

PUBLICATIONS OF CPCC FELLOWS AND FACULTY

JOURNAL PUBLICATIONS

**To Appear**

1. L. Azzam, E. Ayanoglu, “Reduced Complexity Sphere Decoding via a Reordered Lattice Representation,” to be published, *IEEE Transactions on Communications*.
2. L. Azzam E. Ayanoglu, “Real-Valued Maximum Likelihood Decoder for Quasi-Orthogonal Space-Time-Block Codes,” to be published, *IEEE Transactions on Communications*.
3. V. R. Cadambe, S. A. Jafar, “Degrees of Freedom of Wireless Networks - The Impact of Relays, Feedback, Cooperation, and Full-Duplex Operation,” to be published, *IEEE Transactions on Information Theory*.
4. S. Ekbatani, F. Etemadi, H. Jafarkhani, “Throughput Maximization over Slowly Fading Channels Using Erroneous Quantized Feedback,” to be published, *IEEE Transactions on Communications*.
5. A. J. Goldsmith, S. A. Jafar, I. Maric, S. Srinivasa, “Breaking Spectrum Gridlock with Cognitive Radios: An Information Theoretic Perspective,” to be published, *IEEE Proceedings*.
6. I. Inan, F. Keceli, E. Ayanoglu, “Analysis of the 802.11e Enhanced Distributed Channel Access Function,” to be published, *IEEE Transactions on Communications*.
7. A. Jahanian, F. Tzeng, P. Heydari, “Code-Modulated Path-Sharing Multi-Antenna Receivers: Theory and Analysis,” to be published, *IEEE Transactions on Wireless Communications*.
8. V. Jain, B. Javid, P. Heydari, “A BiCMOS Dual-Band Millimeter-Wave Frequency Synthesizer for Automotive Radars,” to be published, *IEEE Journal of Solid-State Circuits*.
9. M. Makhzan, A. Khajeh Djahromi, A. Eltawil, F. J. Kurdahi, “A Low Power JPEG2000 Encoder with Iterative and Fault Tolerant Error Concealment,” to be published, *IEEE Transactions on Very Large Scale Integration Systems*.
10. S. Pasricha, Y. Park F. Kurdahi, N. Dutt, “CAPPS: A Framework for Power-Performance Tradeoffs in Bus-Matrix-Based On-Chip Communication Architecture Synthesis,” to be published, *IEEE Transactions on Very Large Scale Integration Systems*.
11. H. Seferoglu, A. Markopoulou, “Video-Aware Opportunistic Network Coding over Wireless Networks,” to be published, *IEEE Journal on Special Areas in Communications*, Special Issue on Network Coding over Wireless Communication Networks.
12. E. Sengul, H.-J. Park, E. Ayanoglu, “Bit-Interleaved Coded Multiple Beamforming with Imperfect CSIT,” to be published, *IEEE Transactions on Communications*.
13. F. Tzeng, A. Jahanian, P. Heydari, “A CMOS Multi-Band Inductor Re-Use Low Noise Amplifier,” *IEEE Transactions on Circuits and Systems, Part II*, Special Issue on Multifunctional Circuits and Systems for Future Generation of Wireless Communications.
14. F. Tzeng, A. Jahanian, D. Pi, P. Heydari, “A CMOS Code-Modulated Path-Sharing Multi-Antenna Receiver Front-End,” to be published, *IEEE Journal of Solid-State Circuits*.

15. H. Yousefzadeh, H. Jafarkhani, F. De Flaviis, "A Study of Connectivity in MIMO Fading Ad-Hoc Networks," to be published, *Journal of Communications and Networks*.

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16. D. Cho, S. Pasricha, I. Issenin, N. Dutt, M. Ann, Y Paek, "Adaptive Scratch Pad Memory Management for Dynamic Behavior of Multimedia Applications," *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, Vol. 28, pp. 554-567, April 2009.
17. L. Azzam, E. Ayanoglu, "A Novel Maximum Likelihood Decoding Algorithm for Orthogonal Space-Time Block Codes," *IEEE Transactions on Communications*, Vol. 57, pp. 606-609, March 2009.
18. K. S. Gomadam, S. A. Jafar, "The Effect of Noise Correlation in Amplify-and-Forward Relay Networks," *IEEE Transactions on Information Theory*, Vol. 55, pp. 731-745, February 2009.
19. V. R. Cadambe, S. A. Jafar, S. Shamai, "Interference Alignment on the Deterministic Channel and Application to Fully Connected Gaussian Networks," *IEEE Transactions on Information Theory*, Vol. 55, pp. 269-274, January 2009.

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20. S. Srinivasa, S. A. Jafar, "How Much Spectrum Sharing is Optimal in Cognitive Radio Networks?" *IEEE Transactions on Information Theory*, Vol. 54, pp. 3425-3441, August 2008.
21. A. S. Behbahani, R. Merched, A. Eltawil, "Optimizations of a MIMO Relay Network," *IEEE Transactions on Signal Processing*, Vol. 56, pp. 5062-5073, October 2008.
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33. E. Akay, E. Sengul, E. Ayanoglu, "Bit-Interleaved Coded Multiple Beamforming," *IEEE Transactions on Communications*, Vol. 55, pp. 1805-1811, September 2007.
34. S. Pasricha, N. Dutt, M. Ben-Romdhane, "BMSYN: Bus Matrix Communication Architecture Synthesis for MPSoC," *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, Vol. 26, pp. 1454-1464, August 2007.
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43. E. Akay, E. Ayanoglu, "Achieving Full Frequency and Space Diversity in Wireless Systems via BICM, OFDM, STBC, and Viterbi Decoding," *IEEE Transactions on Communications*, Vol. 54, pp. 2164-2172, December 2006.
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51. Y. Zhu, H. Jafarkhani, "Differential Modulation Based on Quasi-Orthogonal Codes," *IEEE Transactions on Wireless Communications*, Vol. 4, pp. 3005-3017, November 2005.
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3. H. Seferoglu, A. Markopoulou, "Distributed Rate Control for Video Streaming over Wireless Networks with Intersession Network Coding," *Packet Video 2009*.

4. L. Zhou, Z. Chen, C.-C. Wang, F. Tzeng, V. Jain, P. Heydari, "A 2Gbps RF-Correlation-Based Impulse-Radio UWB Transceiver Front-End in 130nm CMOS," *IEEE RFIC Symposium*.

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5. X. Yang, M. Gjoka, P. Chabra, A. Markopoulou, P. Rodriguez, "Kangaroo: Video Seeking in P2P Systems," April 2009.
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8. A. Yazdi, M. M. Green, "A 40 Gb/s Full-Rate 2:1 MUX in 0.18  $\mu\text{m}$  CMOS," *IEEE ISSCC 2009*, February 2009.
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18. K. S. Gomadam, V. R. Cadambe, S. A. Jafar, "Approaching the Capacity of Wireless Networks through Distributed Interference Alignment," *IEEE GLOBECOM 2008*, November 2008.

19. I. Inan, F. Keceli, E. Ayanoglu, "Multimedia Capacity Analysis of the IEEE 802.11e Contention-based Infrastructure Basic Service Set," *IEEE GLOBECOM 2008*, November 2008.
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62. K. El Defrawy, M. Gjoka, A. Markopoulou, "Bottorent: Misusing BitTorrent to Launch DDoS Attacks," *Usenix SRUTI*, Santa Clara, June 2007.
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