

# AWSITC 2010 Technical Program

	Wednesday, June 2, 2010	Thursday, June 3, 2010	Friday, June 4, 2010
09:00 – 09:50	Multigigabit Wireless Multimedia Communications: Future and Core Technologies <i>V. Bhargava</i>	The Development of Raptor Codes <i>A. Shokrollahi</i>	Energy-Efficient Communications via Network Coding <i>J. H. Weber</i>
09:50 – 10:20	Tea and Coffee Break		
10:20 – 12:00	Super-Orthogonal Space Time Code in Frequency Selective Wideband Wireless Channel <i>I. B. Oluwafemi, S. H. Mneney</i>	Correcting Synchronization Errors Using Moment Balanced Codes and Neural Networks <i>R. Heymann, H. C. Ferreira</i>	Network Coding in Wireless Mesh Networks: From Theory to Practice <i>L. M. J. Grobler, F. J. Böning, M. Ferreira</i>
	A Survey of Channel Models for Land Mobile Satellite Communication <i>G. S. Hoffmann, L. M. J. Grobler, S. J. de Wet, A. S. J. Helberg</i>	Good Synchronization Sequences for Permutation Trellis Codes <i>T. Shongwe, T. G. Swart, H. C. Ferreira</i>	Comparing the Implementation of Network Coding on Different OSI Layers <i>J. L. van Wyk, L. M. J. Grobler, A. S. J. Helberg</i>
	Structured Low-Density Parity-Check (LDPC) Codes for Next Generation Wireless Communications <i>F. Ghayour</i>	A Note to Decoding of Permutation Sequences with Insertions and Deletions Based on Hidden Markov Model <i>L. Cheng, H. C. Ferreira</i>	The Viability of Implementing Radio Interferometric Positioning System to Obtain Topological Information in MIMO Wireless Mesh Networks <i>D. van der Merwe, L. M. J. Grobler, J. de Wet, M. Ferreira</i>
	Towards Indoor Mobility Modelling For MANETs <i>M. Sumbwanyambe, W. A. Clarke</i>	Timing Jitter and Insertion/Deletion Errors <i>F. Palunčić, W. A. Clarke, T. G. Swart, H. C. Ferreira</i>	Investigating Random Network Coding from a Pricing Perspective <i>H. Zhu</i>
	Interference Alignment for the Constrained K-user MIMO Interference Channel <i>M. Amir, A. El-Keyi, M. Nafie</i>	Linear Programming Bounds of Orthogonal Arrays for Experimental Designs <i>T. Saito, Y. Ukita, T. Matsushima, S. Hirasawa</i>	Investigating the Feasibility of Implementing Network Coding in a Wireless Mesh Network by Means of a Modified Routing Protocol <i>C. Wierenga, L. M. J. Grobler, S. von Solms</i>
12:00 – 13:30	Lunch		
13:30 – 14:20	Highly Nonlinear Filter Boolean Functions with High Algebraic Immunity for Stream Ciphers <i>C. Carlet</i>	Concepts in Information Theory and Coding Techniques <i>A. J. H. Vinck</i>	<i>IEEE Region 8 Event (see next page)</i>
14:20 – 14:50	Tea and Coffee Break		

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14:50 – 16:30	Communication between Engineers using Content Based Object Model <i>L. Horváth, I. J. Rudas, G. Szabó, G. P. Hancke</i>	Characterizing the factors influencing Electromagnetic Interference (EMI) and Radiation (EMR) in outdoor Broadband Power-line Communication (BPLC) Systems <i>S. Naiman, M. M. Kissaka, O. F. Hamad, J. Anatory</i>
	Mutual Information for Image Registration <i>A. Anthony</i>	Experimental Results on the Impulsive Noise measurements in a Narrowband Powerline Communications Channel <i>A. Emleh, H. C. Ferreira</i>
	Bayes Universal Source Coding Scheme for Correlated Sources <i>T. Suko, S. Horii, T. Matsushima, S. Hirasawa</i>	Impact of Synchronous Cyclic Impulsive Noise on Powerline Signal-to-Noise Ratios <i>A. J. Snyders, H. C. Ferreira, A. J. H. Vinck</i>
	Comparison of Algorithms for Audio Fingerprinting <i>H. A. van Nieuwenhuizen, L. M. J. Grobler, W. C. Venter</i>	Constructing Coset Codes with Optimal Same-Symbol Weight for Detecting Narrow-band Interference in M-FSK Systems <i>D. J. J. Versfeld, A. J. H. Vinck, J. N. Ridley, H. C. Ferreira</i>
	On the Balancing of Non-binary Sequences with Fast Parallel Decoding <i>T. G. Swart, J. H. Weber</i>	A Graph Theoretic Analysis of Spectral Shaping Properties <i>K. Ouahada, H. C. Ferreira</i>
16:30 – 17:00	Break	
17:00 – 18:40	Algorithm for Development of Adaptive Networked Traffic Control System by the Webster's Equation for Dar es Salaam City Roads <i>N. Y. Hamisi, B. M. M. Mwinyiwiwa, N. H. Mvungi, D. A. Mfinanga</i>	TBA  <i>W. A. Clarke</i>
	Communications Requirement for an Autonomous Long Endurance Solar Powered Aircraft <i>D. Fourie, J. Meyer</i>	
	Applications of Unmanned Aerial Vehicles in the Telecommunications Industry <i>G. Wilkins, J. Meyer</i>	
	Applications of Short Pulse Q-switched Erbium-doped Fiber Lasers in Telecommunications <i>J. J. M. Kaboko, J. Meyer</i>	
	High Power Fiber Laser Technological Growth from the Telecommunication Industry <i>J. le Roux, J. Meyer</i>	

IEEE Region 8 Chapter Coordination  
Subcommittee Computer & Control Chapter  
Groups Chapter Chair Conference and Leadership  
Joint Workshop  
See separate program for details.