

## LIST OF PUBLICATIONS

by Vladimir D. Tonchev

\* **Books:** [142], [143], [144], [166].

\*\* **Book Chapters:** [51], [94], [100].

\*\*\* **Volumes edited:** [9], [27], [77] [101].

1. D. Jungnickel, V. D. Tonchev, The classification of antipodal two-weight linear codes, *Finite Fields and Their Applications*, **50** (2018), 372-381.
2. Vladimir D. Tonchev, On resolvable Steiner 2-designs and maximal arcs in projective planes, *Designs, Codes, and Cryptography*, **84** (2017) 165-172.
3. V. D. Tonchev, Linearly embeddable designs, *Designs, Codes and Cryptography* **85** (2017), 233-247.
4. D. Jungnickel, S. S. Magliveras, V. D. Tonchev, and A. Wassermann, On classifying Steiner triple systems by their 3-rank, *7th International Conference MACIS*, Vienna, Austria, November 15 - 17, 2017. Lecture Notes in Computer Science, vol. 10693, Springer, pp. 295-305.
5. D. Crnkovic, B. Rodrigues, S. Rukavina, and V.D. Tonchev, Quasi-symmetric 2-(64, 24, 46) designs derived from  $AG(3, 4)$ , *Discrete Math.*, **340** (2017), 2472 - 2478.
6. D. Jungnickel, V. D. Tonchev, On Bonisoli's theorem and the block codes of Steiner triple systems, *Designs, Codes and Cryptography*, DOI 10.1007/s10623-017-0406-9, Published online: September 2, 2017.
7. D. Jungnickel, Y. Zhou, and V. D. Tonchev, Extension sets, affine designs, and Hamada's conjecture, *Designs, Codes and Cryptography*, Published online: March 4, 2017, <http://link.springer.com/article/10.1007/s10623-017-0344-6>, DOI 10.1007/s10623-017-0344-6.
8. M. Harada, E. Novak, V. D. Tonchev, The weight distribution of the self-dual [128,64] polarity design code, *Advances in Mathematics of Communications*, **10**, No. 3 (2016), 643-648.
9. \*\*\* *Algebraic Combinatorics and Applications*, Special Issue of the Journal of Algebra, Combinatorics, Discrete Structures, and Applications, Volume 3, Issue 3 (2016), pp. 126 - 216, Vladimir D. Tonchev, editor.

10. Vladimir D. Tonchev, Galois geometries, codes, and new invariants for incidence structures in: *Advances on Superelliptic Curves and their Applications*, Beshaj, L., Shaska, T., Zhupa, E.(Eds.), IOS Press, Amsterdam, 2015, pp. 360 - 371.
11. D. Jungnickel and V.D. Tonchev, Maximal arcs and quasi-symmetric designs, *Designs, Codes and Cryptography*, **77** (2015), 365-374.
12. Bernardo G. Rodrigues and Vladimir D. Tonchev, On Quasi-symmetric 2-(64,24, 46) Designs Derived from Codes,in: R. Pinto et al. (eds.), *Coding Theory and Applications*, CIM Series in Mathematical Sciences 3, Springer International Publishing, Switzerland, 2015, pp. 327-333.
13. Dean Crnković, Sanja Rukavina, and Vladimir D. Tonchev, New Symmetric (61,16,4) Designs Obtained from Codes, in: *Algebraic Design Theory and Hadamard Matrices*, ADTHM, Lethbridge, Alberta, Canada, July 2014, C. J. Colbourn (Ed.), Springer, 2015, pp. 61-69.
14. V.D. Tonchev, The existence of optimal quaternary [28,20,6] and quantum [[28,12,6]] codes, *Journal of Algebra Combinatorics Discrete Structures and Applications*, **1**(1) (2014), 13-17.
15. D. Clark and V. Tonchev, The nonexistence of (18,3,18,6) relative difference sets, in: K.-U. Schmidt and A. Winterhof (Eds.):*Sequences and Their Applications; SETA 2014, Lecture Notes in Computer Science* **8865**, pp. 149-153, 2014.
16. D. Jungnickel and V.D. Tonchev, New invariants for incidence structures, *Designs, Codes and Cryptography*, **68** (2013), 163-177.
17. D. Clark and V.D. Tonchev, A new class of majority-logic decodable codes derived from finite geometry, *Advances in Mathematics of Communications*, **7**, No. 2 (2013), 175-186.
18. D. Clark and V.D. Tonchev, Enumeration of (16,4,16,4) Relative Difference Sets, *Electronic Journal of Combinatorics*, **20** Issue 1 (2013), P72.
19. Y. Fujiwara and V.D. Tonchev, High-rate self-synchronizing codes, *IEEE Trans. Information Theory*, **59**, No. 4 (2013), 2328-2335.
20. Y. Fujiwara and V.D. Tonchev, A characterization of entanglement-assisted quantum low-density parity-check codes, *IEEE Transactions on Information Theory*, **59**, (2013), 3347-3353.
21. Y. Fujiwara, V.D. Tonchev, and T.W.H. Wong, Algebraic techniques in designing quantum synchronizable codes, *Phys. Rev. A* **88** (2013) 012318-1–012318-8. <https://arxiv.org/abs/1304.05>

22. D. Jungnickel and V.D. Tonchev, A Hamada type characterization of the classical geometric designs, *Designs, Codes, and Cryptography*, **65** (2012), 15-28.
23. D. Clark and V.D. Tonchev, Nonbinary quantum codes derived from finite geometries, *Finite Fields Appl.*, **18** (2012), 63-69.
24. V.D. Tonchev, Incidence structures, codes, and Galois geometry, University of Rijeka Scientific Colloquium 2011/2012, Rieka, 2012, pp. 376-403.
25. Y. Fujiwara and V.D. Tonchev, A direct product construction for high-rate self-synchronizing codes, ISITA 2012: *International Symposium on Information Theory and its Applications*, Honolulu, Hawaii, USA, pp. 226-229.
26. A. Munemasa and V.D. Tonchev, The twisted Grassmann graph is the block graph of a design, *Innovations in Incidence Geometry*, **12** (2011), 1-6.
27. \*\*\* Dean Crnković and Vladimir Tonchev, eds., *Information Security, Coding Theory and Related Combinatorics*, IOS Press, Amsterdam 2011.
28. D. Clark, D. Jungnickel, and V.D. Tonchev, Affine geometry designs, polarities, and Hamada's conjecture, *J. Combin. Theory, Ser. A*, **118** (2011), 231-239.
29. V.D. Tonchev, Finite geometry designs, codes, and Hamada's conjecture, in: *Information Security, Coding Theory and Related Combinatorics*, D. Crnković and V. Tonchev, eds., IOS Press, Amsterdam, 2011, pp. 437-448.
30. D. Jungnickel and V.D. Tonchev, The number of designs with geometric parameters grows exponentially, *Designs, Codes and Cryptography* **55**, (2010), 131-140.
31. D. Clark, D. Jungnickel, V.D. Tonchev, Exponential bounds on the number of designs with affine parameters, *J. Combin. Designs*, **18** (2010), 475-487; **19** (2011), 156-166.
32. M. Araya, M. Harada, V.D. Tonchev, and A. Wassermann, Mutually disjoint designs and new 5-designs derived from groups and codes, *J. Combin. Designs*, **18** (2010), 254-259.
33. Y. Fujiwara, D. Clark, P. Vandenriessche, M. De Boeck, and V.D. Tonchev, Entanglement-assisted quantum low-density parity-check codes, *Phys. Rev. Ser. A*, vol. 82, Issue 4, 042338 (2010) [19 pages], published online October 29, 2010, <http://pra.aps.org/abstract/PRA/v82/i4/e042338>.
34. M. Harada, C. Lam, A. Munemasa and V.D. Tonchev, Classification of generalized Hadamard matrices  $H(6,3)$  and quaternary hermitian self-dual codes of length 18, *Electronic J. Combinatorics*, **17** (2010), #R171.
35. Vladimir D. Tonchev, Generalized weighing matrices and self-orthogonal codes, *Discrete Math.* **309** (2009), 2697-4699.

36. D. Jungnickel and V.D. Tonchev, Polarities, quasi-symmetric designs, and Hamada's conjecture, *Designs, Codes and Cryptography*, **51** (2009), 131-140.
37. V.D. Tonchev, Quantum Codes from Finite Geometry and Combinatorial Designs, *Finite Groups, Vertex Operator Algebras, and Combinatorics*, Research Institute for Mathematical Sciences, **1656** pp. 44-54.
38. V.D. Tonchev, Combinatorial designs of minimum  $q$ -rank and Hamada's conjecture, in: *Proceedings of the 26th Symposium on Algebraic Combinatorics*, Yamagata, Japan, June 24-June 26, 2009, pp. 1-10.
39. V.D. Tonchev, Combinatorial Designs and Code Synchronization, in: *Algebraic Aspects of Digital Communications*, T. Shaska and E. Hasimaj eds., IOS Press, Amsterdam, 2009, pp. 81-99.
40. David Clark and Vladimir D. Tonchev, Embedding symmetric nets in affine geometry and Reed-Muller codes, *J. Statistics and Applications*, vol. 4, No 3,4 (2009), 479-488.
41. Andrew T. Azzam, David Clark, and Vladimir D. Tonchev, On extended cyclic codes, Reed-Muller codes, and related designs, *Journal of Combinatorics, Information & System Sciences*, vol. 34, No. 1-4 (2009), 13-22.
42. H. Wang, V.D. Tonchev, An algorithm for optimal comma free codes with isomorphism rejection, Proceeding SAC '09 Proceedings of the 2009 ACM symposium on Applied Computing Pages 1007-1008, ACM New York, NY, USA 2009, table of contents ISBN: 978-1-60558-166-8 doi:10.1145/1529282.1529502
43. V. D. Tonchev, Quantum Codes from Caps, *Discrete Math* **308** (2008), 6368-6372.
44. V.D. Tonchev, Steiner systems for two-stage disjunctive testing, *Journal of Combinatorial Optimization*, **15** (2008), 1-6.
45. C. Sarami and V.D. Tonchev, Cyclic quasi-symmetric designs and self-orthogonal codes of length 63, *J. Stat. Planning and Inference*, **138** (2008), 80-85.
46. V.C. Mavron , T.P. McDonough, and V.D. Tonchev. On affine designs and Hadamard designs with line spreads, *Discrete Math*, **308** (2008), 2742-2750.
47. Y. Mutoh and V.D. Tonchev, Difference systems of sets and cyclotomy, *Discrete Math.* **308** (2008), 2959-2969.
48. V.D. Tonchev, A class of  $2$ - $(3^n 7, 3^{n-1} 7, (3^{n-1} 7 - 1)/2)$  designs, *J. Combinatorial Designs*, **15** (2007), 460-464.
49. M. Jimbo, M. Mishima, S. Janiszewski, A.Y. Teymorian, and V.D. Tonchev, On Conflict-Avoiding Codes of Length  $n = 4m$  for Three Active Users, *IEEE Trans. Info. Theory*, vol. 53, No. 8, August 2007, 2732-2742.

50. V.D. Tonchev and H. Wang, An Algorithm for Optimal Difference Systems of Sets, *J. Combin. Optimization*, vol.14 (2007), 165-175.
51. \*\*V.D. Tonchev, Codes, Chaper VII.1 in: *Handbook of Combinatorial Designs*, Second Edition, C.J. Colbourn, J.H. Dinitz eds., Chapman &Hall/CRC, Boca Raton 2007, pp. 677-702.
52. V.D. Tonchev, On Affine Designs and GMW Difference Sets, in: *Finite Geometries, Groups, and Computation*, A. Hulpke, R. Liebler, T. Penttila and A. Seress eds., Walter de Gruyter, Berlin 2006, pp. 237-245.
53. V. D. Tonchev, H. Wang, Optimal Difference Systems of Sets with Multipliers, *Lecture Notes in Computer Science* **3967** (2006), 612-618.
54. V.D. Tonchev, *Code synchronization, cyclotomy, and finite geometry*, IEEE Information Theory Workshop, Punta del Este, Uruguay, March 13-17, 2006, pp. 270-274.
55. R. Fuji-Hara, A. Munemasa and V.D. Tonchev, Hyperlane partitions and difference systems of sets, *J. Combin. Theory, Ser. A* **113** (2006), 1689-1698.
56. V.D. Tonchev, Partitions of difference sets and code synchronization, *Finite Fields Appl.*, **11** (2005), 601-621.
57. V.D. Tonchev, Affine designs and linear orthogonal arrays, *Discrete Math.* **294** (2005) 219-222.
58. M. Harada, C. Lam and V.D. Tonchev, Symmetric (4, 4)-nets and generalized Hadamard matrices over groups of order 4, *Designs, Codes and Cryptography* **34** (2005), 71-87.
59. M. Harada, A. Munemasa and V.D. Tonchev, A Characterization of Designs Related to an Extremal Doubly-Even Self-Dual Code of Length 48, *Annals of Combinatorics* **9** (2005), 189-198.
60. V. I. Levenshtein and V. D. Tonchev, Conflict-Avoiding Codes and Cyclic Triple Systems, 2005 IEEE International Symposium on Information Theory, Adelaide, Australia, 4-9 September, 2005, pp. 535-537.
61. V.D. Tonchev, On generalized Hadamard matrices of minimum rank, *Finite Fields and their Appl.* **10** (2004), 522-529.
62. V. I. Levenshtein and V. D. Tonchev, On optimal conflict-avoiding codes, *Proceedings of the Sixth International Conference on Discrete Models in Control System Theory*, Moscow, December 7-11, 2004, Moscow State University Press, Moscow 2004, pp. 242-246 (in Russian).
63. A. Munemasa and V.D. Tonchev, A new quasi-symmetric 2-(56,16,6) design obtained from codes *Discrete Math.* **284** (2004), 231-234.

64. V. D. Tonchev, Difference systems of sets and code synchronization, *Rendiconti del Seminario Matematico di Messina, Series II*, vol. 9 (2003), 217-226.
65. V.D. Tonchev, A note on MDS Codes,  $n$ -Arcs and Complete Designs, *Designs, Codes and Cryptography* **29** (2003), 247-250.
66. V.D. Tonchev, A formula for the number of Steiner quadruple systems on  $2^n$  points of 2-rank  $2^n - n$ , *Journal of Combinatorial Designs*, **11** (2003), 260-274.
67. M. Harada and V.D. Tonchev, Self-Orthogonal Codes from Symmetric Designs with Fixed-Point-Free Automorphisms, *Discrete Math.* 264 (2003), 81-90.
68. D. Betten, A. Betten and V.D. Tonchev, Unitals and Codes, *Discrete Math.***267** (2003), 23-33.
69. V.D. Tonchev, A Varshamov-Gilbert bound for a class of formally self-dual codes and related quantum codes, *IEEE Trans. Information Theory*, **48** (2002) 975-977.
70. V.D. Tonchev, Error-correcting codes from graphs, *Discrete Math.* **257** (2002), 549-557.
71. D. Jungnickel and V.D. Tonchev, Perfect Codes and Balanced Generalized Weighing Matrices, II, *Finite Fields and Their Appl.* **8** (2002), 155-165.
72. H. Kharaghani and V.D. Tonchev, On a class of twin balanced incomplete block designs, in: "Codes and Designs", K.T. Arasu and A. Seress eds., de Gruyter, New York 2002, pp. 157-164.
73. C. Lam and V.D. Tonchev, A new bound on the number of designs with classical affine parameters, *Designs, Codes and Cryptography* **27** (2002), 111-117.
74. V.I. Levenshtein and V.D. Tonchev, Constructions of difference systems of sets, in: "Algebraic and Combinatorial Coding Theory", Eight International Workshop Proc., St. Petersburg, Russia, Sept. 2002, pp. 194-197.
75. V.D. Tonchev, A mass formula for Steiner triple systems  $STS(2^n - 1)$  of 2-rank  $2^n - n$ , *Combin. Theory, Ser. A*, 95 (2001), 197-208.
76. Z. Janko, H. Kharaghani, and V.D. Tonchev, Bush-type Hadamard matrices and symmetric designs, *J. Combin. Designs* **9** (2001), 72-78.
77. \*\*\* Special Issue on Designs and Combinatorics: In honor of S. S. Shrikhande, *J. of Statistical Planning and Inference*, Volume 95, No. 1-2 (2001), 360 pages, Edited by V.D. Tonchev, S. Hedayat, N. Singhi and K.D. Vijayan.
78. W. Cary Huffman and V.D. Tonchev, The  $[52,26,10]$  binary self-dual codes with an automorphism of order 7, *Finite Fields and their Applications*, **7** (2001), 341-349.

79. C. Lam, S. Lam and V.D. Tonchev, Bounds on the number of Hadamard designs of even order, *J. Combin. Designs* **9** (2001), 363-378.
80. Z. Janko, H. Kharaghani and V.D. Tonchev, The existence of a Bush-type Hadamard matrix of order 324 and two new infinite classes of symmetric designs, *Designs, Codes and Cryptography* **24** (2001), 225-232.
81. Maximal arcs and disjoint maximal arcs in projective planes of order 16 *J. Geometry* **67** (2000), 117-126 (with N. Hamilton and S. Stoichev)
82. On symmetric nets and generalized Hadamard matrices from affine designs, *J. Geometry* **67** (2000), 180-187 (with V. Mavron).
83. Corrigendum to "Classification of affine resolvable 2-(27,9,4) designs", *J. Statistical Planning and Inference* **86** (2000) 277-278. (with Clement Lam)
84. Bounds on the number of Affine, Symmetric and Hadamard Designs and Matrices, *J. Combin. Theory, Ser. A* **92** (2000), 186-196. (with Clement Lam and Sigmund Lam)
85. Unital designs in planes of order 16, *Discrete Appl. Math.* **102** (2000), 151-158 (with S. Stoichev)
86. Decompositions of difference sets, *J. Algebra* **217** (1999), 21-39. (with D. Jungnickel)
87. Perfect Codes and Balanced Generalized Weighing Matrices, *Finite Fields and their Applications* **5** (1999), 294-300. (with D. Jungnickel)
88. Linear perfect codes and a characterization of the classical designs, *Designs, Codes and Cryptography* **17** (1999), 121-128.
89. Characterizing the Hermitian and Ree unitals on 28 points, *Designs, Codes and Cryptography* **13** (1998), 57-61. (with G. McGuire and H. N. Ward).
90. Maximum disjoint bases and constant weight codes, *IEEE Transactions on Information Theory* **44** (1998), 333-334.
91. Quasi-symmetric 2-(28,12,11) Designs with an Automorphism of Order 7, *J. Combin. Designs* **6** (1998), 213-223. (with Yuan Ding, Sheridan Houghten, Clement Lam, Suzan Smith and Larry Thiel)
92. Computing linear codes and unitals, *Designs, Codes and Cryptography* **14** (1998), 39-52 (with David Jaffe).
93. New designs with block size 7, *J. Combin. Theory A* **83** (1998), 152-157 (with Z. Janko).

94. \*\* “Codes and Designs”, Chapter in: “Handbook of Coding Theory”, V.S. Pless and W.C. Huffman eds., Chapter 15, pp. 1229-1267, Elsevier Science B.V. 1998.
95. Steiner triple systems of order 15 and their codes, *J. Stat. Plan. Inf.* **58** (1997), 207-216 (with Robert Weishaar).
96. Binary codes derived from the Hoffman-Singleton and Higman-Sims graphs, *IEEE Trans. Info. Theory* **43** (1997), 1021-1025.
97. Linear Codes and the Existence of a Reversible Hadamard Difference Set in  $Z_2 \times Z_2 \times Z_5^4$ , *J. Combin. Theory, Ser. A* **79** (1997), 161-167 (with M. van Eupen).
98. Embedding Partial Geometries in Steiner Designs, in: “Geometry, Combinatorial Designs and Related Structures”, J.W.P Hirschfeld, S.S. Magliveras, and M.J. de Resmini eds., *London Math. Soc. Lecture Note Ser.* **245** (1997), pp. 33-41 (with A. Brouwer and W. Haemers).
99. Computational results for the known biplanes of order 9’ in: “Geometry, Combinatorial Designs and Related Structures”, J.W.P Hirschfeld, S.S. Magliveras, and M.J. de Resmini eds., *London Math. Soc. Lecture Note Ser.* **245** (1997), pp. 113-122 (with Jenny Key).
100. \*\* “Codes”, a Chapter in: “The CRC Handbook of Combinatorial Designs”, C.J. Colbourn and J.H. Dinitz eds., CRC Press, New York 1996, pp. 517-543.
101. \*\*\* “Codes, Designs, and Geometry”, Proceedings of the Second Upper Michigan Combinatorics Workshop, Kluwer, Boston 1996, edited by Vladimir Tonchev.
102. The uniformly packed binary [28,21,3] and [35,29,3] codes, *Discrete Math.* **149** (1996), 283-288.
103. A class of Steiner 4-wise balanced designs derived from Preparata codes, *J. Combin. Designs* **4** (1996), 203-204.
104. On the binary codes of Steiner triple systems, *Designs, Codes and Cryptography* **8** (1996), 29-43 (with A. Baartmans and I. Landjev)
105. Spreads in strongly regular graphs, *Designs, Codes and Cryptography*, **8** (1996), 145-157 (with W. Haemers)
106. The existence of certain extremal [54,27,10] self-dual codes, *IEEE Trans. Inform. Theory* **42** (1996), 1628-1631 (with V.Y. Yorgov)
107. Classification of affine resolvable 2-(27,9,4) designs, *J. Statistical Planning and Inference* **56** Issue 2, (1996), 187-202. (with Clement Lam).



108. On quasi-symmetric 2-(28,12,11) and 2-(36,16,12) designs, *Designs, Codes and Cryptography* **5** (1995), 43-56 (with C. Lam and L. Thiel).
109. The existence of extremal [50,25,10] codes and quasi-symmetric 2-(49,9,6) designs, *Designs, Codes, and Cryptography* **6** (1995), 97-106. (with W. Cary Huffman)
110. Singly-even self-dual codes and Hadamard matrices, *Lecture Notes in Computer Science* **948** (1995), pp. 279-284. ISBN 3-540-60114-7 (with M. Harada)
111. Linear codes and doubly-transitive symmetric designs, *Linear Algebra and its Applications* **226-228** (1995), 237-246. (with C. Parker)
112. The Preparata codes and a class of 4-designs, *J. Combinatorial Designs* **2** (1994), 167-170. (with Alphonse Baartmans and Iliya Bluskov)
113. Designs with the symmetric difference property on 64 points and their groups, *J. Combin. Theory, Ser. A* **67** (1994), 23-43. (with C. Parker and E. Spence).
114. On the existence of a certain (64,32,12) extremal code, *IEEE Transactions on Information Theory* **39** (1993), 214-215 (with Vera Pless and Jef Leon).
115. A class of non-embeddable designs, *J. Combin. Theory, Ser. A* **62** (1993), 252-260 (with J.H. van Lint)
116. A design and a code invariant under the simple group Co<sub>3</sub>, **J. Combin. Theory, Ser. A** **62** (1993), 225-233 (with W. Haemers, C. Parker and Vera Pless).
117. A symmetric 2-(160,54,18) design, *J. Combin. Designs* **1** (1993), 65-68 (with E. Spence and Tran van Trung).
118. On the extendability of Steiner t-designs, *J. Combin. Designs* **1** (1993), 239-247. (with A. Baartmans and Ian Blake).
119. Symmetric (31,10,3) designs with trivial automorphism group, *Ars Combinatoria* **36** (1993), 249-254.
120. Quasi-symmetric designs, codes, quadrics, and hyperplane sections, *Geometriae Dedicata* **48** (1993), 295-308.
121. On symmetric and quasi-symmetric designs with the symmetric difference property and their codes, *J. Combin. Theory A* **59** (1992), 40-50 (with D. Jungnickel).
122. Some small non-embeddable designs, *Discrete Math.* **106/107** (1992), 489-492.
123. On Kirkman triple systems of order 33, *Discrete Math.* **106/107** (1992), 493-496 (with S.A. Vanstone).

124. Concerning multiplier automorphisms of cyclic Steiner triple systems, *Designs, Codes and Cryptography* 2 (1992), 237-251 (with C.J. Colbourn, E. Mendelsohn and C.E. Praeger).
125. Extremal self-dual codes from symmetric designs, *Discrete Math.* 110 (1992), 265-268 (with E. Spence).
126. Partial geometries and quadrics, *Sankhyā* 54 (1992), 137-145 (with Frank De Clerck).
127. Unitals in the Hölz design on 28 points, *Geom. Dedicata* 38 (1991), 357-363.
128. Intersection numbers of quasi-multiples of symmetric designs, in: "Advances in Finite Geometries and Designs", J.W.P. Hirschfeld, D.R. Hughes and J.A. Thas eds., Oxford University Press, 1991, 227-236.(with D. Jungnickel).
129. Exponential number of quasi-symmetric SDP designs and codes meeting the Grey-Rankin bound, *Designs, Codes and Cryptography*, 1 (1991), 247-253 (with D. Jungnickel).
130. Self-dual codes and Hadamard matrices, *Discr. Appl. Math.* 33 (1991), 235-240.
131. Cyclic 2-(91,6,1) designs with multiplier automorphisms, *Discr. Math.* 97 (1991) (with Zvonimir Janko).
132. Problems 150-151, *Discrete Math.* 97 (1991), 422-423.
133. A new design, in: "Coding Theory and Design Theory. Part II. Design Theory", D. Ray-Chaudhuri ed., The IMA Volumes in Mathematics and its Applications, Vol. 21, Springer-Verlag, New York 1990, pp.251-256. (with J.H. van Lint and I. Landgev).
134. Extremal doubly-even codes of length 40 derived from Hadamard matrices of order 20, *Discr. Math.* 82 (1990), 317-321 (with F.C. Bussemaker).
135. Extremal doubly-even codes of length 64 derived from symmetric designs, *Discr. Math.* 83(1990), 285-289 (with S. Kapralov).
136. Self-orthogonal designs, *Contemporary Math.*, 111 (1990),219-235.
137. Some new classes of codes admitting majority decoding, *Mathematics and Mathematical Education*, 1990, 334-337 (in Bulgarian).
138. Self-orthogonal designs and extremal doubly-even codes, *J. Combin. Theory, A* 52 (1989), 197-205.
139. New extremal doubly-even codes of length 56 derived from Hadamard matrices of order 28, *Discr. Math.* 76 (1989) 45-49 (with F.C. Bussemaker).
140. Automorphisms of 2-(22,8,4) designs, *Discr. Math.* 77 (1989) 177-189 (with I. Landgev).

141. Results on the support of BIB designs, *J. Statist. Plann. Inference* 22 (1989) 295-306 (with S. Hedayat and I. Landgev).
142. \* "Combinatorial configurations", Longman Scientific and Technical, Wiley, New York 1988. (English translation of [107])
143. \* "Combinatorial configurations", Visha Shckola, Kiev 1988 (Russian translation of [107]).
144. \* "Combinatorial Structures and Codes", Kliment Ohridski University Press, Sofia 1988 (in Bulgarian; 175 pages).
145. Symmetric designs without ovals and extremal self-dual codes, *Ann. Discr. Math.*, 37 (1988) 451-458.
146. On the covering radius of binary  $(14,6)$  codes containing the all-one vector, *IEEE Trans. Info. Theory*, 34 (1988) 591-593 (with S. Dodunekov and K. Manev).
147. The automorphism groups of the known  $2-(91,6,1)$  designs, *Compt. rend. Acad. bulg. Sci.*, 41 (4) (1988) 15-16 (with S. Stoichev).
148. Self-dual codes over  $GF(7)$ , *IEEE Trans. Info. Theory*, 33 (1987) 723-727 (with Vera Pless).
149. Embedding of the Witt-Mathieu system  $S(3,6,22)$  in a symmetric  $2-(78,22,6)$  design, *Geometriae Dedicata* 22 (1987) 49-75.
150. Transitive Steiner triple systems of order 25, *Discrete Math.* 67 (1987) 211-214.
151. Steiner triple systems of order 21 with automorphisms of order 7, *Ars Combinatoria* 23 (1987) 93-96.
152. Symmetric  $2-(31,10,3)$  designs with automorphisms of order 7, *Ann. Discr. Math.* 34 (1987) 461-464.
153. Quasi-residual  $2-(25,10,6)$  designs invariant under a dihedral group of order 10, *Ann. Discr. Math.*, 34 (1987) 301-306 (with S. Kapralov and I. Landgev).
154. On Steiner systems  $S(2,4,25)$  invariant under a group of order 9, *Ann. Discr. Math.*, 34 (1987) 307-314 (with E. Kramer and S.S. Magliveras).
155. Quasi-symmetric  $2-(31,7,7)$  designs and a revision of Hamada's conjecture, *J. Combin. Theory, A* 42 (1986), 104-110.
156. A characterization of designs related to dodecads in the Witt system  $S(5,8,24)$ , *J. Combin. Theory, A* 43 (1986) 219-227.

157. A characterization of designs related to the Witt system  $S(5,8,24)$ , *Math. Z.*, 191 (1986) 225-230.
158. Quasi-symmetric designs and self-dual codes, *European J. Combin.* 7 (1986) 67-73.
159. Hadamard matrices of order 36 with automorphisms of order 17, *Nagoya Math. J.*, 104 (1986) 163-174.
160. Embedding of Preece's quasi-residual designs into symmetric designs, *Sankhya*, B 48 (1986), pt. 2, 216-223.
161. Two new Steiner systems  $S(2,4,25)$ , *Compt. rend. Acad. bulg. Sci.*, 39 (1986), No. 5, 47-48.
162. The symmetric  $2-(36,15,6)$  designs derived from Latin squares of order 6, *Compt. rend. Acad. bulg. Sci.*, 39 (1986), No. 6, 27-29.
163. Hadamard matrices of order 28 with automorphisms of order 7, *J. Combin. Theory, A* 40 (1985), 62-81.
164. The isomorphism of certain symmetric block designs, *Compt. rend. Acad. bulg. Sci.*, 38 (1985) 161-164.
165. Combinatorial configurations, codes and automorphisms, *Mathematics and Education in Math.* (1985) 104-128 (in Bulgarian).
166. \* "Combinatorial configurations. Designs, codes, graphs", *Nauka i izkustvo*, Sofia 1984 (in Bulgarian; 164 pages).
167. Non-embeddable quasi-residual designs with large  $k$ , *J. Combin. Theory, A* 37 (1984), 359-362 (with J.H. van Lint).
168. The isomorphism of the Cohen, Haemers-van Lint and De Clerck- Dye-Thas partial geometries, *Discrete Math.*, 49 (1984) 213-217.
169. The 3-ranks of the cyclic Steiner  $2-(40,4,1)$  designs, *Compt. rend. Acad. bulg. Sci.*, 37 (1984) 1467-1469.
170. Latin squares, *Mathematical Education*, No. 1, 1984, 13-17 (in Bulgarian).
171. Hadamard matrices of order 28 with automorphisms of order 13, *J. Combin. Theory, A* 35 (1983) 43-57.
172. Block designs of Hadamard type and self-dual codes, *Problemi peredatchi informatsii*, 29 (1983), No. 4, 25-30 (in Russian).
173. On the inequivalence of certain extremal self-dual codes, *Compt. rend. Acad. bulg. Sci.*, 36 (1983) 181-184 (in Russian).

174. Automorphisms of 2-(33,11,5) designs, Mathematics and Education in Math. (1983) 248-251 (in Bulgarian).
175. Leonard Euler (1707-1783), Mathematical Education, No. 6, 1983, 21-25 (in Bulgarian).
176. On block designs derived from the lattice graphs, Compt. rend. Acad. bulg. Sci., 35 (1982), 617-619.
177. Some non-embeddable 2-(11,6,6) designs, Compt. rend. Acad. bulg. Sci., 35 (1982) 621-624 (with D.E. Solakov).
178. Cyclic 2-(13,5,5) designs, Compt. rend. Acad. bulg. Sci., 35 (1982) 1205-1207 (with R.V. Raev).
179. Cyclic 2-(17,8,7) designs and related doubly-even codes, Compt. rend. Acad. bulg. Sci., 35 (1982) 1367-1370 (with R.V. Raev).
180. On some covering by triples, Compt. rend. Acad. bulg. Sci., 35 (1982) 1209-1211 (with D.T. Todorov).
181. Embeddability of 2-(9,6,10) designs without repeated blocks, Mathematics and Education in Mathematics (1982) 300-306 (in Bulgarian).
182. On block designs arising from rank 3 graphs, J. Statist. Plann. Inference, 5 (1981) 399-403.
183. Rank 3 graphs, block designs and unequal error protection codes, Problemi peredatchi informatsii, 27 (1981), No. 2, 19-25 (in Russian).
184. A class of unequal error protection codes, Mathematics and Education in Math., (1981) 215-218 (in Bulgarian).
185. The van der Waerden conjecture is proved, Phys. Math. J. 23 (1981), No. 4, 343-345 (in Bulgarian).
186. Quasi-residual designs, codes and graphs, Colloq. Math. Soc. Janos Bolyai, 37 (1981) 685-695.
187. On the mutual embeddability of  $(2k, k, k-1)$  and  $(2k-1, k, k)$  designs, J. Combin. Theory, A 29 (1980) 329-335.
188. On the number of equivalence classes of Boolean functions under a transformation group, IEEE Trans. Inform. Theory, 26 (1980) 625-626 (with J. Denev).
189. Block designs and 3-designs derived from triangular and lattice graphs, Mathematics and Education in Math., (1980) 95-99 (with D.E. Solakov), (in Bulgarian).

190. On the number of equivalence classes of Boolean functions, *Compt. rend. Acad. bulg. Sci.*, 32 (1979) 1609-1610.
191. Permutation groups and block designs, *Mathematics and Education in Math.*, (1979) 552-564. (in Bulgarian).
192. Designs with repeated blocks derived from rank 3 graphs, *Compt. rend. Acad. bulg. Sci.*, 32 (1979) 1611-1614.
193. On block designs arising from rank 3 graphs, *Compt. rend. Acad. bulg. Sci.*, 31 (1978) 945-948.
194. Combinatorially self-dual codes, *Mathematics and Education in Math.* (1978) 515-523. (in Bulgarian).
195. Self-orthogonal codes and resolvable designs, *Compt. rend. Acad. bulg. Sci.*, 30 (1977) 1235-1237.
196. A new class of majority decodable codes, *Compt. rend. Acad. bulg. Sci.*, 29 (1976) 1091-1094.
197. A simple Boolean function with a complex implementation by the method of cascades, *Mathematics and Education in Math.* (1975) 355-359 (in Bulgarian).