

LIST OF PUBLICATIONS

by Vladimir D. Tonchev

* **Books**

** **Book Chapters**

*** **Volumes Edited**

1. A. Munemasa and V. D. Tonchev, Ternary codes, biplanes, and the nonexistence of some quasisymmetric and quasi-3 designs, *J. Combin. Designs*, **28** (2020), 745-752.
2. M. Gezek, R. Mathon, and V. D. Tonchev, Maximal arcs, codes, and new links between projective planes of order 16, *The Electronic Journal of Combinatorics*, **27** (1) (2020), #P1.62.
<https://www.combinatorics.org/ojs/index.php/eljc/article/view/v27i1p62>
3. C. Ding, C. Tang, and V. D. Tonchev, Linear codes of 2-designs associated with subcodes of the ternary generalized Reed-Muller codes, *Designs, Codes and Cryptography*, **88** (2020), 625-641.
4. C. Ding, A. Munemasa, V. Tonchev, Bent vectorial functions, codes, and designs, *IEEE Trans. Information Theory*, **65** (11) (2019), 7533-7541. 10.1109/TIT.2019.2922401
5. D. Crnković, A. Švob, and V. D. Tonchev, Cyclotomic trace codes, *Algorithms* **12** (8) (2019), 1-10, doi:10.3390/a12080168.
6. M. Gezek, V. D. Tonchev, and Tim Wanger, Maximal arcs in projective planes of order 16 and related designs, *Advances in Geometry*, **19** (3) July 2019, 345-351. DOI: <https://doi.org/10.1515/advgeom-2018-0002>.
7. D. Jungnickel and V. D. Tonchev, Counting Steiner triple systems with classical parameters and prescribed rank, *J. Combin. Theory, Ser. A*, **162** (2019), 10-33.
8. D. Jungnickel, S. S. Magliveras, V. D. Tonchev, and A. Wassermann, The classification of Steiner triple systems on 27 points with 3-rank 24, *Designs, Codes, and Cryptography*, **87** (2019), 831-839.
9. S. De Winter, C. Ding, and Vladimir D. Tonchev, Maximal arcs and extended cyclic codes, *Designs, Codes and Cryptography*, **87** (2019), 807-816.
10. C. Ding, H. Liu, and V. D. Tonchev, All binary linear codes that are invariant under $PSL_2(n)$, *IEEE Transactions on Information Theory*, **64** (2018), 5769-5775.
11. D. Jungnickel and V. D. Tonchev, The classification of antipodal two-weight linear codes, *Finite Fields and Their Applications*, **50** (2018), 372-381.

12. D. Jungnickel and V. D. Tonchev, On Bonisoli's theorem and the block codes of Steiner triple systems, *Designs, Codes and Cryptography*, **86** (3) (2018), 449-462.
13. D. Jungnickel, Y. Zhou, and V. D. Tonchev, Extension sets, affine designs, and Hamada's conjecture, *Designs, Codes and Cryptography*, **86** (3) (2018), 587-610.
14. D. Jungnickel, S. S. Magliveras, V. D. Tonchev, and A. Wassermann, On classifying Steiner triple systems by their 3-rank, *Lecture Notes in Computer Science* **10693** (2018), Springer, pp. 295-305.
15. V. D. Tonchev, On resolvable Steiner 2-designs and maximal arcs in projective planes, *Designs, Codes, and Cryptography*, **84** (2017) 165-172.
16. V. D. Tonchev, Linearly embeddable designs, *Designs, Codes and Cryptography* **85** (2017), 233-247.
17. 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.
18. M. Harada, A. Munemasa, and V. D. Tonchev, Self-dual codes and the non-existence of a quasi-symmetric 2-(37, 9, 8) design with intersection numbers 1 and 3, *J. Combin. Designs*, **25** (2017), 469-476.
19. 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.
20. *** V. D. Tonchev, editor, *Algebraic Combinatorics and Applications*, Special Issue of the Journal of Algebra, Combinatorics, Discrete Structures, and Applications, Volume 3, Issue 3 (2016), pp. 126 - 216.
21. V. 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.
22. D. Jungnickel and V.D. Tonchev, Maximal arcs and quasi-symmetric designs, *Designs, Codes and Cryptography*, **77** (2015), 365-374.
23. 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.
24. 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.

25. 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.
26. 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.
27. D. Jungnickel and V.D. Tonchev, New invariants for incidence structures, *Designs, Codes and Cryptography*, **68** (2013), 163-177.
28. 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.
29. D. Clark and V.D. Tonchev, Enumeration of (16,4,16,4) Relative Difference Sets, *Electronic Journal of Combinatorics*, **20** Issue 1 (2013), P72.
30. Y. Fujiwara and V.D. Tonchev, High-rate self-synchronizing codes, *IEEE Trans. Information Theory*, **59**, No. 4 (2013), 2328-2335.
31. 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.
32. 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>
33. D. Jungnickel and V.D. Tonchev, A Hamada type characterization of the classical geometric designs, *Designs, Codes, and Cryptography*, **65** (2012), 15-28.
34. D. Clark and V.D. Tonchev, Nonbinary quantum codes derived from finite geometries, *Finite Fields Appl.*, **18** (2012), 63-69.
35. V.D. Tonchev, Incidence structures, codes, and Galois geometry, University of Rijeka Scientific Colloquium 2011/2012, Rieka, 2012, pp. 376-403.
36. 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.
37. 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.
38. *** Dean Crnković and Vladimir Tonchev, eds., *Information Security, Coding Theory and Related Combinatorics*, IOS Press, Amsterdam 2011.

39. 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.
40. 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.
41. D. Jungnickel and V.D. Tonchev, The number of designs with geometric parameters grows exponentially, *Designs, Codes and Cryptography* **55**, (2010), 131-140.
42. 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.
43. 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.
44. 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>.
45. 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.
46. Vladimir D. Tonchev, Generalized weighing matrices and self-orthogonal codes, *Discrete Math.* **309** (2009), 2697-4699.
47. D. Jungnickel and V.D. Tonchev, Polarities, quasi-symmetric designs, and Hamada's conjecture, *Designs, Codes and Cryptography*, **51** (2009), 131-140.
48. 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.
49. 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.
50. 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.
51. 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.

52. 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.
53. 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
54. V. D. Tonchev, Quantum Codes from Caps, *Discrete Math* **308** (2008), 6368-6372.
55. V.D. Tonchev, Steiner systems for two-stage disjunctive testing, *Journal of Combinatorial Optimization*, **15** (2008), 1-6.
56. 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.
57. 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.
58. Y. Mutoh and V.D. Tonchev, Difference systems of sets and cyclotomy, *Discrete Math.* **308** (2008), 2959-2969.
59. V.D. Tonchev, A class of $2-(3^n-1, 3^{n-1}-1, (3^{n-1}-1)/2)$ designs, *J. Combinatorial Designs*, **15** (2007), 460-464.
60. 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.
61. V.D. Tonchev and H. Wang, An Algorithm for Optimal Difference Systems of Sets, *J. Combin. Optimization*, vol.14 (2007), 165-175.
62. **V.D. Tonchev, *Codes*, Chapter 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.
63. 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.
64. V. D. Tonchev, H. Wang, Optimal Difference Systems of Sets with Multipliers, *Lecture Notes in Computer Science* **3967** (2006), 612-618.
65. V.D. Tonchev, *Code synchronization, cyclotomy, and finite geometry*, IEEE Information Theory Workshop, Punta del Este, Uruguay, March 13-17, 2006, pp. 270-274.

66. 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.
67. V.D. Tonchev, Partitions of difference sets and code synchronization, *Finite Fields Appl.*, **11** (2005), 601-621.
68. V.D. Tonchev, Affine designs and linear orthogonal arrays, *Discrete Math.* **294** (2005) 219-222.
69. 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.
70. 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.
71. 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.
72. V.D. Tonchev, On generalized Hadamard matrices of minimum rank, *Finite Fields and their Appl.* **10** (2004), 522-529.
73. 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).
74. A. Munemasa and V.D. Tonchev, A new quasi-symmetric 2 - $(56,16,6)$ design obtained from codes *Discrete Math.* **284** (2004), 231-234.
75. V. D. Tonchev, Difference systems of sets and code synchronization, *Rendiconti del Seminario Matematico di Messina, Series II*, vol. 9 (2003), 217-226.
76. V.D. Tonchev, A note on MDS Codes, n -Arcs and Complete Designs, *Designs, Codes and Cryptography* **29** (2003), 247-250.
77. 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.
78. M. Harada and V.D. Tonchev, Self-Orthogonal Codes from Symmetric Designs with Fixed-Point-Free Automorphisms, *Discrete Math.* **264** (2003), 81-90.
79. D. Betten, A. Betten and V.D. Tonchev, Unitals and Codes, *Discrete Math.* **267** (2003), 23-33.

80. 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.
81. V.D. Tonchev, Error-correcting codes from graphs, *Discrete Math.* **257** (2002), 549-557.
82. D. Jungnickel and V.D. Tonchev, Perfect Codes and Balanced Generalized Weighing Matrices, II, *Finite Fields and Their Appl.* **8** (2002), 155-165.
83. 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.
84. 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.
85. 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.
86. 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.
87. Z. Janko, H. Kharaghani, and V.D. Tonchev, Bush-type Hadamard matrices and symmetric designs, *J. Combin. Designs* **9** (2001), 72-78.
88. *** 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.
89. 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.
90. 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.
91. 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.
92. N. Hamilton, S. Stoichev, and V. D. Tonchev, Maximal arcs and disjoint maximal arcs in projective planes of order 16 *J. Geometry* **67** (2000), 117-126.
93. V. Mavron and V. D. Tonchev, On symmetric nets and generalized Hadamard matrices from affine designs, *J. Geometry* **67** (2000), 180-187.

94. C. Lam and V. D. Tonchev, Corrigendum to “Classification of affine resolvable 2-(27,9,4) designs”, *J. Statistical Planning and Inference* **86** (2000) 277-278.
95. C. Lam, S. Lam, and V. D. Tonchev, Bounds on the number of Affine, Symmetric and Hadamard Designs and Matrices, *J. Combin. Theory, Ser. A* **92** (2000), 186-196.
96. S. Stoichev and V. D. Tonchev, Unital designs in planes of order 16, *Discrete Appl. Math.* **102** (2000), 151-158.
97. D. Jungnickel and V. D. Tonchev, Decompositions of difference sets, *J. Algebra* **217** (1999), 21-39.
98. D. Jungnickel and V. D. Tonchev, Perfect Codes and Balanced Generalized Weighing Matrices, *Finite Fields and their Applications* **5** (1999), 294-300.
99. V. D. Tonchev, Linear perfect codes and a characterization of the classical designs, *Designs, Codes and Cryptography* **17** (1999), 121-128.
100. G. McGuire, V. D. Tonchev, and H. N. Ward, Characterizing the Hermitian and Ree unitals on 28 points, *Designs, Codes and Cryptography* **13** (1998), 57-61.
101. V. D. Tonchev, Maximum disjoint bases and constant weight codes, *IEEE Transactions on Information Theory* **44** (1998), 333-334.
102. Y. Ding, S. Houghten, C. Lam, S. Smith, L. Thiel, and V. D. Tonchev, Quasi-symmetric 2-(28,12,11) Designs with an Automorphism of Order 7, *J. Combin. Designs* **6** (1998), 213-223.
103. D. Jaffe and V. D. Tonchev, Computing linear codes and unitals, *Designs, Codes and Cryptography* **14** (1998).
104. Z. Janko and V. D. Tonchev, New designs with block size 7, *J. Combin. Theory A* **83** (1998), 152-157.
105. ** V. D. Tonchev, “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.
106. R. Weishaar and V. D. Tonchev, Steiner triple systems of order 15 and their codes, *J. Stat. Plan. Inf.* **58** (1997), 207-216.
107. V. D. Tonchev, Binary codes derived from the Hoffman-Singleton and Higman-Sims graphs, *IEEE Trans. Info. Theory* **43** (1997), 1021-1025.
108. M. van Eupen and V. D. Tonchev, 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.

109. A. E. Brouwer, W. Haemers, and V. D. Tonchev, 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.
110. J. Key and V. D. Tonchev, 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.
111. ** V. D. Tonchev, "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.
112. *** V. D. Tonchev, "Codes, Designs, and Geometry", Proceedings of the Second Upper Michigan Combinatorics Workshop, Kluwer, Boston 1996.
113. V. D. Tonchev, The uniformly packed binary $[28,21,3]$ and $[35,29,3]$ codes, *Discrete Math.* **149** (1996), 283-288.
114. V. D. Tonchev, A class of Steiner 4-wise balanced designs derived from Preparata codes, *J. Combin. Designs* **4** (1996), 203-204.
115. A. Baartmans, I. Landjev, and V. D. Tonchev, On the binary codes of Steiner triple systems, *Designs, Codes and Cryptography* **8** (1996), 29-43.
116. W. Haemers and V. D. Tonchev, Spreads in strongly regular graphs, *Designs, Codes and Cryptography*, **8** (1996), 145-157.
117. V. Yorgov and V. D. Tonchev, The existence of certain extremal $[54,27,10]$ self-dual codes, *IEEE Trans. Inform. Theory* **42** (1996), 1628-1631.
118. C. Lam and V. D. Tonchev, Classification of affine resolvable $2-(27,9,4)$ designs, *J. Statistical Planning and Inference* **56** Issue 2, (1996), 187-202.
119. C. Lam, L. Thiel, and V. D. Tonchev, On quasi-symmetric $2-(28,12,11)$ and $2-(36,16,12)$ designs, *Designs, Codes and Cryptography* **5** (1995), 43-56.
120. W. C. Huffman and V. D. Tonchev, The existence of extremal $[50,25,10]$ codes and quasi-symmetric $2-(49,9,6)$ designs, *Designs, Codes, and Cryptography* **6** (1995), 97-106.
121. M. Harada and V. D. Tonchev, Singly-even self-dual codes and Hadamard matrices, *Lecture Notes in Computer Science* **948** (1995), pp. 279-284.
122. C. Parker and V. D. Tonchev, Linear codes and doubly-transitive symmetric designs, *Linear Algebra and its Applications* **226-228** (1995), 237-246.

123. A. Baartmans, I. Bluskov, and V. D. Tonchev, The Preparata codes and a class of 4-designs, *J. Combinatorial Designs* **2** (1994), 167-170.
124. C. Parker, E. Spence, and V. D. Tonchev, Designs with the symmetric difference property on 64 points and their groups, *J. Combin. Theory, Ser. A* **67** (1994), 23-43.
125. V. Pless, J. Leon, and V. D. Tonchev, On the existence of a certain (64,32,12) extremal code, *IEEE Transactions on Information Theory* **39** (1993), 214-215.
126. J. H. van Lint and V. D. Tonchev, A class of non-embeddable designs, *J. Combin. Theory, Ser. A* **62** (1993), 252-260.
127. W. Haemers, C. Parker, V. Pless, and V. D. Tonchev, A design and a code invariant under the simple group Co_3 , *J. Combin. Theory, Ser. A* **62** (1993), 225-233.
128. E. Spence, T. van Trung, and V. D. Tonchev, A symmetric 2-(160,54,18) design, *J. Combin. Designs* **1** (1993), 65-68.
129. A. Baartmans, I. Blake, and V. D. Tonchev, On the extendability of Steiner t-designs, *J. Combin. Designs* **1** (1993), 239-247.
130. V. D. Tonchev, Symmetric (31,10,3) designs with trivial automorphism group, *Ars Combinatoria* **36** (1993), 249-254.
131. V. D. Tonchev, Quasi-symmetric designs, codes, quadrics, and hyperplane sections, *Geometriae Dedicata* **48** (1993), 295-308.
132. D. Jungnickel and V. D. Tonchev, On symmetric and quasi-symmetric designs with the symmetric difference property and their codes, *J. Combin. Theory A* **59** (1992), 40-50.
133. V. D. Tonchev, Some small non-embeddable designs, *Discrete Math.* **106/107** (1992), 489-492.
134. S. A. Vanstone and V. D. Tonchev, On Kirkman triple systems of order 33, *Discrete Math.* **106/107** (1992), 493-496.
135. C. J. Colbourn, E. Mendelsohn, C. E. Praeger, and V. D. Tonchev, Concerning multiplier automorphisms of cyclic Steiner triple systems, *Designs, Codes and Cryptography* **2** (1992), 237-251.
136. E. Spence and V. D. Tonchev, Extremal self-dual codes from symmetric designs, *Discrete Math.* **110** (1992), 265-268.
137. F. De Clerck and V. D. Tonchev, Partial geometries and quadrics, *Sankhyā* **54** (1992), 137-145.

138. V. D. Tonchev, Unitals in the Hölz design on 28 points, *Geom. Dedicata* 38 (1991), 357-363.
139. D. Jungnickel and V. D. Tonchev, 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.
140. D. Jungnickel and V. D. Tonchev, Exponential number of quasi-symmetric SDP designs and codes meeting the Grey-Rankin bound, *Designs, Codes and Cryptography*, 1 (1991), 247-253.
141. V. D. Tonchev, Self-dual codes and Hadamard matrices, *Discr. Appl. Math.* 33 (1991), 235-240.
142. Z. Janko and V. D. Tonchev, Cyclic 2-(91,6,1) designs with multiplier automorphisms, *Discr. Math.* 97 (1991), 265-268.
143. V. D. Tonchev, Open Problems 150-151, *Discrete Math.* **97** (1991), 422-423.
144. J. H. van Lint, I. Landgev, and V. D. Tonchev, 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.
145. F. C. Bussemaker and V. D. Tonchev, Extremal doubly-even codes of length 40 derived from Hadamard matrices of order 20, *Discr. Math.* 82 (1990), 317-321.
146. S. Kapralov and V. D. Tonchev, Extremal doubly-even codes of length 64 derived from symmetric designs, *Discr. Math.* 83(1990), 285-289.
147. V. D. Tonchev, Self-orthogonal designs, *Contemporary Math.*, 111 (1990), 219-235.
148. V. D. Tonchev, Some new classes of codes admitting majority decoding, *Mathematics and Mathematical Education* (1990), 334-337.
149. V. D. Tonchev, Self-orthogonal designs and extremal doubly-even codes, *J. Combin. Theory, A* 52 (1989), 197-205.
150. F. C. Bussemaker and V. D. Tonchev, New extremal doubly-even codes of length 56 derived from Hadamard matrices of order 28, *Discr. Math.* 76 (1989) 45-49.
151. I. Landgev and V. D. Tonchev, Automorphisms of 2-(22,8,4) designs, *Discr. Math.* 77 (1989) 177-189.
152. S. Hedayat, I. Landgev, and V. D. Tonchev, Results on the support of BIB designs, *J. Statist. Plann. Inference* 22 (1989) 295-306.

153. * V. D. Tonchev, "Combinatorial configurations", Longman Scientific and Technical, Wiley, New York 1988 (English translation of [172]).
154. * V. D. Tonchev, "Combinatorial configurations", Visha Shckola, Kiev, 1988 (Russian translation of [172]).
155. * V. D. Tonchev, "Combinatorial Structures and Codes", Kliment Ohridski University Press, Sofia 1988 (in Bulgarian).
156. V. D. Tonchev, Symmetric designs without ovals and extremal self-dual codes, *Ann. Discr. Math.*, 37 (1988) 451-458.
157. S. Dodunekov, N. Manev, and V. D. Tonchev, On the covering radius of binary (14,6) codes containing the all-one vector, *IEEE Trans. Info. Theory*, 34 (1988) 591-593.
158. S. Stoichev and V. D. Tonchev, The automorphism groups of the known 2-(91,6,1) designs, *Compt. rend. Acad. bulg. Sci.*, 41 (4) (1988) 15-16.
159. V. Pless and V. D. Tonchev, Self-dual codes over GF(7), *IEEE Trans. Info. Theory*, 33 (1987) 723-727.
160. V. D. Tonchev, Embedding of the Witt-Mathieu system S(3,6,22) in a symmetric 2-(78,22,6) design, *Geometriae Dedicata* 22 (1987) 49-75.
161. V. D. Tonchev, Transitive Steiner triple systems of order 25, *Discrete Math.* 67 (1987) 211-214.
162. V. D. Tonchev, Steiner triple systems of order 21 with automorphisms of order 7, *Ars Combinatoria* 23 (1987) 93-96.
163. V. D. Tonchev, Symmetric 2-(31,10,3) designs with automorphisms of order 7, *Ann. Discr. Math.* 34 (1987) 461-464.
164. S. Kapralov, I. Landgev, and V. D. Tonchev, Quasi-residual 2-(25,10,6) designs invariant under a dihedral group of order 10, *Ann. Discr. Math.*, 34 (1987) 301-306.
165. E. Kramer, S. S. Magliveras, and V. D. Tonchev, On Steiner systems S(2,4,25) invariant under a group of order 9, *Ann. Discr. Math.*, 34 (1987) 307-314.
166. V. D. Tonchev, Quasi-symmetric 2-(31,7,7) designs and a revision of Hamada's conjecture, *J. Combin. Theory, A* 42 (1986), 104-110.
167. V. D. Tonchev, A characterization of designs related to dodecads in the Witt system S(5,8,24), *J. Combin. Theory, A* 43 (1986) 219-227.
168. V. D. Tonchev, A characterization of designs related to the Witt system S(5,8,24), *Math. Z.*, 191 (1986) 225-230.

169. V. D. Tonchev, Quasi-symmetric designs and self-dual codes, *European J. Combin.* 7 (1986) 67-73.
170. V. D. Tonchev, Hadamard matrices of order 36 with automorphisms of order 17, *Nagoya Math. J.*, 104 (1986) 163-174.
171. V. D. Tonchev, Embedding of Preece's quasi-residual designs into symmetric designs, *Sankhya*, B 48 (1986), pt. 2, 216-223.
172. V. D. Tonchev, Two new Steiner systems $S(2,4,25)$, *Compt. rend. Acad. bulg. Sci.*, 39 (1986), No. 5, 47-48.
173. V. D. Tonchev, 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.
174. V. D. Tonchev, Hadamard matrices of order 28 with automorphisms of order 7, *J. Combin. Theory*, A 40 (1985), 62-81.
175. V. D. Tonchev, The isomorphism of certain symmetric block designs, *Compt. rend. Acad. bulg. Sci.*, 38 (1985) 161-164.
176. V. D. Tonchev, Combinatorial configurations, codes and automorphisms, *Mathematics and Education in Math.* (1985) 104-128.
177. * V. D. Tonchev, "Combinatorial configurations. Designs, codes, graphs", *Nauka izkustvo*, Sofia 1984 (in Bulgarian; 164 pages).
178. J. H. van Lint and V. D. Tonchev, Non-embeddable quasi-residual designs with large k , *J. Combin. Theory*, A 37 (1984), 359-362.
179. V. D. Tonchev, The isomorphism of the Cohen, Haemers-van Lint and De Clerck-Dye-Thomas partial geometries, *Discrete Math.*, 49 (1984) 213-217.
180. V. D. Tonchev, The 3-ranks of the cyclic Steiner $2-(40,4,1)$ designs, *Compt. rend. Acad. bulg. Sci.*, 37 (1984) 1467-1469.
181. V. D. Tonchev, Latin squares, *Mathematical Education*, No. 1, 1984, 13-17.
182. V. D. Tonchev, Hadamard matrices of order 28 with automorphisms of order 13, *J. Combin. Theory*, A 35 (1983) 43-57.
183. V. D. Tonchev, Block designs of Hadamard type and self-dual codes, *Problems of Information Transmission*, 29 (1983), No. 4, 25-30.
184. V. D. Tonchev, On the inequivalence of certain extremal self-dual codes, *Compt. rend. Acad. bulg. Sci.*, 36 (1983) 181-184.

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

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