

## LIST OF PUBLICATIONS

by Vladimir D. Tonchev

\* **Books:** [116], [117], [118], [140].

\*\* **Book Chapters:** [25], [68], [74].

\*\*\* **Volumes edited:** [2], [51], [75].

### 2012

1. D. Clark and V.D. Tonchev, Nonbinary quantum codes derived from finite geometries, *Finite Fields Appl.*, **18** (2012), 63-69.  
<http://www.sciencedirect.com/science/article/pii/S1071579711000542>

### 2011

2. Dean Crnković and Vladimir Tonchev, eds., *Information Security, Coding Theory and Related Combinatorics*, IOS Press, Amsterdam 2011.
3. 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.
4. 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.

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5. D. Jungnickel and V.D. Tonchev, The number of designs with geometric parameters grows exponentially, *Designs, Codes and Cryptography* **55**, (2010), 131-140.
6. 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.
7. 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.

8. 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>.
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## 2009

10. Vladimir D. Tonchev, Generalized weighing matrices and self-orthogonal codes, *Discrete Math.* **309** (2009), 2697-4699.
11. D. Jungnickel and V.D. Tonchev, Polarities, quasi-symmetric designs, and Hamada's conjecture, *Designs, Codes and Cryptography*, **51** (2009), 131-140.
12. 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.
13. 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.
14. 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.
15. 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.
16. 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.

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18. V.D. Tonchev, Steiner systems for two-stage disjunctive testing, *Journal of Combinatorial Optimization*, **15** (2008), 1-6.
19. 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.

20. 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.
21. Y. Mutoh and V.D. Tonchev, Difference systems of sets and cyclotomy, *Discrete Math.* **308** (2008), 2959-2969.

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23. 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.
24. V.D. Tonchev and H. Wang, An Algorithm for Optimal Difference Systems of Sets, *J. Combin. Optimization*, vol.14 (2007), 165-175.
25. \*\*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.

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32. 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.
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44. V.D. Tonchev, Error-correcting codes from graphs, *Discrete Math.* **257** (2002), 549-557.
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- 55. Maximal arcs and disjoint maximal arcs in projective planes of order 16 *J. Geometry* **67** (2000), 117-126 (with N. Hamilton and S. Stoicev)
- 56. On symmetric nets and generalized Hadamard matrices from affine designs, *J. Geometry* **67** (2000), 180-187 (with V. Mavron).
- 57. Corrigendum to “Classification of affine resolvable 2-(27,9,4) designs”, *J. Statistical Planning and Inference* **86** (2000) 277-278. (with Clement Lam)
- 58. 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)
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- 60. Decompositions of difference sets, *J. Algebra* **217** (1999), 21-39. (with D. Jungnickel)
- 61. Perfect Codes and Balanced Generalized Weighing Matrices, *Finite Fields and their Applications* **5** (1999), 294-300. (with D. Jungnickel)
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- 63. Characterizing the Hermitian and Ree unitals on 28 points, *Designs, Codes and Cryptography* **13** (1998), 57-61. (with G. McGuire and H. N. Ward).
- 64. Maximum disjoint bases and constant weight codes, *IEEE Transactions on Information Theory* **44** (1998), 333-334.
- 65. 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)
- 66. Computing linear codes and unitals, *Designs, Codes and Cryptography* **14** (1998), 39-52 (with David Jaffe).
- 67. New designs with block size 7, *J. Combin. Theory A* **83** (1998), 152-157 (with Z. Janko).

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79. Spreads in strongly regular graphs, *Designs, Codes and Cryptography*, **8** (1996), 145-157 (with W. Haemers)

80. The existence of certain extremal  $[54,27,10]$  self-dual codes, *IEEE Trans. Inform. Theory* **42** (1996), 1628-1631 (with V.Y. Yorgov)
81. Classification of affine resolvable  $2-(27,9,4)$  designs, *J. Statistical Planning and Inference* **56** Issue 2, (1996), 187-202. (with Clement Lam).

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84. 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)
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