References*

1. Baumert, L. D. and McEliece, R. J.: *A Golay-Viterbi Concatenated Coding Scheme for MJS '77*. JPL Technical Report 32-1526, pp. 76–83. Pasadena, Calif.: Jet Propulsion Laboratory, 1973.
2. Berlekamp, E. R.: *Algebraic Coding Theory*. New York: McGraw-Hill, 1968.
3. Berlekamp, E. R.: *Decoding the Golay Code*. JPL Technical Report 32-1256, Vol. IX, pp. 81–85. Pasadena, Calif.: Jet Propulsion Laboratory, 1972.
4. Berlekamp, E. R.: Goppa codes. *IEEE Trans. Info. Theory*, **19**, pp. 590–592 (1973).
5. Berlekamp, E. R. and Moreno, O.: Extended double-error-correcting binary Goppa codes are cyclic. *IEEE Trans. Info. Theory*, **19**, pp. 817–818 (1973).
6. Best, M. R., Brouwer, A. E., MacWilliams, F. J., Odlyzko, A. M. and Sloane, N. J. A.: Bounds for binary codes of length less than 25. *IEEE Trans. Info. Theory*, **23**, pp. 81–93 (1977).
7. Best, M. R.: *On the Existence of Perfect Codes*. Report ZN 82/78. Amsterdam: Mathematical Centre, 1978.
8. Best, M. R.: Binary codes with a minimum distance of four. *IEEE Trans. Info. Theory*, **26**, pp. 738–742 (1980).
9. Bussey, W. H.: Galois field tables for $p^n \leq 169$. *Bull. Amer. Math. Soc.*, **12**, pp. 22–38 (1905).
10. Bussey, W. H.: Tables of Galois fields of order less than 1,000. *Bull. Amer. Math. Soc.*, **16**, pp. 188–206 (1910).
11. Cameron, P. J. and van Lint, J. H.: *Designs, Graphs, Codes and their Links*. London Math. Soc. Student Texts, Vol. 22. Cambridge: Cambridge Univ. Press, (1991).
12. Chen, C. L., Chien, R. T. and Liu, C. K.: On the binary representation form of certain integers. *SIAM J. Appl. Math.*, **26**, pp. 285–293 (1974).
13. Chien, R. T. and Choy, D. M.: Algebraic generalization of BCH-Goppa-Helgert codes. *IEEE Trans. Info. Theory*, **21**, pp. 70–79 (1975).
14. Clark, W. E. and Liang, J. J.: On arithmetic weight for a general radix representation of integers. *IEEE Trans. Info. Theory*, **19**, pp. 823–826 (1973).

* References added in the Second Edition are numbered 72 to 81 and references added in the Third Edition are numbered 82 to 100.

15. Clark, W. E. and Liang, J. J.: On modular weight and cyclic nonadjacent forms for arithmetic codes. *IEEE Trans. Info. Theory*, **20**, pp. 767–770 (1974).
16. Curtis, C. W. and Reiner, I.: *Representation Theory of Finite Groups and Associative Algebras.* New York–London: Interscience, 1962.
17. Cvetković, D. M. and van Lint, J. H.: An elementary proof of Lloyd's theorem. *Proc. Kon. Ned. Akad. v. Wetensch.* (A), **80**, pp. 6–10 (1977).
18. Delsarte, P.: An algebraic approach to coding theory. *Philips Research Reports Supplements*, **10** (1973).
19. Delsarte, P. and Goethals, J.-M.: Unrestricted codes with the Golay parameters are unique. *Discrete Math.*, **12**, pp. 211–224 (1975).
20. Elias, P.: *Coding for Noisy Channels.* IRE Conv. Record, part 4, pp. 37–46.
21. Feller, W.: *An Introduction to Probability Theory and Its Applications*, Vol. I. New York–London: Wiley, 1950.
22. Forney, G. D.: *Concatenated Codes.* Cambridge, Mass.: MIT Press, 1966.
23. Forney, G. D.: Convolutional codes I: algebraic structure. *IEEE Trans. Info. Theory*, **16**, pp. 720–738 (1970); *Ibid.*, **17**, 360 (1971).
24. Gallagher, R. G.: *Information Theory and Reliable Communication.* New York: Wiley, 1968.
25. Goethals, J.-M. and van Tilborg, H. C. A.: Uniformly packed codes. *Philips Research Reports*, **30**, pp. 9–36 (1975).
26. Goethals, J.-M.: The extended Nadler code is unique. *IEEE Trans. Info. Theory*, **23**, pp. 132–135 (1977).
27. Goppa, V. D.: A new class of linear error-correcting codes. *Problems of Info. Transmission*, **6**, pp. 207–212 (1970).
28. Goto, M.: A note on perfect decimal AN codes. *Info. and Control*, **29**, pp. 385-387 (1975).
29. Goto, M. and Fukumara, T.: Perfect nonbinary AN codes with distance three *Info. and Control*, **27**, pp. 336–348 (1975).
30. Graham, R. L. and Sloane, N. J. A.: Lower bounds for constant weight codes. *IEEE Trans. Info. Theory*, **26**, pp. 37–40 (1980).
31. Gritsenko, V. M.: Nonbinary arithmetic correcting codes, *Problems of Info. Transmission*, **5**, pp 15–22 (1969).
32. Hall, M.: *Combinatorial Theory.* New York–London–Sydney–Toronto: Wiley (second printing), 1980.
33. Hartmann, C. R. P. and Tzeng, K. K.: Generalizations of the BCH bound. *Info. and Control*, **20**, pp. 489–498 (1972).
34. Helgert, H. J. and Stinaff, R. D.: Minimum distance bounds for binary linear codes. *IEEE Trans. Info. Theory*, **19**, pp. 344–356 (1973).
35. Helgert, H. J.: Alternant codes. *Info. and Control*, **26**, pp. 369–380 (1974).
36. Jackson, D.: *Fourier Series and Orthogonal Polynomials.* Carus Math. Monographs, Vol. 6. Math. Assoc. of America, 1941.
37. Justesen, J.: A class of constructive asymptotically good algebraic codes. *IEEE Trans. Info. Theory*, **18**, pp. 652–656 (1972).
38. Justesen, J.: An algebraic construction of rate $1/v$ convolutional codes. *IEEE Trans. Info. Theory*, **21**, 577–580 (1975).
39. Kasami, T.: An upper bound on k/n for affine invariant codes with fixed d/n. *IEEE Trans. Info. Theory*, **15**, pp. 171–176 (1969).
40. Levenshtein, V. I.: Minimum redundancy of binary error-correcting codes. *Info. and Control*, **28**, pp. 268–291 (1975).
41. van Lint, J. H.: Nonexistence theorems for perfect error-correcting-codes. In: *Computers in Algebra and Theory*, Vol. IV (SIAM–AMS Proceedings) 1971.
42. van Lint, J. H.: *Coding Theory.* Springer Lecture Notes, Vol. 201, Berlin–Heidelberg–New York: Springer, 1971.

43. van Lint, J. H.: A new description of the Nadler code. *IEEE Trans. Info Theory*, **18**, pp. 825–826 (1972).
44. van Lint, J. H.: A survey of perfect codes. *Rocky Mountain J. Math.*, **5**, pp. 199–224 (1975).
45. van Lint, J. H. and MacWilliams, F. J.: Generalized quadratic residue codes. *IEEE Trans. Info. Theory*, **24**, pp. 730–737 (1978).
46. MacWilliams, F. J. and Sloane, N. J. A.: *The Theory of Error-correcting Codes*. Amsterdam–New York–Oxford: North Holland, 1977.
47. Massey, J. L.: *Threshold Decoding*. Cambridge, Mass.: MIT Press, 1963.
48. Massey, J. L. and Garcia, O. N.: Error-correcting codes in computer arithmetic. In: *Advances in Information Systems Science*, Vol. 4, Ch. 5. (Edited by J. T. Ton). New York: Plenum Press, 1972.
49. Massey, J. L., Costello, D. J. and Justesen, J.: Polynomial weights and code construction. *IEEE Trans. Info. Theory*, **19**, pp. 101–110 (1973).
50. McEliece, R. J., Rodemich, E. R., Rumsey, H. C. and Welch, L. R.: New upper bounds on the rate of a code via the Delsarte–MacWilliams inequalities. *IEEE Trans. Info. Theory*, **23**, pp. 157–166 (1977).
51. McEliece, R. J.: *The Theory of Information and Coding*. Encyclopedia of Math. and its Applications, Vol. 3. Reading, Mass.: Addison-Wesley, 1977.
52. McEliece, R. J.: The bounds of Delsarte and Lovasz and their applications to coding theory. In: *Algebraic Coding Theory and Applications*. (Edited by G. Longo, CISM Courses and Lectures, Vol. 258. Wien–New York: Springer, 1979.
53. Peterson, W. W. and Weldon, E. J.: *Error-correcting Codes*. (2nd ed.). Cambridge, Mass.: MIT Press, 1972.
54. Piret, Ph.: Structure and constructions of cyclic convolutional codes. *IEEE Trans. Info. Theory*, **22**, pp. 147–155 (1976).
55. Piret, Ph.: Algebraic properties of convolutional codes with automorphisms. Ph.D. Dissertation. Univ. Catholique de Louvain, 1977.
56. Posner, E. C.: Combinatorial structures in planetary reconnaissance. In: *Error Correcting Codes*. (Edited by H. B. Mann). pp. 15–46. New York–London–Sydney–Toronto: Wiley, 1968.
57. Preparata, F. P.: A class of optimum nonlinear double-error-correcting codes. *Info. and Control*, **13**, pp. 378–400 (1968).
58. Rao, T. R. N.: *Error Coding for Arithmetic Processors*. New York–London: Academic Press, 1974.
59. Roos, C.: On the structure of convolutional and cyclic convolutional codes. *IEEE Trans. Info. Theory*, **25**, pp. 676–683 (1979).
60. Schalkwijk, J. P. M., Vinck, A. J. and Post, K. A.: Syndrome decoding of binary rate *k*/*n* convolutional codes. *IEEE Trans. Info. Theory*, **24**, pp. 553–562 (1978).
61. Selmer, E. S.: Linear recurrence relations over finite fields. Univ. of Bergen, Norway: Dept. of Math., 1966.
62. Shannon, C. E.: A mathematical theory of communication. *Bell Syst. Tech. J.*, **27**, pp. 379–423, 623–656 (1948).
63. Sidelnikov, V. M.: Upper bounds for the number of points of a binary code with a specified code distance. *Info. and Control*, **28**, pp. 292–303 (1975).
64. Sloane, N. J. A. and Whitehead, D. S.: A new family of single-error-correcting codes. *IEEE Trans. Info. Theory*, **16**, pp. 717–719 (1970).
65. Sloane, N. J. A., Reddy, S. M. and Chen, C. L.: New binary codes. *IEEE Trans. Info. Theory*, **18**, pp. 503–510 (1972).
66. Solomon, G. and van Tilborg, H. C. A.: A connection between block and convolutional codes. *SIAM J. Appl. Math.*, **37**, pp. 358 – 369 (1979).
67. Szegö, G.: *Orthogonal Polynomials*. Colloquium Publications, Vol. 23. New York: Amer. Math. Soc. (revised edition), 1959.

68. Tietäväinen, A.: On the nonexistence of perfect codes over finite fields. *SIAM J. Appl. Math.*, **24**, pp. 88–96 (1973).
69. van Tilborg, H. C. A.: Uniformly packed codes. Thesis, Eindhoven Univ. of Technology, 1976.
70. Tricomi, F. G.: *Vorlesungen uber Orthogonalreihen.* Grundlehren d. math. Wiss. Band 76. Berlin–Heidelberg–New York: Springer, 1970.
71. Tzeng, K. K. and Zimmerman, K. P.: On extending Goppa codes to cyclic codes. *IEEE Trans. Info. Theory*, **21**, pp. 712–716 (1975).
72. Baker, R. D., van Lint, J. H. and Wilson, R. M.: On the Preparata and Goethals codes. *IEEE Trans. Info. Theory*, **29**, pp. 342–345 (1983).
73. van der Geer, G. and van Lint, J. H.: *Introduction to Coding Theory and Algebraic Geometry.* Basel: Birkhäuser, 1988.
74. Hong, Y.: On the nonexistence of unknown perfect 6- and 8-codes in Hamming schemes $H(n, q)$ with q arbitrary. *Osaka J. Math.*, **21**, pp. 687–700 (1984).
75. Kerdock, A. M.: A class of low-rate nonlinear codes. *Info and Control*, **20**, pp. 182–187 (1972).
76. van Lint, J. H. and Wilson, R. M.: On the Minimum Distance of Cyclic Codes. *IEEE Trans. Info. Theory*, **32**, pp. 23–40 (1986).
77. van Oorschot, P. C. and Vanstone, S. A.: *An Introduction to Error Correcting Codes with Applications.* Dordrecht: Kluwer, 1989.
78. Peek, J. B. H.: Communications Aspects of the Compact Disc Digital Audio System. *IEEE Communications Magazine*, Vol. 23, No. 2 pp. 7–15 (1985).
79. Piret, Ph.: *Convolutional Codes, An Algebraic Approach.* Cambridge, Mass.: The MIT Press, 1988.
80. Roos, C.: A new lower bound for the minimum distance of a cyclic code. *IEEE Trans. Info. Theory*, **29**, pp. 330–332 (1983).
81. Tsfasman, M. A., Vlăduţ, S. G. and Zink, Th.: On Goppa codes which are better than the Varshamov–Gilbert bound. *Math. Nachr.*, **109**, pp. 21–28 (1982).
82. Barg, A. M., Katsman, S. L., and Tsfasman, M. A.: Algebraic Geometric Codes from Curves of Small Genus. *Probl. of Information Transmission*, **23**, pp. 34–38 (1987).
83. Conway, J. H. and Sloane, N. J. A.: Quaternary constructions for the binary single-error-correcting codes of Julin, Best, and others. *Designs, Codes and Cryptography*, **41**, pp. 31–42 (1994).
84. Duursma, I. M.: *Decoding codes from curves and cyclic codes.* Ph. D. dissertation, Eindhoven University of Technology (1993).
85. Feng, G.-L. and Rao, T. R. N.: A simple approach for construction of algebraic-geometric codes from affine plane curves. *IEEE Trans. Info. Theory*, **40**, pp. 1003–1012 (1994).
86. Feng, G.-L., Wei, V., Rao, T. R. N., and Tzeng, K. K.: Simplified understanding and efficient decoding of a class of algebraic-geometric codes. *IEEE Trans. Info. Theory* **40**, pp. 981–1002 (1994).
87. Garcia, A. and Stichtenoth, H.: A tower of Artin-Schreier extensions of function fields attaining the Drinfeld-Vlăduţ bound. *Invent. Math.* **121**, pp. 211–222 (1995).
88. Hammons, A. R., Vijay Kumar, P., Calderbank, A. R., Sloane, N. J. A., and Solé, P.: The $\mathbb{Z}_4$-Linearity of Kerdock, Preparata, Goėthals, and Related Codes. *IEEE Trans. Info. Theory*, **40**, pp. 301–319 (1994).
89. Høholdt, T. and Pellikaan, R.: On the decoding of algebraic-geometric codes. *IEEE Trans. Info. Theory* **41**, pp. 1589–1614 (1995).
90. Høholdt, T., van Lint, J. H., and Pellikaan, R.: Algebraic Geometry Codes. In: *Handbook of Coding Theory*, (edited by V. S. Pless, W. C. Huffman, and R. A. Brualdi). Elsevier Science Publishers, Amsterdam 1998.
91. Justesen, J., Larsen, K. J., Elbrønd Jensen, H., Havemose, A., and Høholdt, T.: Construction and decoding of a class of algebraic geometry codes. *IEEE Trans. Info. Theory* **35**, pp. 811–821 (1989).

92. van Lint, J. H.: Algebraic geometric codes. In: *Coding Theory and Design Theory I*, The IMA Volumes in Math. and Appl. **20**, (edited by D. Ray-Chaudhuri). Springer Verlag 1990.
93. van Lint, J. H. and Wilson, R. M.: *A Course in Combinatorics*. Cambridge University Press 1992.
94. Long, R. L.: *Algebraic Number Theory*. Marcel Dekker Inc., New York 1977
95. Pellikaan, R.: On a decoding algorithm for codes on maximal curves, *IEEE Trans. Info. Theory*, **35**, pp. 1228–1232 (1989).
96. Serre, J.-P.: Sur le nombre des points rationnels d'une courbe algébrique sur un corps fini. *C. R. Acad. Sc. Paris*, **296**, pp. 397–402 (1983).
97. Skorobogatov, A. N. and Vlăduţ, S. G.: On the decoding of algebraic-geometric codes. *IEEE Trans. Info. Theory*. **36**, pp. 1051–1060 (1990).
98. Stichtenoth, H.: *Algebraic function fields and codes*. Universitext, Springer Verlag, Berlin 1993.
99. Tsfasman, M. A., Vlăduţ, S. G. and Zink, T.: Modular curves, Shimura curves and Goppa codes, better than Varshamov-Gilbert bound. *Math. Nachrichten*, **109**, pp. 21–28 (1982).
100. Uspensky, J. V.: *Theory of Equations*. McGraw-Hill, New York 1948.