

Monday, 19<sup>th</sup> December 2005

9:00 a.m. Official Opening

9:05 a.m. – 10:30 a.m. Session 1: INFORMATION THEORY

1. *Recent Results on Construction of Structured LDPC codes* – Bahram Honary  
(**invited paper**)
2. *Turbo Equalization without MMSE Filtering* – Pei Xiao and Rolando Carrasco
3. *Dynamic ECC for Error Resilient Video Coding* – Bing Du, Anthony Maeder and Miles Moody
4. *Efficient Decoding Algorithm for Turbo-Gallager Codes* – P. C. Catherine K. M. S. Soyjaudah

10:30 a.m. – 11:00 a.m. Coffee Break

11:00 a.m. – 12:30 p.m. Session 2: DIVERSITY TECHNIQUES

1. *Orthogonal Spreading Code for Quasi-synchronous CDMA Based on Scrambled Walsh Sequence* – Kwonhue Choi
2. *Error Rate Performance of Space-Time Block Coded CDMA Systems with Parameter Uncertainties* – Emmanuel Oluremi Bejide
3. *Indoor MIMO Transmissions with Alamouti Space-Time Block Codes* – Sebastian Caban, Christian Mehlführer, Arpad L. Scholtz, and Markus Rupp
4. *Comparison between Greedy and Lagrange Algorithms in an Adaptive MIMO OFDM System* – Peerapong Uthansakul, Marek E. Bialkowski and John Homer
5. *Achieving Maximum Capacity from a Fixed Region of Space* – Tharaka A. Lamahewa, Tony S. Pollock, Thushara D. Abhayapala

12:30 p.m. – 1:30 p.m. Lunch

1:30 p.m. – 3:00 p.m. Session 3: SIGNAL PROCESSING 1

1. *Transcoding of Narrowband to Wideband Speech* – C. H. Ritz, M. Baker, N. Harders, J. Hermann
2. *Continuous-Time Smoothing Formulas* – Garry A. Einicke

3. *A Discrete Time and Frequency Wigner-Ville Distribution: Properties and Implementation* – John O' Toole, Mostefa Mesbah and Boualem Boashash
4. *Impact of the GSM AMR Speech Codec on Acoustic Parameters used in Forensic Speaker Identification* – Bernard J Guillemain, Catherine I. Watson, Shaun Dowler
5. *Embedded Lossless Audio Coding Using Linear Prediction and Cascade Coding* – Kevin Adistambha, Christian H. Ritz, and Jason Lukasiak
6. *Neural Network based Simple Word Recognition Using the Analog Devices Blackfin Processor* – Robert Slaviero, Michael Stranieri, and David Tay

3:00 p.m. – 3:30 p.m. Coffee Break

3:30 p.m. – 5:00 p.m. Session 4: NETWORKING 1

1. *Model-Free End-to-End TCP Congestion Control* – Belinda A. Chiera and Langford B. White
2. *The Problem of SPAM in VoIP* – Marius Portmann
3. *Fractal Analysis of TCP Flows* – Hassan Hassan and Jean-Marie Garcia
4. *Secure Key Extraction in Computer Networks* – Willy Susilo, Yi Mu, and Xinyi Huang
5. *The Joint Distribution of Server State and Queue Length of M/M/1/1 Retrial Queue with Abandonment and Feedback* – Hamada ALshaer and Eric Horlait
6. *Average End-to-end Delay for Real Time Applications in MPLS/DiffServ Network: FIFO versus EDF scheduling* – Inès El Korbi and Leïla Azouz Saïdane

6:30 p.m. – 7:30 p.m. Cocktail Reception

Tuesday, 20<sup>th</sup> December 2005

9:00 a.m. – 10:30 a.m. Session 5: IMPLEMENTATION

1. *The Interplay of Signal Processing, Communication Technologies and RF Circuit Design with Perspectives on the Future of RF and Microwave Engineering* – Michael Steer (**invited paper**)
2. *Transmultiplexer Frequency Domain Equalization for Direct Sequence Spread Spectrum* – Gareth Parker

3. *Efficient FM Demodulation by Single Tone Detection for FPGA Implementation* – Matthew D’Souza, Michael Chan, Adam Postula
4. *Fractional Bits-Per-Symbol Modulation with Hierarchical Coding in DMT Modems* – Daniel Franklin

10:30 a.m. – 11:00 a.m. Coffee Break

11:00 a.m. – 12:30 p.m. Session 6: WIRELESS NETWORKS

1. *QoS-Aware Packet Scheduling for Delivering Multiple Services in Broadband Wireless Systems* – Seungwan Ryu, Byunghan Ryu and Hyunhwa Seo
2. *Wireless Network Visualisation Using Geographic Information Systems in Planning and Implementation of Wireless Networks* – G. A. Mendez, Liyanage C De Silva, Amal Punchihewa, and Stan Swan
3. *Satellite DVB Multicast for Remote Desert Community Messaging* – Tony Eysers and Meharan Abolhasan
4. *A Power-saving PCF for Mobile Ad-hoc Networks* – Rhys Hearne, David Everitt, and Jahan Hassan
5. *Cache Timeout Strategies for on-Demand Routing in MANETs* – Sanlin Xu, Kim Blackmore, and Haley Jones
6. *A Cross-Layer Design for mobile AD HOC Networking in Fast Fading Channels* – Xiao Qin Chen, Dhammika Jayalath, and Haley Jones

12:30 p.m. – 1:30 p.m. Lunch

1:30 p.m. – 3:00 p.m. Poster Session 1: SIGNAL PROCESSING AND COMMUNICATION SYSTEMS

1. *Fractal Sinusoidal Modelling for Low Bit-Rate Audio Coding* – Bing Du, Anthony Maeder, and Miles Moody
2. *Trellis-Coded Modulation of Combined Variable Length Codes and Convolutional Codes* – M.A Hosany, and K.M.S Soyjaudah
3. *Block Coded Joint Huffman codes and Run Length Limited/Error Correcting Codes employing Multi-Quadrature Amplitude Modulation* – M.A Hosany, and K.M.S Soyjaudah
4. *Stereophonic Acoustic Echo Cancellation* – Fenglu Ge, Prashan Premaratne, Jiangtao Xi
5. *Colour Reproduction Performance of JPEG and JPEG2000 Codecs* – A. Punchihewa, D. G. Bailey, and R. M. Hodgson
6. *A Method of Reducing Blocky Noise Using Inverse Wavelet Transform For Moving Pictures* – Tomio GOTO, Naoki GOH, and Tadashi KITAMURA

7. *A Personalized Classroom System for Speech Training of Hearing-Impaired Children in the Philippines* – R.B. Galo, and J.W. Leis
8. *Investigation on High Gain Compact Circularly Polarized Microstrip Antenna* – Nasimuddin, Karu Esselle and A. K. Verma
9. *TMS320C6713-DSP Based FSK Modem with Receiver Synchronisation* – Kandeepan Sithamparanathan, and Leif Hanlen
10. *Using Asterisks to decode Multi-User MIMO systems* – Phillip Conder, Tadeusz A. Wysocki
11. *A new complex wavelet and its application in communications* – Limin Yu, and Langford B. White
12. *Reference-Free Video Quality Metric for Mobile Streaming Applications* – Michal Ries, Olivia Nemethova, and Markus Rupp
13. *Design of Non-Separable 2-D Half-Band Filters Using Two Error Criteria* – Felicja Wysocka-Schillak

3:00 p.m. – 3:30 p.m. Coffee Break

3:30 p.m. – 5:00 p.m. Poster Session 2: COMMUNICATION SYSTEMS AND NETWORKS

1. *VoWLAN Study on Single Radio IEEE 802.11b Systems with Multihop Chain Topology* – Kee Ngoh Ting, Yin Fern Ko, Moh Lim Sim
2. *Federated Authentication in Next-Generation Wireless Networks* – Mo Li, and Kumbesan Sandrasegaran
3. *Different Gateway Policies in a Multi-homed Mobile Ad Hoc Network* – Andreas Hafslund, and Øivind Kure
4. *QoS Aware Handover between 802.11e and 802.16e Networks* – Anselm Teh, and Aruna Jayasuriya
5. *A Bluetooth Wireless Network Infrastructure for Multimedia Guidebooks on Mobile Computing Devices* – Matthew D'Souza, Montserrat Ros, Adam Postula, and Neil Bergmann
6. *Trust classification in wireless sensor networks* – Mohammad Momani, Johnson Agbinya, Gina Paola Navarrete and Mahmood Akache
7. *EXIT Chart Analysis of Iteratively Decodable Source Codes for Wireless Multimedia Communications* - Wei Xiang, and John Leis
8. *Parameters Computation of the Extended Suzuki Mobile Fading Channel of Type I* – Amin H. Al-Ka'bi, and John Homer
9. *Subcarrier Scrambling-Based PAPR Reduction Scheme for MC-CDMA Systems* – Kwonhue Choi, Kunseok Kang, and Sooyoung Kim
10. *Active-parameter Detection Guided CDMA-RAKE Receiver* – John HOMER, and Yan WU Jennifer
11. *Feedback QoS/Power/Real-Time control modelling of learning reconfigurable embedded systems* – Jean-Philippe Diguët, Yvan Eustache, and Milad El Khodary
12. *On the Influence of Channel Statistics on the Performance of Coded UWB-IR Systems* – Michal M. Pietrzyk, and Jos H. Weber

13. *Effects of Channel on an OFDM signal used for WiMax and MBWA to Support Broadband Mobile Wireless Access* – Gina Paola Navarrete, Johnson Ihyeh Agbinya, Mohammad Momani, and Mahmood Akache
14. *Quasi-Orthogonal Sequence Based WCDMA Real Time Kinematic Datalink* – Dinesh Kumar-Mills, and John Homer

7:00 p.m. Banquet

Wednesday, 21<sup>st</sup> December 2005

9:00 a.m. – 10:30 a.m. Session 7: CHANNEL CHARACTERISATION AND MODELLING

1. *Measurement based Analysis and Modelling of UMTS DCH Error Characteristics for Static Scenarios* – Wolfgang Karner, and Markus Rupp
2. *On non-coherent Rician fading channels with average and peak power limited input* – Rasika R. Perera, Tony S. Pollock, and Thushara D. Abhayapala
3. *A Multi-Antenna Testbed for Research in Indoor Wireless Communications* – Carlos Gómez Calero, Laura García García, and Leandro de Haro Ariet
4. *Effect of Transmit and Receive Antenna Configuration on the Throughput of MIMO UMTS Downlink* – Christian Mehlführer, Sebastian Caban, Markus Rupp, and Arpad L. Scholtz
5. *Design and Development of Various MIMO Testbeds for Indoor Environments* – Konstanty S. Bialkowski, Serguei Zagriatski, Marek E. Bialkowski and Adam Postula

10:30 a.m. – 11:00 a.m. Coffee Break

11:00 a.m. – 12:30 p.m. Session 8: NETWORKING 2

1. *BitTorrent Fairness: Analysis and Improvements* – Richard Thommes and Mark Coates
2. *Information Switching Networks* – Doan B. Hoang, and Tal Lavian
3. *Dynamic Behavior of a STT-Based Vegas* – Hong Zhou, John Leis, and Zhongwei Zhang
4. *A Proposed 802.11e-Based Buffer Management Scheme for Mobile Ad Hoc Networks* – Choon Lim Gwee, Yang Qin, and Winston KG Seah

5. *Intelligent Control on Packet Dropping of AQM within Congested Networks* – Zhongwei Zhang, Zhi Li and Hong Zhou
6. *Proactive Key Delivery for Fast Authentication in WLAN-based Access Networks* – Ha Hoang Duong, Arek Dadej and Steven Gordon

12:30 p.m. – 1:30 p.m. Lunch

1:30 p.m. – 3:00 p.m. Session 9: WIRELESS SYSTEMS 1

1. *An Ultra Wide Band Simulator Using MATLAB/Simulink* – Peter James Vial, Beata Wysocki and Tad Wysocki
2. *Wideband Beam-Steered Array Antenna Utilizing Real-Valued Weighting Coefficients* – Monthippa Uthansakul and Marek E Bialkowski
3. *Person Tracking using Motion Detection and Optical Flow* – Simon Denman, Vinod Chandran, Sridha Sridharan
4. *Frequency Dependency in UWB Channel Modelling* – Wen Zhang, Thushara D. Abhayapala, and Jian Zhang
5. *Investigations into the Use of Linearly or Circularly Polarised Antennas in an Indoor Wireless System* – Serguei Zagriatski, Konstanty Bialkowski, and Marek E. Bialkowski

3:00 p.m. – 3:30 p.m. Coffee Break

3:30 p.m. – 5:00 p.m. Session 10: WIRELESS SYSTEMS 2

1. *Performance Evaluation of the Equalizers in the Downlink MC-CDMA System with Pilot-Aided Channel Estimation* – Rachod Patachaianand
2. *A Compact Real-time Channel Measurement Architecture Based on the Capon Beamforming Algorithm* – Fredrik Edman, and Viktor Öwall
3. *Enhancing GoS and Network Capacity in Next Generation Cellular Networks by using Handover Channel Relaying Strategy: Analytical Approach* – The-Anh Ngo, Sylvie Perreau and Arek Dadej
4. *Background Radio Frequency Interference Measurements for Wireless Devices in the Electricity Supply Industry* – D. Robinson, T. Wysocki, V. Smith, and K. Popovski
5. *Limits of Interference in MoHotS and Wireless Chain Networks* – Johnson Agbinya

