

LIST OF PUBLICATIONS

ENDER AYANOGLU

(AUGUST 2007)

JOURNAL PUBLICATIONS

Communication Theory and Coding

1. (1) E. Akay, E. Sengul, and E. Ayanoglu, "Bit-Interleaved Coded Multiple Beamforming," to be published, *IEEE Transactions on Communications*, September 2007.
2. (2) E. Akay and 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.
3. (3) B. A. Cetiner, E. Sengul, E. Akay, and E. Ayanoglu, "A MIMO System with Multifunctional Reconfigurable Antennas," *IEEE Antennas and Wireless Propagation Letters*, Vol. 5, pp. 463-466, December 2006.
4. (4) E. Sengul, E. Akay, and E. Ayanoglu, "Diversity Analysis of Single and Multiple Beamforming," *IEEE Transactions on Communications*, Vol. 54, pp. 990-993, June 2006.
5. (5) E. Ayanoglu, N. R. Dagdeviren, G. D. Golden, and J. E. Mazo, "An Equalizer Design Technique for the PCM Modem: A New Modem for the Digital Public Switched Telephone Network," *IEEE Transactions on Communications*, Vol. 46, pp. 763-774, June 1998.
6. (6) E. Ayanoglu, "Data Transmission When the Sampling Frequency Exceeds the Nyquist Rate," *IEEE Communications Letters*, Vol. 1, pp. 157-159, November 1997.
7. (7) E. Ayanoglu, P. Pancha, A. Reibman, and S. Talwar, "Forward Error Control for MPEG-2 Video Transport in a Wireless LAN," *ACM/Baltzer Mobile Networks and Applications Journal*, Vol. 1, pp. 235-244, December 1996.
8. (8) E. Ayanoglu, C.-L. I, R. D. Gitlin, and I. Bar-David, "Analog Diversity Coding to Provide Transparent Self-Healing Communication Networks," *IEEE Transactions on Communications*, Vol. 42, pp. 110-118, January 1994. **IEEE Communications Society 1995 Stephen O. Rice Prize Paper Award** (for the best original paper published in *IEEE Transactions on Communications* in 1994).
9. (9) E. Ayanoglu, C.-L. I, R. D. Gitlin, and J. E. Mazo, "Diversity Coding for Self-Healing and Fault-Tolerant Communication Networks," *IEEE Transactions on Communications*, Vol. 41, pp. 1677-1686, November 1993.
10. (10) E. Ayanoglu, "Robust and Fast Failure Detection and Prediction for Fault-Tolerant Communication Network," *Electronics Letters*, Vol. 28, pp. 940-941, May 1992.
11. (11) J. H. Winters, E. Ayanoglu, I. Bar-David, R. D. Gitlin, and C.-L. I, "Ghost Cancellation of Analog TV Signals with Applications to IDTV, EDTV, and HDTV," *IEEE Transactions on Circuits and Systems for Video Technology*, Vol. CSVT-1, pp. 136-146, March 1991.
12. (12) E. Ayanoglu and R. M. Gray, "The Design of Joint Source and Channel Trellis Waveform Coders," *IEEE Transactions on Information Theory*, Vol. 33, pp. 855-865, November 1987.

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13. (1) E. Ayanoglu, "Wireless Broadband and ATM Systems," *Computer Networks and ISDN Systems Journal*, Vol. 31, pp. 395-410, February 1999. (Invited Paper)
14. (2) E. Ayanoglu, K. Y. Eng, M. J. Karol, Z. Liu, P. Pancha, M. Veeraraghavan, and C. B. Woodworth, "Mobile Information Infrastructure," *Bell Labs Technical Journal*, Vol. 1, pp. 143-164, November 1996.
15. (3) E. Ayanoglu, K. Y. Eng, and M. J. Karol, "Wireless ATM: Limits, Challenges, and Proposals," *IEEE Personal Communications Magazine*, Vol. 3, pp. 18-34, August 1996. **IEEE Communications Society 1997 Best Tutorial Paper Award** (for the best tutorial paper published in *IEEE Communications Society publications* in 1996). (Invited Paper)

16. (4) K. Y. Eng, M. Karol, M. Veeraraghavan, E. Ayanoglu, C. Woodworth, and R. A. Valenzuela, "A Wireless Broadband Ad-Hoc ATM Local-Area Network," *ACM/Baltzer Wireless Networks Journal*, Vol. 1, pp. 161–174, May 1995.
17. (5) E. Ayanoglu, S. Paul, T. F. La Porta, K. K. Sabnani, R. D. Gitlin, "AIRMAIL: A Link-Layer Protocol for Wireless Networks," *ACM/Baltzer Wireless Networks Journal*, Vol. 1, pp. 47–60, February 1995.

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18. (1) M. Alanyali and E. Ayanoglu, "A Provisioning Algorithm for WDM Optical Networks," *IEEE/ACM Transactions on Networking*, Vol. 7, pp. 767–778, October 1999.
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21. (4) E. Ayanoglu and R. J. Caballero, "Path Enumeration and Hot-Potato Routing Analysis in Multihop Networks," *International Journal of Digital and Analog Communication Systems*, Vol. 5, pp. 217–223, November 1992.

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22. (1) E. Ayanoglu and R. D. Gitlin, "Broadband Network Restoration," *IEEE Communications Magazine*, Vol. 34, pp. 110–119, July 1996.
23. (2) T. F. LaPorta, M. Veeraraghavan, E. Ayanoglu, M. Karol, and R. D. Gitlin, "Broadband Integrated Services Digital Networks: A Technological Discontinuity," *IEEE Communications Magazine*, Vol. 32, pp. 84–97, October 1994.
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26. (1) E. Ayanoglu and R. D. Gitlin, "Tandem Transcoding Without Distortion Accumulation for Vector Quantization," *IEEE Transactions on Communications*, Vol. 40, pp. 397–403, February 1992.
27. (2) E. Ayanoglu, "On Optimal Quantization of Noisy Sources," *IEEE Transactions on Information Theory*, Vol. 36, pp. 1450–1452, November 1990.
28. (3) E. Ayanoglu and R. M. Gray, "The Design of Predictive Trellis Waveform Coders Using the Generalized Lloyd Algorithm," *IEEE Transactions on Communications*, Vol. 34, pp. 1073–1080, November 1986.

PAPERS AND CONTRIBUTED CHAPTERS IN PAPER COLLECTIONS AND BOOKS

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29. (1) E. Ayanoglu, P. Pancha, A. Reibman, and S. Talwar, "Combined Source and Channel Coding for Wireless ATM LANs," in *Signal Processing in Telecommunications*, E. Biglieri and M. Luise (Eds), Springer, London, 1996.

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34. (6) E. Ayanoglu and N. Akar, “B-ISDN (Broadband Integrated Services Digital Network),” *Wiley Encyclopedia of Telecommunications*, J. Proakis (Ed.), Wiley, December 2002. (*Invited Contribution*)

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35. (7) E. E. Kuruoglu and E. Ayanoglu, “The Design of Finite-State Machines for Quantization Using Simulated Annealing,” in *Coding and Quantization: DIMACS/IEEE Workshop Proceedings, October 19-21, 1992*, R. Calderbank, D. G. Forney, Jr., N. Moayeri (Eds.), American Mathematical Society, Providence, RI, 1993.

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36. (1) L. Azzam and E. Ayanoglu, “Reduced Complexity Sphere Decoding for Square QAM via a New Lattice Representation,” to be published, *Proc. IEEE GLOBECOM 2007*, Washington, DC, November 2007.
37. (2) B. A. Cetiner, E. Akay, E. Sengul, and E. Ayanoglu, “A MIMO System Equipped with Multifunctional Reconfigurable Antennas,” *Proc. IEEE AP-S International Symposium*, pp. 157-160, Albuquerque, New Mexico, July 2006.
38. (3) E. Sengul, E. Akay, and E. Ayanoglu, “Adaptive Modulation and Coding for Bit Interleaved Coded Multiple Beamforming,” *Proc. IEEE VTC Spring 2006*, Vol. 5, pp. 2088-2092, Melbourne, Australia, May 2006.
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42. (7) E. Akay, E. Sengul, and E. Ayanoglu, “Performance Analysis of Beamforming for MIMO OFDM with BICM,” *Proc. IEEE ICC 2005*, Vol. 1, pp. 613-617, Seoul, Korea, May 2005.
43. (8) E. Akay, E. Ayanoglu, “Bit Interleaved Coded Modulation with Space Time Block Codes for OFDM Systems,” *Proc. IEEE VTC Fall 2004*, Vol. 3, pp. 1870-1874, Los Angeles, California, September 2004.
44. (9) E. Akay, E. Ayanoglu, “Full Frequency Diversity Codes for Single Input Single Output Systems,” *Proc. IEEE VTC Fall 2004*, Vol. 4, pp. 2477-2481, Los Angeles, California, September 2004.
45. (10) E. Akay, E. Ayanoglu, “Low Complexity Decoding of Bit-Interleaved Coded Modulation for M-ary QAM,” *Proc. ICC 2004*, Vol. 2, pp. 901-905, Paris, France, June 2004.
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- 76. (41) E. Ayanoglu, "Reduction of Restoration Capacity in Advanced Optical Networks," *Proc. IEEE GLOBECOM 1995*, pp. 1018-1022, Singapore, November 1995.
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- 80. (45) E. Ayanoglu, "A Fast Topology Update Algorithm for Restoration under Multiple Failures in Broadband Networks," *Proc. IEEE ICC 1990*, pp. 1295-1299, Geneva, Switzerland, May 1993.
- 81. (46) R. Izmailov and E. Ayanoglu, "Priority Statistical Multiplexing of Mixed VBR Video and CBR Traffic in B-ISDN/ATM With a Threshold Algorithm," *Proc. IEEE INFOCOM 1993*, Vol. 3, pp. 910-918, San Francisco, California, March 1993.
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- 85. (50) E. Ayanoglu, R. D. Gitlin, P. Johri, and W. S. Lai, "Protocols for Loss Recovery in High-Speed Networks," *Proc. 7th International Teletraffic Congress Seminar*, Morristown, New Jersey, October 1990.
- 86. (51) E. Ayanoglu and C.-L. I, "A Method of Calculating the Reliability Polynomial of a Network," *Proc. IEEE GLOBE-COM 1989*, pp. 9.6.1-9.6.7, Dallas, Texas, November 1989.

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- 87. (52) E. E. Kuruoglu and E. Ayanoglu, "The Design of Finite-State Machines for Quantization Using Simulated Annealing," *Proc. IEEE 1993 International Symposium on Information Theory*, p. 443, San Antonio, Texas, January 1993.
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- 91. (1) E. Ayanoglu, B. L. Douglas, O. Gurbuz, E. Perahia, and K. Toussi, "BWIF - Bringing Broadband Wireless Access Indoors," *IEEE-ISTO Broadband Wireless Internet Forum White Paper*, Document WP-4_TG-1, September 2001.
- 92. (2) E. Ayanoglu, M. Burgess, M. Pollack, and A. Zamanian, "Frequency Division Duplexing and Time Division Duplexing for Broadband Wireless Applications," *IEEE-ISTO Broadband Wireless Internet Forum White Paper*, Document WP-3_TG-1, February 2001.
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WORKSHOP PRESENTATIONS, INVITED TALKS, AND PANEL PARTICIPATIONS

Communication Theory and Coding

- 95. (1) E. Ayanoglu, "Bit-Interleaved Coded Multiple Beamforming to Achieve Full Diversity and Maximum Spatial Multiplexing," *IEEE Radio and Wireless Symposium 2007*, Long Beach, CA, January 2007. (*Invited Talk*)
- 96. (2) E. Ayanoglu, "MIMO BICM-OFDM Beamforming with Full and Partial CSIT," *Center for Information Theory Applications Workshop*, UC San Diego, January 2007.
- 97. (3) E. Ayanoglu, "Performance of MIMO Techniques to Achieve Full Diversity and Maximum Spatial Multiplexing," *Center for Information Theory Applications Inaugural Workshop*, UC San Diego, February 2006. (*Invited Talk*)
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101. (7) E. Ayanoglu, "Broadband Network Technological Discontinuity: Error, Loss, and Failure Recovery" *IEEE PCJS Communications and Consumer Electronics Societies and the Jersey Coast Sections of CAS/SP and Computer/Instrumentation Societies*, March 1995. (Invited Talk)
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103. (9) E. Ayanoglu, "Pervasive Communications and Computing Research at UC Irvine," *Keynote Presentation, IEEE Conference on Electronic Commerce*, Newport Beach, California, June 2003.
104. (10) E. Ayanoglu, "The Failure of Fixed Broadband Wireless: Where Do We Go from Here?" *UCLA Electrical Engineering Department Colloquium*, Los Angeles, California, April 2003. (Invited Talk)
105. (11) E. Ayanoglu, "Towards Pervasive Communications: State and Future of Fixed Wireless and Wireless LANs," *Cal-(IT)² UCSD Division*, San Diego, California, December 2002. (Invited Talk)
106. (12) E. Ayanoglu, S. Fisher, J. Frederick, A. Klinkert, and H. Zaghoul, "Setting Requirements and Standards for Multi-Vendor Interoperability," Panel, *Wireless Communications International 14th Annual Convention*, Boston, Massachusetts, June 2001.
107. (13) E. Ayanoglu and B. Kiernan, "Standards and Industry Specifications," Panel, *Supercomm 2001*, Atlanta, Georgia, June 2001.
108. (14) E. Ayanoglu, R. Krishnamoorthy, R. Muse, and H. Zaghoul, "Contrasting Non Line of Sight Technology Approaches," Panel, *Broadband Wireless World Forum*, San Francisco, California, February 2001.
109. (15) E. Ayanoglu, V. Hayes, D. Kostas, D. Satapathy, and H. Zaghoul, "BWA Standards for License Exempt: What Do the Options Deliver and What Are the Service Options," Panel, *Wireless Communications Association 7th Annual Technical Symposium*, San Jose, California, January 2001.
110. (16) E. Ayanoglu, E. A. Hervatic, and M. Shahar, "Layer 2 Alternatives for Broadband Wireless Access," Panel, *Supernet 2001*, San Jose, California, January 2001.
111. (17) E. Ayanoglu, "OFDM and Single Carrier Amplitude Modulation for Fixed Broadband Wireless Access," *UCLA Electrical Engineering Department Seminar*, Los Angeles, California, November 2000. (Invited Talk)
112. (18) E. Ayanoglu, J. M. Costa, K. Krechmer, R. Marks, and R. McAllister, "Fixed Broadband Wireless Access: Technologies and Standards," Panel, *International Symposium on Advanced Radio Technologies*, Boulder, Colorado, September 2000.
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