



IEEE ISPLC 2013
JOHANNESBURG • SOUTH AFRICA • 24 - 27 MARCH

	Sunday, 24 March 2013	Monday, 25 March 2013	Tuesday, 26 March 2013	Wednesday, 27 March 2013
8:30-9:00		Registration	Registration	Registration
9:00-9:30		Welcome	Keynote: UtilLabs	Keynote: City Power
9:30-9:40		Short Break	Short Break	Short Break
9:40-11:00		M1: Signal Processing 1 M2: Smart Grids/In-vehicle	T1: Protocols 2 T2: Narrowband 1	W1: Applications W2: Narrowband 2
11:00-11:20		Coffee Break	Coffee Break	Coffee Break
11:20-12:40		M3: Protocols 1 M4: Impulsive noise	T3: Signal Processing 2 T4: EMC/Noise	W3: Broadband Channels W4: Coupling
12:40-14:00		Lunch	Lunch	Conference Ends
14:00-15:20		M5: Measurements M6: Smart Grids/Green Communications	T5: Coding/Modulation T6: Narrowband Interference	
15:20-15:30		Short Break	Short Break	
15:30-16:10		Panel Session: PLC in Developing Countries	Panel Session: PLC in Smart Grids	
16:10-16:30		Coffee Break	Coffee Break	
16:30-17:30	Registration (at the The Holiday Inn, in Rosebank)	Recent Results	Devolvo Workshop	
18:00-20:00	Welcome Reception (at the The Holiday Inn, in Rosebank)	TC-PLC Meeting	Conference Banquet (19:00-21:00 at Moyo's)	

Monday, 25 March 2013

Conference Room 1		Conference Room 2	
9:40-11:00	M1: Signal Processing 1 Chair: Gerd Bumiller	M2: Smart Grids/In-vehicle Chair: Ralf Lehnert	
	<p>Combining Techniques Performance Analysis in Spatially Correlated MIMO-PLC Systems <i>B. Nikfar, A.J.H. Vinck</i></p> <p>Potential Impact of the CENELEC Spectral Mask on Broadband PLC Networks <i>P. Achaichia, M. Le Bot, P. Siohan</i></p> <p>Multi-User Power-line Communication <i>A.J.H. Vinck, B. Dai</i></p> <p>On Performance of Multiple-domain Diversity in Powerline Communication Networks <i>H. Gacanin, A. Ligata</i></p>	<p>PLC Systems for Electric Vehicles and Smart Grid Applications <i>S. Barmada, M. Raugi, M. Tucci, Y. Maryanka, O. Amrani</i></p> <p>PLC Noise and Channel Characterization in a Compact Electrical Car <i>M. Antoniali, M. De Pianta, A.M. Tonello</i></p> <p>Experimental Evaluation on Narrow Band Power Line Communication in Medium and Low Voltage Smart Grids <i>A. Cataliotti, V. Cosentino, P. Russotto, D. Di Cara, G. Tinè</i></p> <p>Noise Analysis of a Power-Line Communication Channel in an LVDC Smart Grid Concept <i>A. Pinomaa, J. Ahola, A. Kosonen, P. Nuutinen</i></p>	
11:20-12:40	M3: Protocols 1 Chair: Masaaki Katayama	M4: Impulsive noise Chair: Abe Snyders	
	<p>Enhancement of Backoff Algorithm in CSMA/CA Protocols for Broadband PLC <i>I. Tsokalo, R. Radeke, R. Lehnert</i></p> <p>CSMA/CA: Improvements of the Contention Window Adaptation <i>S. Mudrievskiy, R. Radeke, R. Lehnert</i></p> <p>Fairness of MAC Protocols: IEEE 1901 Vs. 802.11 <i>C. Vlachou, J. Herzen, P. Thiran</i></p> <p>Cluster-based MAC and Resource Management for Quasi-Stationary Broadband Power Line Communication Networks <i>S. Choe, J. Yoo, Y. Louët</i></p>	<p>A Study on Channel Estimation Under Class A Impulsive PLC Channel <i>H. Ando, A. Nakamura, K. Ohno, M. Itami</i></p> <p>Impulsive Noise Generated by a Pulse Width Modulation Inverter: Modeling and Impact on Powerline Communication <i>K. Kilani, V. Degardin, P. Laly, M. Lienard, P. Degauque</i></p> <p>A New Impulsive Noise Cancellation Algorithm for Multi-wire Power Line Communications <i>X. Hu, F. Yin, Z. Chen</i></p> <p>Investigation on a New Combined Impulsive Noise Mitigation Scheme for OFDM Transmission <i>V.N. Papilaya, A.J.H. Vinck</i></p>	
14:00-15:20	M5: Measurements Chair: Pierre Degauque	M6: Smart Grids/Green Communications Chair: Francisco Cañete	
	<p>Measurement Based 3D-Simulation Models for Elements of Power Line Communications Network <i>R. Vuohtoniemi, T. Ronkainen, J.-P. Mäkelä, J. Iinatti</i></p> <p>The Characterization of Hybrid PLC-Wireless Channels: A Preliminary Analysis <i>T.R. Oliveira, C.A.G. Marques, M.S. Pereira, S.L. Netto, M.V. Ribeiro</i></p> <p>Spectrum Analyzer Based Measurement and Detection of MW/SW Broadcast Radios on Power Lines for Cognitive PLC <i>Y. Lu, W. Liu</i></p> <p>Preliminary Analysis of Additive Noise on Outdoor and Low Voltage Electric Power Grid in Brazil <i>F.J.A. Andrade, C.A.G. Marques, T.R. Oliveira, F.P.V. Campos, E.J. de Oliveira, M.V. Ribeiro</i></p>	<p>H-Bridge Inverters as Part of the Communication Channel for Deploying Power Line Communications Over Solar Photovoltaic Energy Systems <i>A.R. Ndjiongue, A.J. Snyders, H.C. Ferreira, M. Della Tamin</i></p> <p>Low Voltage Feeder Identification for Smart Grids with Standard Narrowband PLC Smart Meters <i>L. Marrón, X. Osorio, A. Llano, A. Arzuaga, A. Sendin</i></p> <p>Deployment of Power Line Communication by European Utilities in Advanced Metering Infrastructure <i>A. Haidine, A. Tabone, J. Müller</i></p> <p>Modelling and Analysis of a Power Line Communication Infrastructure for Wind Energy Conversion Systems <i>E. Kabalci, Y. Kabalci</i></p>	

Monday, 25 March 2013

Conference Room 2

Recent Results	
Chair: Theo Swart	
16:30-17:30	<p>Markov Model of In-Vehicle Power Line as Communication Medium <i>M. Wilson, H.C. Ferreira, R. Heymann</i></p> <p>Hardware Implementation of Frequency Mappings for Power Line Communications <i>T. Lukusa, K. Ouahada, R. Ndjiongue, H.C. Ferreira, A.J.H. Vinck</i></p> <p>Topology Estimation Using Power Line Communications <i>L. Lampe, M.O. Ahmed</i></p> <p>A Network Simulator-3 Implementation for Simulating Power Line Communication Networks <i>F. Aalamifar, A. Schlögl, D. Harris, L. Lampe</i></p>

Tuesday, 26 March 2013

Conference Room 1		Conference Room 2	
9:40-11:00	T1: Protocols 2 Chair: Driton Statovci	T2: Narrowband 1 Chair: Han Vinck	
	Enhanced 6LoWPAN Ad Hoc Routing for G3-PLC <i>K. Razazian, A. Niktash, V. Loginov, J. Yazdani</i>	N-PE Transmission System for Narrow-Band PLC and Its Channel Properties <i>I.S. Areni, S. Tsuzuki, Y. Yoshizawa, Y. Yamada</i>	
	High Speed Multimedia and Smart Energy PLC Applications Based on Adaptations of HomePlug AV <i>H. Latchman, S. Katar, L. Yonge, A. Amarsingh</i>	A Power Optimised Narrowband Power-line Communication System <i>Y. Sun, G.A.J. Amaratunga</i>	
11:20-12:40	Experimental and Field Trial Results of Enhanced Routing Based on LOAD for G3-PLC <i>K. Razazian, A. Niktash, V. Loginov, J. LeClare, T. Lys, C. Lavenu</i>	Modeling of In-House CENELEC A-Band PLC Channel Using Fritchman Model and Baum-Welch Algorithm <i>A.D. Familua, L. Cheng</i>	
	MAC Enhancements for G3-PLC Home Networks <i>L. Di Bert, S. D'Alessandro, A.M. Tonello</i>	Framework to Establish a Simplex Communication System Over a Power Line Using Load Signatures <i>P.A. Kamjom, A.R. Ndjongue, R. Heymann, H.C. Ferreira</i>	
	T3: Signal Processing 2 Chair: Andrea Tonello	T4: EMC/Noise Chair: Petrus Janse van Rensburg	
14:00-15:20	A Sounding Method Based on OFDM Modulation for PLC Channel Measurement <i>T.R. Oliveira, W.A. Finamore, M.V. Ribeiro</i>	Effects of LED Lamps on the Power-line Communications Channel <i>A.S. de Beer, A. Emleh, H.C. Ferreira, A.J.H. Vinck</i>	
	Non-Intrusive Power Line Quality Monitoring Based on Power Line Communications <i>F. Yang, W. Ding, J. Song</i>	Electromagnetic Immunity Analysis of a New Interface Device with Power Line Communication for Smart Grid and Energy Storage Applications <i>A. Cataliotti, D. Di Cara, G. Marsala, A. Ragusa, G. Tinè</i>	
	Joint Iterative Channel Estimation and Guard Interval Selection for Adaptive Powerline Communication Systems <i>H. Gacanin</i>	The Extrapolation Factor for PLC Radiation Measurements in the 150-500 kHz Frequency Range <i>M. Wächter, M. Koch, C. Schwing, H. Hirsch</i>	
14:00-15:20	Joint Channel and Impulsive Noise Estimation for OFDM Based Power Line Communication Systems Using Compressed Sensing <i>A. Mehboob, L. Zhang, J. Khangosstar, K. Suwunnapak</i>	The Impact of the CFL Lamps on the Power-Line Communications Channel <i>A. Emleh, A.S. de Beer, H.C. Ferreira, A.J.H. Vinck</i>	
	T5: Coding/Modulation Chair: Makoto Itami	T6: Narrowband Interference Chair: Lutz Lampe	
	Robust Turbo Decoding in Impulse Noise Channels <i>D.-F. Tseng, T.-R. Tsai, Y.S. Han</i>	OFDM Preamble Design for Synchronization Under Narrowband Interference <i>S. Liu, F. Yang, J. Song, F. Ren, J. Li</i>	
Short LDPC Codes for NB-PLC Channel with a Differential Evolution Construction Method <i>N. Andreadou, A.M. Tonello</i>	Interleaving and Nulling to Combat Narrow-band Interference in PLC Standard Technologies PLC G3 and PRIME <i>T. Shongwe, A.J.H. Vinck</i>		
Adaptive Rateless Permutation Coding Scheme for OFDM-based PLC <i>L. Cheng, T.G. Swart, H.C. Ferreira</i>	Comparison of Different Digital Front End Structures At the OFDM Receiver <i>G. Hongjian, G. Bumiller</i>		
Cyclic Block FMT Modulation for Broadband Power Line Communications <i>A.M. Tonello, M. Girotto</i>	Narrow-band Interference Model for OFDM Systems for Powerline Communications <i>T. Shongwe, V.N. Papilaya, A.J.H. Vinck</i>		

Wednesday, 27 March 2013

Conference Room 1		Conference Room 2	
9:40-11:00	W1: Applications Chair: Anil Mengi	W2: Narrowband 2 Chair: Khmaies Ouahada	
	Physical Layer Security in PLC Networks: Achievable Secrecy Rate and Channel Effects <i>A. Pittolo, A.M. Tonello</i>	Narrow Band Power Line Channel Characteristics for Low Voltage Access Network in China <i>G. Chu, J. Li, W. Liu</i>	
	Coexistence Analysis of Impedance Modulating Transmitters <i>G. Hallak, G. Bumiller</i>	On the Characterization of the Indoor Low-Voltage PLC Channel At Frequencies Up to 500 kHz <i>H. Gassara, F. Rouissi, A. Ghazel</i>	
	Real Problems Solving in PRIME Networks by Means of Simulation <i>A. Sanz, P.J. Piñero, S. Miguel, J.I. Garcia</i>	Fast Characterization Method and Error Sequence Analysis for Narrowband Indoor Powerline Channel <i>J. Bilbao, A. Calvo, I. Armendariz</i>	
	Integration of Indoor Visible Light and Power Line Communication Systems <i>H. Ma, L. Lampe, S. Hranilovic</i>	Cyclic Spectral Analysis of Power Line Noise in the 3-200 kHz Band <i>K.F. Nieman, J. Lin, M. Nassar, K. Waheed, B.L. Evans</i>	
11:20-12:20	W3: Broadband Channels Chair: Pierre Siohan	W4: Coupling Chair: Shinji Tsuzuki	
	A PLC Broadband Channel Simulator for Indoor Communications <i>G. Marrocco, D. Statovci, S. Trautmann</i>	A Compact Economical PLC Band-Pass Coupler with Impedance Matching <i>M.P. Sibanda, P.A. Janse van Rensburg, H.C. Ferreira</i>	
	A Binary Tree Network Topology for Statistical and Physical PLC Channel Modeling <i>C. Delestre, G. Ndo, F. Labeau</i>	A Coupling Strategy with Automatic Time Diversity to Counter Rectifier Impulsive Noise <i>A.J. Snyders, H.C. Ferreira, P.A. Janse van Rensburg</i>	
	On PLC Channel Models: An OFDM-based Comparison <i>J.A. Cortés, F.J. Cañete, L. Díez, L.M. Torres</i>	Industrial Powerline Communication for Machine-tools and Industrial Robots <i>J. Lopes, K.-H. Wurst, A. Verl</i>	