

Publication List of Professor Chung-Chin Lu (吕忠津)

Journal Papers

1. Y.-Y. Wang and C.-C. Lu, "Using Weibull density function in importance sampling for digital communication system simulation," *IEE Proceedings-I*, vol. 140, no. 2, pp. 163—168, Apr. 1993.
2. Y.-Y. Wang and C.-C. Lu, "Error performance analysis in concatenated digital transmission systems by two-layered modeling," *IEEE Transactions on Communications*, vol. 43, no. 2/3/4, pp. 1356—1364, Apr. 1995.
3. C.-C. Lu and S.-H. Huang, "On bit-level trellis complexity of Reed-Muller codes," *IEEE Transactions on Information Theory*, vol. 41, no. 6, pp. 2061—2064, Nov. 1995.
4. C.-C. Lu, "A search of minimal key functions for normal basis multipliers," *IEEE Transactions on Computers*, vol. 46, no. 5, pp. 588—592, May 1997.
5. C.-W. Liu, K.-T. Huang, and C.-C. Lu, "A systolic array implementation of the Feng-Rao algorithm," *IEEE Transactions on Computers*, vol. 48, no. 7, pp. 690—706, July 1999.
6. Y.-C. Wang and C.-C. Lu, "End-to-end call admission control in service guaranteed networks," *IEICE Transactions on Communications*, vol. E83-B, no. 4, pp. 791—802, Apr. 2000.
7. Y.-C. Wang, C.-W. Liu, and C.-C. Lu, "Loss behavior in space priority queue with batch Markovian arrival process--Discrete-time case," *Performance Evaluation*, vol. 41, no. 4, pp. 269—293, Aug. 2000.
8. C.-C. Lu, H.-S. Wang, and J.-P. Chen, "Efficient architectures for syndrome generation and error location search in the decoding of Hermitian codes," *IEEE Transactions on Communications*, vol. 52, no. 2, pp. 176--179, Feb. 2004.
9. J.-P. Chen and C.-C. Lu, "A serial-in-serial-out hardware architecture for systematic encoding of Hermitian codes via Groebner bases," *IEEE Transactions on Communications*, vol. 52, no. 8, pp. 1322—1332, Aug. 2004.
10. T.-M. Chen, C.-C. Lu, and W.-H. Li, "Prediction of splice sites with dependency graphs and their expanded Bayesian networks," *Bioinformatics*, vol. 21, no. 4, pp. 471—482, Feb. 2005.
11. C.-C. Cheng and C.-C. Lu, "Space-time code design for CPFSK modulation over frequency-nonselective fading channels," *IEEE Transactions on Communications*, vol. 53, no. 9, pp. 1477—1489, Sep. 2005.
12. C.-C. Lu, J.-Y. Hsu, and C.-C. Cheng, "Systolic array implementation of a real-time symbol-optimum multiuser detection algorithm," *IEEE Transactions on Communications*, vol. 53, no. 10, pp. 1718—1728, Oct. 2005.
13. Y.-C. Wang and C.-C. Lu, "Loss behavior in space priority queue with batch Markovian arrival process -- Continuous-time case," *Performance Evaluation*, vol. 64, no. 1, pp. 93—101, Jan. 2007.
14. C.-W. Liu and C.-C. Lu, "A view of Gaussian elimination applied to early stopped Berlekamp-Massey algorithm," *IEEE Transactions on Communications*, vol. 55, no. 6, pp. 1131-1143, Jun. 2007.
15. C.-C. Lu, W.-H. Yuan, and T.-M. Chen, "Extracting transcription factor binding sites from unaligned gene sequences with statistical models," *BMC Bioinformatics*, 9 (Suppl 12): S7, Dec. 2008.
16. C.-Y. Lai and C.-C. Lu, "A construction of quantum stabilizer codes based on syndrome assignment by classical parity-check matrices," *IEEE Transactions on Information Theory*, vol. 57, no. 10, pp. 7163—7179, Oct. 2011.

Conference Papers

1. C.-C. Lu and S.-W. Lin, "Extension of a decoding algorithm from Reed-Solomon codes to

- BCH codes," in the Proceedings of 1989 Telecommunications Symposium, Taipei, Taiwan, pp. 267—274, Dec. 1989.
2. C.-C. Lu and S.-W. Lin, "The key functions of normal basis multipliers," in the Proceedings of 1989 Telecommunications Symposium, Taipei, Taiwan, pp. 275—278, Dec. 1989.
 3. Y.-F. Won and C.-C. Lu, "Recursive pseudo maximum likelihood estimation for joint carrier phase and symbol timing recovery," in the Abstracts of Papers, 1990 IEEE International Symposium on Information Theory, San Diego, California, USA, page 33.
 4. W.-H. Chen and C.-C. Lu, "CSMA/CD/TDMA: a dynamic combination for voice and data integration," in the Proceedings of IEEE INFOCOM'90, San Francisco, California, USA, pp. 842—849, Jun. 1990.
 5. Y.-Y. Wang and C.-C. Lu, "Applying compound Poisson process to error performance analysis in cascaded digital transmission systems," in the Proceedings of IEEE TENCON'90, Hong Kong, Sept. 1990.
 6. C.-C. Lu and K.-Y. Lin, "Delay time analysis of FDDI protocol," in the Proceedings of IEEE INFOCOM'91, Miami, Florida, USA, pp. 1440—1445, Apr. 1991.
 7. C.-C. Lu and R.-H. Lee, "On linear delta-decodable codes for binary adder channels," in the Proceedings of 1991 IEEE International Symposium on Information Theory, Budapest, Hungary, page 303, Jun. 1991.
 8. C.-C. Lu and S.-H. Huang, "On trellis-oriented generator matrices," in the Proceedings of 1991 International Symposium on Communications, Tainan, Taiwan, pp. 80—83, Dec. 1991.
 9. C.-C. Chao, D.-G. Wei, and C.-C. Lu, "Performance of modulation codes over fading channels," in the Proceedings of 1991 Symposium on Information Theory and Its Applications, Ibusuki, Kagoshima, Japan, pp. 381—384, Dec. 1991.
 10. C.-C. Lu and Y.-C. Wang, "A high speed slotted ring protocol for integrated services," in the Proceedings of 1992 Workshop on High Speed Networks, Chung-Li, Taiwan, Feb. 1992.
 11. C.-Y. Ko, K.-C. Chen, and C.-C. Lu, "Performance of slotted ALOHA in multiple joint cell of wireless networks," in the Proc. Intern. Sympos. on Personal, Indoor and Mobile Radio Communications, Boston, USA, Oct. 1992.
 12. Y.-Y. Wang and C.-C. Lu, "The trellis complexity of equivalent binary $[17,9]$ quadratic residue codes is five," in the Proceedings of 1993 IEEE International Symposium on Information Theory, San Antonio, Texas, USA, page 200, Jan. 1993.
 13. C.-C. Lu and Y.-Y. Wang, "Importance sampling in digital communication system simulation," in the Proceedings of 1993 Workshop on Modern Digital Communication, Tainan, Taiwan, pp. 182—195, Feb. 1993.
 14. Y.-C. Wang and C.-C. Lu, "An adaptive algorithm for solving cell loss unfairness problem in ATM networks," in the Proceedings of 1993 Workshop on Computer Communication Networks, Taipei, Taiwan, pp. 57—77, Feb. 1993.
 15. C.-C. Lu, "Characterization and treatments of wireless RF channels," presented at ICOM'93, Taipei, Taiwan, pp. 144—153, March 1993.
 16. C.-C. Lu and C.-Y. Ko, "A media access control protocol architecture for wireless local area networks," in the Proceedings of ICC'93, Geneva, Switzerland, pp. 1005—1009, May 1993.
 17. C.-C. Lu and C.-W. Liu, "On down-link broadcast in a wireless local area network," in the Proceedings of 1994 Workshop on Communication Networks, Hsinchu, Taiwan, pp. 65—72, Feb. 1994.
 18. C.-C. Lu and L.R. Welch, "On automorphism groups of binary primitive BCH codes," in the Proceedings of 1994 IEEE International Symposium on Information Theory, Trondheim, Norway, Jun. 1994.
 19. C.-C. Lu and S.-H. Huang, "On bit-level trellis complexity of Reed-Muller codes," in the Proceedings of 1994 International Symposium on Information Theory and Its Applications, Sydney, Australia, pp. 31—32, Nov. 1994.
 20. C.-C. Lu and H.-T. Ni, "On variable-to-constant-length noiseless coding with a (d, k) constraint," in the Proceedings of 1994 National Symposium on Telecommunications,

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21. C.-W. Liu and C.-C. Lu, "Performance analysis of a media access control protocol stack for wireless LANs with infrastructure," in the Proceedings of 1995 Workshop on Communication Networks, Tainan, Taiwan, Feb. 1995.
 22. C.-C. Lu, C.-H. Shih, C.-Y. Wei, and W.-J. Fan, "Characterization of MPEG coded variable-bit-rate video traffic," in the Proceeding of of HD-Media '96, Taipei, Taiwan, pp.~A3-4/13 -- A3-4/18, Oct. 1996.
 23. C.-C. Lu and C.-C. Hsu, "An integrated voice/data wireless access with cyclic order," Proceedings of the 11th International Conference on Information Networking, Taipei, Taiwan, pp. 5D-3.1 -- 5D-3.7, Jan. 1997.
 24. C.-C. Lu and W.-S. Wang, "On the asymptotic behavior of recursive maximum likelihood estimation for symbol timing recovery over AWGN channels," in the Proceeding of of 1997 IEEE International Symposium on Information Theory, Ulm, Germany, page 245, Jun. 1997.
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 26. Y.-C. Wang and C.-C. Lu, "Traffic descriptor and bandwidth assignment in guaranteed service networks," in the Proceeding of 1997 International Symposium on Communications, Hsinchu, Taiwan, Nov. 1997.
 27. C.-L. Hsiao and C.-C. Lu, "On the design of optimal (2,1) Z2-convolutional coded CPFSK over Rayleigh fading channels," in the Proceeding of of 1998 IEEE International Symposium on Information Theory, MIT, Cambridge, USA, page 458, Aug. 1998.
 28. C.-C. Lu, H.-S. Wang, and J.-P. Chen, "On syndrome generation and error location search in the decoding of Hermitian codes," in the Proceeding of of 2000 IEEE International Symposium on Information Theory, Sorrento, Italy, page 421, June 2000.
 29. W.-H. Gu and C.-C. Lu, "Rate $1/(1+1)$ convolutional encoders over rings with maximal free branch distance," in the Proceedings of 2001 IEEE International Symposium on Information Theory, Washington, DC, USA, page 166, Jun. 2001.
 30. Y.-C. Wang and C.-C. Lu, "A hardware-realizable framework for time stamp scheduling discipline in high speed networks," in the Proceeding of 2001 International Symposium on Communications, Tainan, Taiwan, Nov. 2001.
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 30. W.-H. Gu and C.-C. Lu, "Explicit construction of codes on an asymptotically bad tower of function fields," in the Proceedings of 2002 IEEE International Symposium on Information Theory, Lausanne, Switzerland, Jun. 2002.
 31. J.-P. Chen and C.-C. Lu, "A serial-in-serial-out hardware architecture for systematic encoding of Hermitian codes via Groebner bases," in the Proceedings of 2003 IEEE International Symposium on Information Theory, Yokohama, Japan, Jun. 2003.
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 33. C.-C. Cheng and C.-C. Lu, "Multiresolution analysis of long-range dependent traffic with Haar wavelet," in the Proceeding of 2005 IASTED International Conference on Communication Systems, Novosibirsk, Russia, Jun. 2005.
 34. W.-Y. Chen and C.-C. Lu, "On codes constructed by generalized Kronecker product," in the Proceedings of 2007 IEEE International Symposium on Information Theory, Nice, France, Jun. 2007.
 35. C.-C. Lu, S.-C. Chou, and D.-T. Huang, "A design of space-time codes for CPFSK modulation over multipath fading channels," in the Proceedings of ICC'09, Dresden, Germany, June 2009.
 36. C.-C. Lu, "How to make algebraic-geometry codes practical?," Presented in the Fifth Asian Mathematical Conference, Kuala Lumpur, Malaysia, June 2009.
 37. C. Yang and C.-C. Lu, "On the systematic encoding of geometric Goppa codes on Klein quartic curves," Presented in the Fifth Asian Mathematical Conference, Kuala Lumpur,

Malaysia, June 2009.

38. K. -Y. Kuo and C.-C. Lu, `` A further study on the encoding complexity of quantum stabilizer codes,” in the Proceedings of 2010 International Symposium on Information Theory and its Applications, Taichung, Taiwan, Oct. 2010.
39. C.-C. Lu, C.-Y. Yang and T.-C. Lee, `` Syndrome calculation for the decoding of algebraic-geometry codes on plane Garcia-Stichtenoth curves,” in the Proceedings of 2010 International Symposium on Information Theory and its Applications, Taichung, Taiwan, Oct. 2010.
40. W.-Y. Chen and C.-C. Lu, `` On error correction capability of bit-flipping algorithm for LDPC codes,” in the Proceedings of 2011 IEEE International Symposium on Information Theory, Saint Petersburg, Russia, Jun. 2011.