



2003 Wireless Networking Symposium

Technical Sessions: Friday, October 24, 2003 10:00 am – 5:00 pm
Thompson Conference Center

Time	Track One Thompson Conference Center Room 1.126	Track Two Thompson Conference Center Room 2.110	Track Three Thompson Conference Center Room 3.110	Track Four Thompson Conference Center Room 3.122
10:00 am – 11:45 am	<p>Antenna Design <i>Session Chair: Dr. Hao Ling</i></p> <p>E. Skafidas, Bandspeed, Inc., Texas; R.J. Evans, University of Melbourne, Australia, "Periodic Structures for Antenna Decoupling on PCB Substrates for MIMO Applications"</p> <p>R.A. Abd-Alhameed, N.J. McEwan, P.S. Excell, J.G. Gardiner and E.M. Ibrahim, Bradford University, UK, "Simulation and Measurement of Horizontally Polarised and Dual-Polarised Uniplanar Conical Beam Antennas for HiperLAN"</p> <p>K. Khalil, R.A. Abd-Alhameed, P.S. Excell and J.G. Gardiner, Bradford University, UK, "A Compact Design of a New Square Spiral Antenna for Satellite-Mobile Handsets"</p> <p>B. Panoutsopoulos, Naval Undersea Warfare Center, Rhode Island, "Fractal Antennas in Wireless Network Applications"</p>	<p>Multi-User Communication <i>Session Chair: Dr. Jeffrey G. Andrews</i></p> <p>D.J. Shyy, The MITRE Corporation, Virginia; H. Gharavi, K. Ban, National Institute of Standards and Technology, Maryland, "System Design Tradeoff for Supporting Soft Handoff in 3G CDMA2000 Networks"</p> <p>J.H. Kim, S.S. Choi, H.S. Lee, Electronics and Telecommunications Research Institute, Korea, "The Spectrum Usage Efficiency of CDMA Systems by Maximum Capacity per Unit Area"</p> <p>R. Kobylinski, M. Majmundar, SBC Laboratories, Texas; A. Mostafa, M. Austin, Cingular Wireless, Georgia, "Performance of Single Antenna Interference Cancellation (SAIC) Techniques for GSM Networks"</p> <p>M. Janani, A. Hedayat, T. Hunter, A. Nosratinia, The University of Texas at Dallas, "Coded Cooperation with Space-Time Transmission and Iterative Decoding"</p>	<p>Network Management and Simulation <i>Session Chair: Dr. Sanjay Shakkottai</i></p> <p>J. Brassil, Vanderbilt University, Tennessee, "Getting from Point B to Point A: Mixed Mode Deployment in a Straight Line at Vanderbilt University's Owen School"</p> <p>R. Wohlert, SBC Laboratories, Inc., Texas, "Standard Challenges for NGN End to End Quality of Service"</p> <p>V. Capdevielle, T. Lestable, M. Coupechoux, M.-L. Alberi-Morel, L. Brignol, Alcatel Research and Innovation, France, "Multi-Hop Coverage Extension of an IEEE 802.11B WLAN in a Corporate Environment"</p>	<p>Space-Time Coding and Diversity <i>Session Chair: Mr. David Love</i></p> <p>S.A. Zekavat, P.K. Teh, Michigan Technological University, "Beam-Pattern-Scanning Dynamic-Time Block Coding"</p> <p>S.M. Joshi and S. Mitra, Texas Tech University, "Space Time Block Codes from Generalized Orthogonal Design with Variable Rates for Arbitrary Number of Transmit Antennas"</p> <p>E. Skafidas, B. Jones and A. Storm, Bandspeed Inc., Texas, "Probability of Fading for a Selection Diversity Antenna System with Mutual Coupling"</p> <p>H. Shah, A. Hedayat, A. Nosratinia, The University of Texas at Dallas, "Analysis of Coded Block Space-Time Transmission Under Correlated Rician Fading"</p>
11:45 am – 1:15 pm	LUNCH (LBJ AUDITORIUM)	LUNCH (LBJ AUDITORIUM)	LUNCH (LBJ AUDITORIUM)	LUNCH (LBJ AUDITORIUM)



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1:15 pm – 3:00 pm	<p>Propagation, Coverage, and Deployment <i>Session Chair: Dr. Theodore S. Rappaport</i></p> <p>S. Dickey, DTI, a PCTEL company, Maryland, "Novel Technique for Co-channel Interference Measurements in Cellular Networks"</p> <p>I. Kostanic, Florida Institute of Technology; I. Guerra, N. Faour, J. Zec and M. Susanj, Agilent Technologies, Florida, "Use of Morphology Classification Data in Macro-Cell Propagation Modeling"</p> <p>R. Anderson, B. Arend, K. Baker, QUALCOMM Incorporated, Colorado, "Power Controlled Repeaters for Indoor CDMA Networks"</p> <p>H. Smith, D. Shumaker, CFX, L.P., Texas; E.B. Stumberg, TengelInternet, Inc., Texas, "Laying the Foundation for Residential Wireless Networks"</p>	<p>Advanced Algorithms <i>Session Chair: Dr. Brian L. Evans</i></p> <p>S. Paranjpe and G. Orsak, Southern Methodist University, Texas, "Training-Free Universal Signal Classification for Wireless Communications"</p> <p>K. Shi and E. Serpedin, Texas A&M University, "On the Design of Digital Blind Feedforward Self-Noise Free Timing Recovery Schemes"</p> <p>G. Zeng, I. Chlamtac and A. Gumaste, The University of Texas at Dallas, "Computational Aspects of Blocking Probability in Cellular Networks"</p> <p>F. Bouchereau, D. Brady, Northeastern University, Massachusetts, "Nuisance Parameter Effects and Range-Resolution Degradation Using RSSI Measurements"</p>	<p>Network Modeling & Analysis <i>Session Chair: Dr. Gustavo de Veciana</i></p> <p>M. Thaker, J. Evans, J. Roberts, The University of Kansas, "Evaluation of Media Access Control Protocols for Broadband Wireless Local Loop Applications and Recommended Design Improvements"</p> <p>M. Coupechoux, Alcatel Research and Innovation and Institut Eurecom, France; B. Baynat, Université Pierre et Marie Curie, France; C. Bonnet, Institut Eurecom, France; V. Kumar, Alcatel Research & Innovation, France, "CROMA - a Slotted MAC Protocol for MANETs with Multislot Communications"</p> <p>O. Somarriba, T. Giles, Royal Institute of Technology, Spain, "Scheduling for Variable Power and Rate Control for Spatial TDMA in Wireless Ad-hoc Networks"</p> <p>H. Abu-Amara, University of Texas at Dallas, J. Lee, C. Rosenberg, Purdue University, Indiana, E.K.P. Chong, Colorado State University, "Efficient Roaming over Heterogeneous Wireless Networks"</p>	<p>MIMO Systems <i>Session Chair: Dr. Robert W. Heath, Jr.</i></p> <p>S. Sanayei and A. Nosratinia, The University of Texas at Dallas, "Asymptotic Capacity Gain of Transmit Antenna Selection"</p> <p>D. Cheung, J. Lung and C. Prettie, Intel Labs, California, "Measurements of Angular Spectra and Antenna Polarization in Support of MIMO Channel Modeling"</p> <p>D.N. Doan, K.R. Narayanan, Texas A&M University, "Capacity of Multiple Antenna ISI Channels"</p> <p>O. Oteri, T. Al-Naffouri, O. Awoniyi and A. Paulraj, Stanford University, California, "Joint Channel/Data Recovery in STBC MIMO-OFDM"</p>
3:00 pm – 3:30 pm	<p>COFFEE BREAK & POSTER SESSION (LBJ AUDITORIUM)</p>	<p>COFFEE BREAK & POSTER SESSION (LBJ AUDITORIUM)</p>	<p>COFFEE BREAK & POSTER SESSION (LBJ AUDITORIUM)</p>	<p>COFFEE BREAK & POSTER SESSION (LBJ AUDITORIUM)</p>



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3:30 pm – 5:00 pm	<p>Wireless Video/Sequence Design & Synchronization <i>Session Chair: Ms. Serene Banerjee</i></p> <p>H. Zhu, H. Wang, I. Chlamtac, B. Chen, The University of Texas at Dallas, "Bandwidth Scalable Source-Channel Coding for Video over Wireless Networks"</p> <p>M. Hamada, S. Verma, J. Xu, T. Lee, Stanford University, California, "Completely DC-Free Direct Sequence Spectrum Spreading Scheme for Low Power, Low Cost, Direct Conversion Transceiver"</p> <p>Y. Wang, E. Serpedin, Texas A&M University, "Continuous-Mode Frame Synchronization for Frequency-Selective Channels"</p> <p>M. Hajo, M. Nizam, K. Merhi, A. Kayssi, American University of Beirut, Lebanon; M. Zeidan, National Instruments, Texas, "Bluetooth RF Layer Performance Simulation Using LABVIEW"</p>	<p>Algorithm Implementation <i>Session Chair: Dr. Shouli Yan</i></p> <p>C. Dick, Xilinx, Inc., California; P. Murphy, J.P. Frantz, Rice University, Texas, "An FPGA Implementation of Alamouti's Transmit Diversity Technique"</p> <p>V. Chandrasekhar, National Instruments, Texas, "Hardware-Software Codesign of a Wireless Transceiver in LabVIEW FPGA"</p> <p>A. Samant, A. Hinde, National Instruments, Texas, "A Real-Time Software Modem using LabVIEW RT"</p> <p>V. Venkateshwar, V. Anantha, C. Harle, Intrinsity, Inc., Texas, "Parameterized Performance Analysis of the Software Implementation of the Viterbi Decoder Using the Intrinsity FastMATH Processor"</p>	<p>Network Measurement and Security <i>Session Chair: Dr. Scott Nettles</i></p> <p>M. Zimet, Vivere Networks, Inc., California, "Anomaly Detection in 802.11 Wireless Networks"</p> <p>F.M. Aziz, B. Woerner, Virginia Polytechnic Institute and State University, "Saturated Throughput of a Multi-Hop Outdoor Wireless LAN"</p> <p>T. Kamarkaris, J. Evans, Stevens Institute of Technology, Wireless Network Security Center, New Jersey, "Encryption Key Generation based on Wireless Channel Statistics"</p> <p>J. Lansford, Mobilian Corporation, Oregon, "Bluetooth and Wi-Fi: Enabling Coexistence"</p>	<p>OFDM and Ultra-Wideband <i>Session Chair: Dr. Edward J. Powers</i></p> <p>H. Minn, The University of Texas at Dallas; V.K. Bhargava, University of British Columbia, "A Reduced Complexity, Improved Frequency Offset Estimation for OFDM-Based WLANs"</p> <p>H. Liu, Oregon State University, "A High-Rate Transmission Scheme for Ultra-Wideband Systems"</p> <p>H.-C. Wu, Louisiana State University; J. Chen, R. Barton, The University of Houston, Texas, "A Novel Approach for Geometric OFDM Quality-of-Service Analysis"</p> <p>H. Sankar, K.R. Narayanan, Texas A&M University, "Design of IRA Codes for Non-Coherent Detection with OFDM"</p>



2003 Wireless Networking Symposium

Poster Sessions: Thursday & Friday, October 23 & 24, 2003
LBJ Auditorium

- *Arunabha Ghosh, SBC Laboratories, Texas: Performance of E-OTD in a Typical Urban Environment for GSM Networks*
- *Peh Keong Teh and Seyed Alireza Zekavat, Michigan Technological University: Merging Multi-Carrier OFDM and Beam Pattern Scanning Smart Antennas: Achieving Low PAPR, High Performance and High Directionality*
- *Mathieu K. Kourouma and Magdy A. Bayoumi, University of Louisiana at Lafayette: Techniques for Increasing Capacity in Bluetooth Personal Area Network*
- *Ahmed Barnawi and John G. Gardiner, University of Bradford, UK: Strategies for Ad-hoc Networking Using the UTRA-TDD Air Interface*
- *Ivica Kostanic, Florida Institute of Technology, Ivan Guerra, Nizar Faour, Josko Zec and Mladen Susanj, Agilent Technologies, Florida: Optimization and Application of W.C.Y Lee Micro-cell Propagation Model in 850MHz Frequency Band*
- *Guoping Zeng, Hua Zhu and Imrich Chlamtac, The University of Texas at Dallas: A Novel Queueing Model for 802.11 Wireless LANs*
- *Yu-jung Chang and Meng-Chun Chang, Industrial Technology Research Institute, Taiwan: Performance Evaluation of OFDM Channel Estimation in High-mobility WLAN-based DSRC Systems*
- *N.T. Ali and J. Rodriguez-Tellez, Etisalat College of Engineering, UAE; R.A. Abd-Alhameed, N.J. McEwan, M. Zewani and J.G. Gardiner, Bradford University, UK: Simulation and Measurement of Low Noise Dielectric Resonator Oscillators Around 3.65 GHz*
- *R.A. Abd-Alhameed, Z. Konstantiou, K. Khalil, P.S. Excell and J.G. Gardiner, Bradford University, UK: Probability Density Function and Exceedance Probability of Randomly Distributed Mobile Phones on Screened Cables*
- *Ashutosh Goyal, New York Institute of Technology; Sunil Joshi, Engineering College, India; Sandeep Sancheti, Malviya National Institute of Technology, India; Ashok Malav, Staini Memorial College of Engineering, India: Fast 3D Microcellular Propagation Modeling of Millimeter Waves at 35GHz for Future Wireless Communication Services*
- *Andres Navarro, Universidad Icesi, Colombia; Narcis Cardona, Universidad Politecnica de Valencia, Spain: Up-Link Down-Link Capacity Unbalance Analysis in UMTS Using a GIS-based Planning Tool and MATLAB Simulation*
- *Kartikeya Mehrotra, Apoorva Jindal, and A.K.Chaturvedi, Indian Institute of Technology, India: A Novel Scheme for Capacity Enhancement in DS-CDMA Systems*
- *Ali Pezeshk and Seyed A. Zekavat, Michigan Technological University: Intervendor Spectrum Sharing in MC-CDMA Systems Via Subcarrier Clustering*
- *Seyed A Zekavat, Michigan Technological University: Mobile Base Station (MBS) Wireless with Applications in Vehicle Early Warning Systems*
- *Lei Chen and Wendi Heinzelman, University of Rochester, New York: End-to-End Congestion Control for Best-effort Transmission*
- *J. Wei, B. H. Soong, and Z. G. Li, Nanyang Technological University, Singapore: Rate control for H.264 Video Transmission*
- *Yan Zhang and Boon-Hee Soong, Nanyang Technological University, Singapore: Channel Holding Time in Hierarchical Cellular Network Supporting Overflow and Underflow Schemes*
- *Hlaing Minn and Shaohui Xing, University of Texas at Dallas: An Optimal Training Signal Structure for Frequency Offset Estimation in AWGN Channel*
- *Ali T. Koc and Murat Torlak, The University of Texas at Dallas: Beamforming for Super-Orthogonal Space Time Trellis Codes*