development of a Satellite Communication Emulator for the Hyperspectral Microwave Atmospheric Sounder (HyMAS), Giti Javidi (Virginia State University, USA); Ehsan Sheybani (Virginia State University, USA); Janelle Williams (Virginia State University, USA)

Visualization of Real-time Radar Data by Integration of X-Band Software, Giti Javidi (Virginia State University, USA); Ehsan Sheybani (Virginia State University, USA); Danielle Mason (Virginia State University, USA)

Design Considerations for Radio Protocol Improvement Beyond LTE-Advanced: Service Access Integration and Optimization, Ki-Dong Lee (LG Electronics Mobile Research, USA)

An Optimized SIMD Implementation of the HEVC/H.265 Video Decoder, Paolo Lambruschini (University of Genoa, Italy); Massimo Bariani (University of Genoa, Italy); Marco Raggio (University of Genoa, Italy); Luca Pezzoni (Advanced System Technology, Italy)

Signaling Cost Analysis for NEMO Extended Support Protocol using Correspondent Router, Samer Sami Hasan (University Kebangsaan Malaysia, Malaysia); Rosilah Hassan (Universiti Kebangsaan Malaysia, Malaysia)

WTS 2014 Poster Papers
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Friday, April 11, 2014

Poster papers will be posted all day. Authors will be available to answer questions during the morning and afternoon breaks and after lunch.

Dyadic Green's functions for Wireless System to Electric Field Prediction: A Study Case for Digital TV Systems in Amazon Region, Silva, D. K. N.; Oliveira, A. W.; Barros, W. J. da S. Faculty of Electrical Engineering and Computer Federal University of Pará – UFPA, Belém – Pará – Brazil

Practical Considerations for Electromagnetic Interference Suppression Rate in Wireless System Applications, Nurcan Keskin and Huaping Liu, School of Electrical Engineering and Computer Science, Oregon State University, Corvallis, OR 97331-5501, USA

Integrating WSN with the Internet: QoS Analysis and Modeling for Heterogeneous Data Traffic, Syarifah Ezdiani Syed Nor Azlan and Adnan Al-Anbuky, Sensor Network and Smart Environment Research Centre Auckland University of Technology, Auckland, New Zealand

Environment Monitoring And Control In Aquaculture Based On Wireless Sensor Networks, Shi-feng Yang, Long Xue, College of Electronic Information and Automation, Tianjin University of Science and Technology, P. R. China

Packet Collision Avoidance Scheme for CRMBR, Dan Liu, Roujia Sun, Pei Xue, Yan Sun, School of Electronic Engineering and Computer Science, Queen Mary University of London, London, UK