Self-Dual Codes

- [1] Christine Bachoc and Philippe Gaborit, On extremal additive \mathbf{F}_4 codes of length 10 to 18, J. Théor. Nombres Bordeaux 12 (2000), no. 2, 255–271, Colloque International de Théorie des Nombres (Talence, 1999). MR MR1823184 (2002b:94056)
- [2] ______, On extremal additive F₄ codes of length 10 to 18, International Workshop on Coding and Cryptography (Paris, 2001), Electron. Notes Discrete Math., vol. 6, Elsevier, Amsterdam, 2001, p. 10 pp. (electronic). MR MR1985228 (2004d:94037)
- [3] _____, Designs and self-dual codes with long shadows, J. Combin. Theory Ser. A **105** (2004), no. 1, 15–34. MR MR2030137 (2005a:94084)
- [4] Christine Bachoc, T. Aaron Gulliver, and Masaaki Harada, Isodual codes over Z_{2k} and isodual lattices, J. Algebraic Combin. 12 (2000), no. 3, 223–240. MR MR1803233 (2001j:94052)
- [5] Eiichi Bannai, Steven T. Dougherty, Masaaki Harada, and Manabu Oura, Type II codes, even unimodular lattices, and invariant rings, IEEE Trans. Inform. Theory 45 (1999), no. 4, 1194–1205. MR MR1686252 (2000i:94091)
- [6] Koichi Betsumiya, Minimum Lee weights of type II codes over F2r, Discrete Math. 308 (2008), no. 14, 3018–3022. MR MR2413878
- [7] Koichi Betsumiya, T. Aaron Gulliver, and Masaaki Harada, Extremal self-dual codes over $F_2 \times F_2$, Des. Codes Cryptogr. **28** (2003), no. 2, 171–186. MR MR1962804 (2004c:94111)
- [8] Koichi Betsumiya and Masaaki Harada, Binary optimal odd formally self-dual codes,
 Des. Codes Cryptogr. 23 (2001), no. 1, 11–21. MR MR1825025 (2002b:94026)
- [9] _____, Classification of formally self-dual even codes of lengths up to 16, Des. Codes Cryptogr. 23 (2001), no. 3, 325–332. MR MR1840914 (2002d:94051)
- [10] _____, Formally self-dual codes related to Type II codes, Appl. Algebra Engrg. Comm. Comput. 14 (2003), no. 2, 81–88. MR MR1995560 (2004g:94079)
- [11] A. Bonnecaze, P. Solé, and P. Udaya, Tricolore 3-designs in type III codes, Discrete Math. 241 (2001), no. 1-3, 129–138. MR MR1861413 (2002m:05031)

- [12] A. Bonnecaze and P. Udaya, Cyclic codes and self-dual codes over $F_2 + uF_2$, IEEE Trans. Inform. Theory 45 (1999), no. 4, 1250–1255. MR MR1686262 (2000b:94020)
- [13] Alexis Bonnecaze, Anne Desideri Bracco, Steven T. Dougherty, Luz R. Nochefranca, and Patrick Solé, Cubic self-dual binary codes, IEEE Trans. Inform. Theory 49 (2003), no. 9, 2253–2259. MR MR2004780 (2004i:94052)
- [14] Alexis Bonnecaze, Bernard Mourrain, and Patrick Solé, Jacobi polynomials, type II codes, and designs, Des. Codes Cryptogr. 16 (1999), no. 3, 215–234. MR MR1689581 (2000b:05032)
- [15] Stefka Bouyuklieva and Masaaki Harada, Extremal self-dual [50, 25, 10] codes with automorphisms of order 3 and quasi-symmetric 2-(49, 9, 6) designs, Des. Codes Cryptogr. 28 (2003), no. 2, 163–169. MR MR1962803 (2004b:94083)
- [16] Stefka Bouyuklieva, E. A. O'Brien, and Wolfgang Willems, *The automorphism group of a binary self-dual doubly even* [72, 36, 16] *code is solvable*, IEEE Trans. Inform. Theory **52** (2006), no. 9, 4244–4248. MR MR2298550
- [17] A. R. Calderbank and N. J. A. Sloane, Double circulant codes over Z₄ and even unimodular lattices, J. Algebraic Combin. 6 (1997), no. 2, 119–131. MR MR1436530 (97k:94078)
- [18] Jean-Claude Carlach and Ayoub Otmani, A systematic construction of self-dual codes, IEEE Trans. Inform. Theory 49 (2003), no. 11, 3005–3009. MR MR2027579 (2004k:94080)
- [19] Robin Chapman, Steven T. Dougherty, Philippe Gaborit, and Patrick Solé, 2-modular lattices from ternary codes, J. Théor. Nombres Bordeaux 14 (2002), no. 1, 73–85. MR MR1925991 (2004g:94091)
- [20] Naoki Chigira, Masaaki Harada, and Masaaki Kitazume, Extremal self-dual codes of length 64 through neighbors and covering radii, Des. Codes Cryptogr. 42 (2007), no. 1, 93–101. MR MR2277060 (2007m:94201)
- [21] _____, Permutation groups and binary self-orthogonal codes, J. Algebra 309 (2007), no. 2, 610–621. MR MR2303196
- [22] Daniel B. Dalan, New extremal binary [44, 22, 8] codes, IEEE Trans. Inform. Theory 49 (2003), no. 3, 747–748. MR MR1967201 (2004a:94060)

- [23] _____, New extremal type I codes of lengths 40, 42, and 44, Des. Codes Cryptogr. **30** (2003), no. 2, 151–157. MR MR2007207 (2004h:94055)
- [24] Lars Eirik Danielsen and Matthew G. Parker, On the classification of all self-dual additive codes over GF(4) of length up to 12, J. Combin. Theory Ser. A 113 (2006), no. 7, 1351–1367. MR MR2259065 (2007g:94083)
- [25] Radinka Dontcheva and Masaaki Harada, Some extremal self-dual codes with an auto-morphism of order 7, Appl. Algebra Engrg. Comm. Comput. 14 (2003), no. 2, 75–79. MR MR1995559 (2004f:94093)
- [26] Steven T. Dougherty, Philippe Gaborit, Masaaki Harada, and Patrick Solé, *Type II codes over* $\mathbf{F}_2 + u\mathbf{F}_2$, IEEE Trans. Inform. Theory **45** (1999), no. 1, 32–45. MR MR1677846 (2000h:94053)
- [27] Steven T. Dougherty, T. Aaron Gulliver, and Manabu Oura, Higher weights and graded rings for binary self-dual codes, Discrete Appl. Math. 128 (2003), no. 1, 121– 143, International Workshop on Coding and Cryptography (WCC 2001) (Paris). MR MR1991421 (2004f:94094)
- [28] Steven T. Dougherty, Masaaki Harada, and Manabu Oura, Note on the biweight enumerators of self-dual codes over Z_k , 2004.
- [29] J. E. Fields, P. Gaborit, W. C. Huffman, and V. Pless, On the classification of extremal even formally self-dual codes, Des. Codes Cryptogr. 18 (1999), no. 1-3, 125–148. MR MR1738661 (2002f:94054)
- [30] _____, On the classification of extremal even formally self-dual codes of lengths 20 and 22, Discrete Appl. Math. 111 (2001), no. 1-2, 75–86. MR MR1836720 (2002g:94045)
- [31] Philippe Gaborit, A bound for certain s-extremal lattices and codes, Arch. Math. (Basel) 89 (2007), no. 2, 143–151. MR MR2341725
- [32] Philippe Gaborit, Carmen-Simona Nedeloaia, and Alfred Wassermann, On the weight enumerators of duadic and quadratic residue codes, IEEE Trans. Inform. Theory 51 (2005), no. 1, 402–407. MR MR2234603
- [33] Philippe Gaborit and Ayoub Otmani, Experimental constructions of self-dual codes, Finite Fields Appl. 9 (2003), no. 3, 372–394. MR MR1983055 (2004f:94096)

- [34] M. Grassl and T. A. Gulliver, *On self-dual MDS codes*, IEEE International Symposium on Information Theory, 2008. ISIT 2008 (2008), 1954–1957.
- [35] Markus Grassl and T. Aaron Gulliver, On circulant self-dual codes over small fields, Des. Codes Cryptogr. **52** (2009), no. 1, 57–81.
- [36] T. Aaron Gulliver and Masaaki Harada, Classification of extremal double circulant formally self-dual even codes, Des. Codes Cryptogr. 11 (1997), no. 1, 25–35. MR MR1436757 (97k:94084)
- [37] _____, Classification of extremal double circulant self-dual codes of lengths 64 to 72, Des. Codes Cryptogr. 13 (1998), no. 3, 257–269. MR MR1601568 (98i:94045)
- [38] _____, Double circulant self-dual codes over Z_{2k} , IEEE Trans. Inform. Theory 44 (1998), no. 7, 3105–3123. MR MR1672103 (99m:94043)
- [39] _____, Double circulant self-dual codes over GF(5), Ars Combin. **56** (2000), 3–13. MR MR1768599
- [40] _____, Classification of extremal double circulant self-dual codes of lengths 74–88, Discrete Math. **306** (2006), no. 17, 2064–2072. MR MR2251825 (2007e:94109)
- [41] _____, On double circulant doubly even self-dual [72, 36, 12] codes and their neighbors, Australas. J. Combin. 40 (2008), 137–144. MR MR2381421 (2008k:94082)
- [42] T. Aaron Gulliver, Masaaki Harada, and Jon-Lark Kim, Construction of new extremal self-dual codes, Discrete Math. 263 (2003), no. 1-3, 81–91. MR MR1955716 (2003m:94083)
- [43] _____, Construction of some extremal self-dual codes, Discrete Math. **264** (2003), 55–73.
- [44] T. Aaron Gulliver, Masaaki Harada, and Hiroki Miyabayashi, *Double circulant and quasi-twisted self-dual codes over* F_5 *and* F_7 , Adv. Math. Commun. 1 (2007), no. 2, 223–238. MR MR2306310 (2008b:94109)
- [45] _____, Optimal double circulant self-dual codes over F_4 . II, Australas. J. Combin. **39** (2007), 163–174. MR MR2351197 (2008h:94108)
- [46] T. Aaron Gulliver, Masaaki Harada, Takuji Nishimura, and Patric R. J. Östergård, Near-extremal formally self-dual even codes of lengths 24 and 32, Des. Codes Cryptogr. 37 (2005), no. 3, 465–471. MR MR2177646

- [47] T. Aaron Gulliver and Jon-Lark Kim, Circulant based extremal additive self-dual codes over GF(4), IEEE Trans. Inform. Theory 50 (2004), no. 2, 359–366. MR MR2044084 (2005a:94113)
- [48] T. Aaron Gulliver, Jon-Lark Kim, and Yoonjin Lee, New MDS or near-MDS self-dual codes, IEEE Trans. Inform. Theory **54** (2008), no. 9, 4354–4360. MR MR2451972
- [49] Annika Günther, A mass formula for self-dual permutation codes, Finite Fields Appl. **15** (2009), no. 4, 517–533. MR MR2535593
- [50] Sunghyu Han and Jon-Lark Kim, On self-dual codes over F_5 , Des. Codes Cryptogr. 48 (2008), no. 1, 43–58. MR MR2395089 (2009a:94043)
- [51] Masaaki Harada, Construction of an extremal self-dual code of length 62, IEEE Trans. Inform. Theory 45 (1999), no. 4, 1232–1233. MR MR1686258 (2000a:94016)
- [52] _____, New extremal self-dual codes of lengths 36 and 38, IEEE Trans. Inform. Theory 45 (1999), no. 7, 2541–2543. MR MR1725149
- [53] _____, An extremal doubly even self-dual code of length 112, Electron. J. Combin. 15 (2008), no. 1, Note 33, 5. MR MR2438589
- [54] _____, On the existence of frames of the Niemeier lattices and self-dual codes over F_p , J. Algebra **321** (2009), no. 8, 2345–2352. MR MR2501524 (2010c:94066)
- [55] Masaaki Harada, W. Holzmann, H. Kharaghani, and M. Khorvash, Extremal ternary self-dual codes constructed from negacirculant matrices, Graphs Combin. 23 (2007), no. 4, 401–417. MR MR2328944
- [56] Masaaki Harada and Hadi Kharaghani, Orthogonal designs and MDS self-dual codes, Australas. J. Combin. 35 (2006), 57–67. MR MR2239304 (2007h:94077)
- [57] Masaaki Harada, Masaaki Kitazume, Akihiro Munemasa, and Boris Venkov, On some self-dual codes and unimodular lattices in dimension 48, European J. Combin. 26 (2005), no. 5, 543–557. MR MR2126638 (2005m:94044)
- [58] Masaaki Harada, Masaaki Kitazume, and Michio Ozeki, Ternary code construction of unimodular lattices and self-dual codes over Z₆, J. Algebraic Combin. 16 (2002), no. 2, 209–223. MR MR1943589 (2004b:11099)

- [59] Masaaki Harada and Akihiro Munemasa, A complete classification of ternary selfdual codes of length 24, J. Combin. Theory Ser. A 116 (2009), no. 5, 1063–1072. MR MR2522420
- [60] Masaaki Harada, Akihiro Munemasa, and Boris Venkov, Classification of ternary extremal self-dual codes of length 28, Math. Comp. 78 (2009), no. 267, 1787–1796. MR MR2501075
- [61] Masaaki Harada and Takuji Nishimura, An extremal singly even self-dual code of length 88, Adv. Math. Commun. 1 (2007), no. 2, 261–267. MR MR2306315 (2008b:94110)
- [62] Masaaki Harada, Takuji Nishimura, and Radinka Yorgova, New extremal self-dual codes of length 66, Math. Balkanica (N.S.) 21 (2007), no. 1-2, 113–121. MR MR2350723 (2008h:94097)
- [63] Masaaki Harada, Michio Ozeki, and Kenichiro Tanabe, On the covering radius of ternary extremal self-dual codes, Des. Codes Cryptogr. 33 (2004), no. 2, 149–158. MR MR2080361 (2005d:94214)
- [64] Hyun Kwang Kim, Dae Kyu Kim, and Jon-Lark Kim, Type I codes over GF(4), Ars Combin. To appear.
- [65] Jon-Lark Kim, New extremal self-dual codes of lengths 36, 38, and 58, IEEE Trans. Inform. Theory 47 (2001), no. 1, 386–393. MR MR1820382 (2002b:94032)
- [66] ______, New good Hermitian self-dual codes over GF(4), IEEE International Symposium on Information Theory (ISIT), Washington, 2001, p. 177.
- [67] ______, New self-dual codes over GF(4) with the highest known minimum weights, IEEE Trans. Inform. Theory 47 (2001), no. 4, 1575–1580. MR MR1830104 (2002b:94033)
- [68] Jon-Lark Kim and Yoonjin Lee, Euclidean and Hermitian self-dual MDS codes over large finite fields, J. Combin. Theory Ser. A 105 (2004), no. 1, 79–95. MR MR2030141 (2004k:94084)
- [69] C. L. Mallows, V. Pless, and N. J. A. Sloane, Self-dual codes over GF(3), SIAM J. Appl. Math. 31 (1976), no. 4, 649–666. MR MR0441541 (55 #14404)
- [70] C.A. Melchor and P. Gaborit, On the classification of extremal [36, 18, 8] binary self-dual codes, IEEE Trans. Inform. Theory **54** (2008), no. 10, 4743–4750.

- [71] Jamshid Moori and B. G. Rodrigues, A self-orthogonal doubly even code invariant under McL: 2, J. Combin. Theory Ser. A **110** (2005), no. 1, 53–69. MR MR2128966 (2006a:05174)
- [72] Gabriele Nebe, Eric M. Rains, and Neil J. A. Sloane, Self-dual Codes and Invariant Theory, Algorithms and Computation in Mathematics, vol. 17, Springer-Verlag, Berlin, 2006. MR MR2209183
- [73] Michio Ozeki, Jacobi polynomials for singly even self-dual codes and the covering radius problems, IEEE Trans. Inform. Theory 48 (2002), no. 2, 547–557. MR MR1891267 (2003c:94048)
- [74] B. G. Rodrigues, Self-orthogonal designs and codes from the symplectic groups $S_4(3)$ and $S_4(4)$, Discrete Math. **308** (2008), no. 10, 1941–1950. MR MR2394462 (2009a:05022)
- [75] Marten van Dijk, Sebastian Egner, Marcus Greferath, and Alfred Wassermann, On two doubly even self-dual binary codes of length 160 and minimum weight 24, IEEE Trans. Inform. Theory **51** (2005), no. 1, 408–411. MR MR2235784 (2007m:94202)
- [76] R. Yorgova, Constructing self-dual codes using an automorphism group, IEEE Information Theory Workshop, 2006. ITW '06 Chengdu (2006), 11–15.
- [77] Radinka Yorgova and Alfred Wassermann, Binary self-dual codes with automorphisms of order 23, Des. Codes Cryptogr. 48 (2008), no. 2, 155–164. MR MR2403446
- [78] Radinka Aleksandrova Yorgova, On binary self-dual codes with automorphisms, IEEE Trans. Inform. Theory **54** (2008), no. 7, 3345–3351. MR MR2450792