

MILCOM 2014

TRACK 2 – WAVEFORMS AND SIGNAL PROCESSING – Monday 6 October 2014

Session Code	Session Title	Time	Paper Title	Authors	Session Chair
WSP-1	Localization	9:00 AM	Decoupled 2D Direction Finding Based On Sparse Signal Reconstruction	Feng Wang; Xiaowei Cui; Mingquan Lu	Genshe Chen
		9:25 AM	Designing Radio Interferometric Positioning Systems with Undersampling Techniques	Marie Shinotsuka; Yiyin Wang; Xiaoqi Ma; G. Tong Zhou	
		9:50 AM	A Methodology for Localization in Tunnels based on Periodic RF Signal Fading	Carlos Rizzo; Francisco M Lera; José Luis Villarreal	
		10:35 AM	Remote Transmitter Tracking with Raytraced Fingerprint Database	Eric de Groot; Tamal Bose; Charlie Cooper; Matt Kruse	
		11:00 AM	Hardware Implementation of MUSIC and ESPRIT on NI-PXI Platform	Nizar Mohammed Tayem; Ahmed Hussain; Mohammed Omer	
		11:25 AM	DOA Estimation Method using R Matrix of the QR Factorized Data and its Prototype Implementation on NI-PXI Platform	Nizar Mohammed Tayem; Mohammed Omer; Ahmed Hussain	
WSP-2	Coding and Modulation	9:00 AM	Performance of Percent Gaussian Orthogonal Signaling Waveforms	Alan Michaels; Chad Lau	Michael Rice
		9:25 AM	Simple Closed-Form Approximations for the Error Performance of Digital Modulations in Fading	Eyidayo Adebola; Annamalai Annamalai	
		9:50 AM	BER Analysis for Digital Modulation Schemes Under Symmetric Alpha-Stable Noise	Fan Yang; Xi Zhang	
		10:35 AM	Design and Implementation of Seamless Rate Adaptive Decoder	Qiu Lu; Min Wang; Jun Wu; Zhifeng Zhang; Xin-Lin Huang	
		11:00 AM	Preliminary Results on the Performance of an Adaptive Protocol for Packet Relay with Fountain Coding	Siddhartha S Borkotoky; Michael Pursley	
		11:25 AM	Optimal choice of transmission parameters for LDPC-coded CPM	Mahsa Foruhandeh; Murat Uysal; ?brahim Altunba?; Tuna Guven; Alper Gercek	
WSP-3	Antennas and Propagation	9:00 AM	A New Type of Conformal Antenna Using Magnetic Flux Channels	David Auckland; Chris Daniel; Rodolfo Diaz	David Korn
		9:25 AM	A Study on the Forest Radio Propagation Characteristics in European Mixed Forest Environment	Alexandros Palaïos; Yann Labou; Petri Mähönen	
		9:50 AM	Over-Harbor Channel Modeling with Directional Ground Station Antennas for the Air-Ground Channel	Ruoyu Sun; David W Matolak	
		10:35 AM	Adaptive Transmit and Receive Beamforming Based on Subspace Projection for Anti-jamming	Shengjun Zhang; Liang Jin; Kaizhi Huang; Xiangyu Li	
		11:00 AM	Impact of Antenna Correlation in Electrically Dual-polarized Small Antennas	Jun Chen; Farzad Talebi; Thomas Pratt	
		11:25 AM	On the Study of Shadow Correlations of Two Radio Frequencies in an Urban Environment	Nikos Perpinias; Alexandros Palaïos; Janne Riihijärvi; Petri Mähönen	
WSP-4	Cognitive Radio	2:00 PM	Fast Spectrum Sensing: a Combination of Channel Correlation and Markov Model	Mingfei Gao; Xiao Yan; Yuchi Zhang; Chaoyue Liu; Yifan Zhang; Zhiyong Feng	
		2:25 PM	Game Theoretical Partially Overlapping Filtered Multi Tones in Cognitive Heterogeneous Networks	Mustafa H Yilmaz; Huseyin Arslan	
		2:50 PM	Decode-and-Forward Relay Selection with Imperfect CSI in Cognitive Relay Networks	Hui Sun; Mort Naraghi-Pour	
		3:35 PM	Variable rate m-QAM assisted Packet Size Optimization for Cognitive Radio and MIMO Cognitive Radio based Sensor Networks	Chitradeep Majumdar; Nikita Sridhar; Shabbir N Merchant	
		4:00 PM	Cognitive Manager for Hierarchical Cluster Networks Based on Multi-Stage Machine Method	Krzysztof Malon; Pawel Skokowski; Piotr Marszalek; Jan Kelner; Jerzy Lopatka	
		4:25 PM	Cooperative Combining of Cumulants-Based Modulation Classification in CR Networks	Mahdi Abdelbar; Tamal Bose; Bill Tranter	
WSP-5	Signal Processing	2:00 PM	A Block Processing approach to CMA Equalization of SOQPSK for Aeronautical Telemetry	Arlene A. Cole-Rhodes; Henry Umuolo; Farzad Moazzami; Michael Rice	Aaron Cohen
		2:25 PM	Mappings of Window Functions	Christopher Fritz; Adly T. Fam	
		2:50 PM	The Sidelobe Inversion Window	Adly T. Fam; Christopher Fritz	
		3:35 PM	On the Performance of Equalization Techniques for Aeronautical Telemetry	Michael Rice; Mohammad Saquib; Md. Shah Afran; Arlene A. Cole-Rhodes; Farzad Moazzami	
		4:00 PM	Model Order Selection in Presence of Unknown Colored Noise	Farzad Talebi; Thomas Pratt	
		4:25 PM	Unsupervised Denoising via Wiener Entropy Masking in the STFT Domain	Tarin Ziyae	
WSP-6	Protected Communications	2:00 PM	Cyclic Feature Concealing CP Selection for Physical Layer Security	Zekeriyya E Ankarali; Murat Karabacak; Huseyin Arslan	Michael Kurdziel
		2:25 PM	An Assessment of OFDM Carrier Frequency Offset Synchronization Security for 4G Systems	Matthew La Pan; T. Charles Clancy; Robert McGwier	
		2:50 PM	Secrecy Rate Pair Constraints for Secure Throughput	Kyle A Morrison; Dennis Goeckel	
		3:35 PM	An Anti-jam Communications Technique via Spatial Hiding Precoding	Chad A Cole; Chowdhury Shahriar; T. Charles Clancy	
		4:00 PM	Robust Beamforming and Jamming for Secure AF Relay Networks with Multiple Eavesdroppers	Cong Zhang; Hui Gao; Haijing Liu; Tiejun Lv	
		4:25 PM	Statistics-based Jamming Detection Algorithm for Jamming Attacks Against Tactical MANETs	Aleksi Marttinen; Alexander M. Wyglinski; Riku Jäntti	

TRACK 2 – WAVEFORMS AND SIGNAL PROCESSING – Tuesday 7 October 2014

Session Code	Session Title	Time	Paper Title	Authors	Session Chair
WSP-7	Relay Networks	9:00 AM	Long Range Inter-Band Radio with the Processed Surrogate Satellite Waveform	William T Harbison; Rohit Gupta	Michael Rupar
		9:25 AM	Time-efficient Relaying Strategies for Military Communication	Ian Bajaj; Yi Gong; Yee Hui Lee	
		9:50 AM	Exploiting Cooperative Relay for Reliable Communications in Underwater Acoustic Sensor Networks	Yang Wei; Dong Seong Kim	
		10:35 AM	Blind Relay Network with Viterbi Detection	Shuang Feng; Jie Yang; Hyuck Kwon	
		11:00 AM	Hybrid Positioning Scheme based on Satellite and Aeronautical Relay for the Battlefield	Kyuman Lee; Jae Sung Lim	
		11:25 AM	Unicast Barrage Relay Networks: Outage Analysis and Optimization	Salvatore Talarico; Matthew Valenti; Thomas R Halford	
WSP-8	MIMO	9:00 AM	A Generalized Time-Reversed Space-Time Block Code for Helicopter-to-Ground Communications	Michael Rice; Mohammad Saquib	Christian Schlegel
		9:25 AM	An Efficient Greedy LLL Algorithm for MIMO Detection	Qingsong Wen; Xiaoli Ma	
		9:50 AM	Lattice Reduction Aided Transceiver Design for Multiuser MIMO Downlink Transmissions	Yiming Kong; Qi Zhou; Xiaoli Ma	
		10:35 AM	Zero-Forcing approach for L2-Orthogonal ST-Codes with CPM-OFDM schemes and frequency selective Rayleigh fading channels	Miguel Hisojo; Jerome Lebrun; Luc Deneire	
		11:00 AM	A Family of Orthogonal Full Rate Differential Space Time Block Codes	Ning Yang	
		11:25 AM	Lattice Reduction Techniques in MIMO Systems with Correlated Channels	Yiming Kong; Xiaoli Ma	

TRACK 2 – WAVEFORMS AND SIGNAL PROCESSING – Tuesday 7 October 2014 – (Continued) –

Session Code	Session Title	Time	Paper Title	Authors	Session Chair
WSP-9	Satellite Waveforms	2:00 PM	Shared Transponder Performance With Selective Sub-Channel Gain	Bruce F. McGuffin	Roy Axford
		2:25 PM	Dual Polarization Frequency Reuse in SATCOM: A Method to Counter Poor Cross-Polar Isolation	Balachander Ramamurthy; William G Cowley; Linda M. Davis; Gerald Bolding	
		2:50 PM	Frequency hopping packing algorithm for MF-TDMA with various types of satellite terminals	Jin Seok Lee; Hong Jun Noh; Jae Sung Lim; Ki Keun Kim	
		3:35 PM	Downlink Tracking Performance of Kalman Filter for the Enhanced Polar System (EPS)	Lan K Nguyen; Ming Chang; Ryan Vorwerk; Tin Ha	
		4:00 PM	Particle Filter Based Inversion of Nonlinear Satcom Channels	Muhammad Qureshi; Stephen Wilson	
		4:25 PM	High Penetration Alerting Signal Design for Mobile Satellite Communications Systems	James J Jong; Harish Ramchandran; Channasandra Ravishankar; Jun Wang	
WSP-10	Sensor Networks	2:00 PM	Single Sensor Blind Time-Frequency Activity Estimation of a Mixture of Radio Signals via CP Tensor Decomposition	Christopher Mueller-Smith; Predrag Spasojevi?	Richard Booton
		2:25 PM	Distributed Event Detection in Sensor Networks under Random Spatial Deployment	Pengfei Zhang; Gareth Peters; Ido Nevat; Gaoxi Xiao; Hwee Pink Tan	
		2:50 PM	Node Synchronization in a Wireless Sensor Network Using Unreliable GPS Signals	Daniel Fuhrmann; Joshua Stomberg; Saeid Nooshabadi; Dustin McIntire; William Merill	
		3:35 PM	Density Estimation, Hypotheses Testing, and Sensor Classification in Wireless Sensor Networks	Erfan Soltanmohammadi; Mort Naraghi-Pour	
		4:00 PM	ASPD: Adaptive Sensing Period Decision for Time-varying Channel in Military MANETs	Bosung Kim; Gyu-min Lee; Byeong-hee Roh	
WSP-11	Spread Spectrum	2:00 PM	Performance of the FASTNET Narrowband VHF Frequency Hopping tactical radio in challenging multipath environments	Adrien Le Naour; François Pipon; Bernhard Obrist; Benny Nahoum; Dominique Mérel	Clark Robertson
		2:25 PM	Generalized Multi-Carrier Chaotic Shift Keying	Alan Michaels; Chad Lau	
		2:50 PM	Performance of CSSS Signals with Orthogonal Overlay Codes	Alan Michaels; Chad Lau	
		3:35 PM	Frequency Hopping Zero Sidelobe Code Set with Desirable Frequency Selective Fading and Multipath Interference Properties	Adly T. Fam; Ravi Kadlimatti	
		4:00 PM	Optimum Design for Robustness of Frequency Hopping System	Gang Wang; Khanh D Pham; Erik Blasch; Tien Manh Nguyen; Genshe Chen; Dan Shen; Bin Jia; Xin Tian; Zhonghai Wang	
WSP-12	Detection	2:00 PM	Mixed Signal Detection based on Second-order Cyclostationary Features	Dong Li; Yang Qu; Zhiqiang Liu; Zhiqiang Wu; Zhiping Zhang	
		2:25 PM	Integrating linear-law detector performance simulation using Gram-Charlier expansion	Darius Subacius; Gurpartap Takhar; George Vachula	
		2:50 PM	Real-Time Passive Detection of RF Spark Emission from Gasoline Engines	Timothy Brothers	

TRACK 2 – WAVEFORMS AND SIGNAL PROCESSING – Wednesday 8 October 2014

Session Code	Session Title	Time	Paper Title	Authors	Session Chair
WSP-13	Receiver Algorithms	9:00 AM	Synchronization Error in QAM-based FBMC System	Wonsuk Chung; Beomju Kim; Moonchang Choi; Hyungju Nam; Hyunkyu Yu; Sooyong Choi; Daesik Hong	Eric Perrins
		9:25 AM	On Frequency Offset Estimation Using the INET Preamble in Frequency Selective Fading Channels	Michael Rice; Erik S. Perrins	
		9:50 AM	Iterative Demodulation and Channel Estimation for Asynchronous Joint Multiple Access Reception	Christian Schlegel; Marcel Jar	
		10:35 AM	A Low-Complexity Preamble Detector for INET-Formatted SOQPSK	Michael Rice; Andrew McMurdie; Erik S. Perrins	
		11:00 AM	On the Performance of Variable Fractional Delay Arbitrary Sample Rate Conversion for Digital Signals	John Kleider; Chris Steenhoek	
		11:25 AM	Fast Time Synchronization Strategy for Mitigating Collision of Initial Entry Message over Link-16	Sangsoon Ko; Hoki Baek; Jae Sung Lim	
WSP-14	Signal Classification	9:00 AM	Background Spectrum Classification for Cognitive Radio	Shridatt Sugrim; Predrag Spasojevi?; 301211	James Norris
		9:25 AM	Blind modulation classification for Rician aeronautical channels	Hyeung ill Lee; Dongho Kim; Byunggho Moon; Jungwoo Lee	
		9:50 AM	Universal Nonhierarchical Automatic Modulation Recognition Techniques For Distinguishing Bandpass Modulated Waveforms Based On Signal Statistics, Cumulant, Cyclostationary, Multifractal And Fourier-Wavelet Transforms Features	Sylwester Sobolewski; William Adams, Jr.; Ravi Sankar	
		10:35 AM	Blind Modulation Classification for MIMO systems using Expectation Maximization	Zhechen Zhu; Asoke Nandi	
		11:00 AM	Average Likelihood Method for Classification of CDMA	Alfredo Vega Irizarry; Adly T. Fam	
WSP-15	Radar Waveforms and Processing	9:00 AM	Triangular FM Based Discrete Frequency-Coding Waveform Sets	Farhan Qazi	Stephen Wilson
		9:25 AM	Polyphase Code Sets with Large Population Size	Farhan Qazi	
		9:50 AM	Multiple Extended Target Detection Using MIMO Radar and Compressed Sensing	Amanda Daniel; Dimitrie C. Popescu	
		10:35 AM	A Novel Approach for the Characterization of FSK Low Probability of Intercept Radar Signals Via Application of the Reassignment Method	Daniel Stevens; Stephanie Schuckers	
		11:00 AM	Multiplicative Complementary Codes	Adly T. Fam; Ravi Kadlimatti	
WSP-16	Interference Management	2:00 PM	An Optimal Transmission of Improper-Complex Second-Order Stationary Data Sequence in Cyclostationary Interference	Jeongho Yeo; Joon Ho Cho; Jim Lehnert	Randy Sylvester
		2:25 PM	Comm-Through-CREW Using Broadband Signal Processing ECCM	Cameron Pike	
		2:50 PM	On The Impact of Time-Varying Interference-Channel on the Spatial Approach of Spectrum Sharing between S-band Radar and Communication System	Awais Khawar; Ahmed Abdelhadi; T. Charles Clancy	
		3:35 PM	Detecting UWB Radar signals with UWB communication interference	Hyunwoo Cho; Yiyin Wang; Xiaoli Ma	
WSP-17	Faster than Nyquist	2:00 PM	Faster-than-Nyquist Signaling and Optimized Signal Constellation for High Spectral Efficiency in Nonlinear Satellite Systems	Bassel F Beidas; Rohit Iyer Seshadri; Mustafa Eroz; Lin-Nan Lee	Osama Haddadin
		2:25 PM	On Faster-than-Nyquist Transmission over a Multiple-Access Channel	Yi Feng; Jan Bajcsy	
		2:50 PM	Novel Interference Cancellation Technique based on Matrix Computation for FTN Communication System	Myung-Sun Baek	