

# Publications

## Journals

- [1] A. LEVERRIER AND G. ZÉMOR, Decoding Quantum Tanner Codes, *IEEE Trans. on Information Theory*, IT-69 No 8 (2023) pp. 5100–5115.
- [2] A. BARG AND G. ZÉMOR, High-rate storage codes on triangle-free graphs, *IEEE Trans. on Information Theory*, IT-68 No 12 (2022) pp. 7787–7797.
- [3] N. ARAGON, O. BLAZY, J-C. DENEUVILLE, P. GABORIT AND G. ZÉMOR, Ouroboros: An efficient and provably secure KEM family, *IEEE Trans. on Information Theory*, IT-68 No 9 (2022) pp. 6233–6244.
- [4] S. EVRAI, T. KAUFMAN AND G. ZÉMOR, Decodable quantum LDPC codes beyond the  $\sqrt{n}$  distance barrier using high dimensional expanders, *SIAM J. on Computing*, to appear.
- [5] A. LEVERRIER, V. LONDE AND G. ZÉMOR, Towards local testability for quantum coding, *Quantum*, 6, 661 (2022).
- [6] F. OGGIER AND G. ZÉMOR, Coding Constructions for Efficient Oblivious transfer from Noisy Channels, *IEEE Trans. on Information Theory*, IT-68 No 4 (2022) pp. 2719–2734.
- [7] N. RON-ZEWI, M. WOOTTERS AND G. ZÉMOR, Linear-time Erasure List Decoding of Expander Codes, *IEEE Trans. on Information Theory*, IT-67 No 9 (2021) pp. 5827–5839.
- [8] N. DELFOSSE AND G. ZÉMOR, Linear-time maximum likelihood decoding of surface codes over the quantum erasure channel, *Physical Review Research*, **2** 033042, July 2020.
- [9] G. SPINI AND G. ZÉMOR, Efficient protocols for Perfectly Secure Message Transmission with applications to secure network coding, *IEEE Trans. on Information Theory*, IT-66 No 10 (2020) pp. 6340–6353.
- [10] N. ARAGON, P. GABORIT, A. HAUTEVILLE, O. RUATTA AND G. ZÉMOR, Low Rank Parity Check Codes: New Decoding Algorithms and Applications to Cryptography, *IEEE Trans. on Information Theory*, IT-65 No 12 (2019) pp. 7697–7717.
- [11] C. BACHOC, A. COUVREUR AND G. ZÉMOR, Towards a function field version of Freiman’s Theorem, *Algebraic Combinatorics*, Vol. 1 No 4 (2018) pp. 501–521.
- [12] C. AGUILAR, O. BLAZY, J-C. DENEUVILLE, P. GABORIT AND G. ZÉMOR, Efficient Encryption from Random Quasi-Cyclic Codes, *IEEE Trans. on Information Theory*, IT-64 No 5 (2018) pp. 3927–3943.

- [13] N. DI PIETRO, G. ZÉMOR AND J. J. BOUTROS, **LDA Lattices Without Dithering Achieve Capacity on the Gaussian Channel**, *IEEE Trans. on Information Theory*, IT-64 No 3 (2018) pp. 1561–1594.
- [14] C. BACHOC, O. SERRA AND G. ZÉMOR, **Revisiting Kneser’s Theorem for Field Extensions**, *Combinatorica*, Vol. 39 No 4 (2018) pp. 759–777.
- [15] C. BACHOC, O. SERRA AND G. ZÉMOR, **An analogue of Vosper’s Theorem for Extension Fields**, *Math. Proc. Cambridge Philos. Soc.*, Vol. 163, No 3 (2017) pp. 423–452.
- [16] P. GABORIT AND G. ZÉMOR, **On the hardness of the decoding and the minimum distance problems for rank codes**, *IEEE Trans. on Information Theory*, IT-62, No 12 (2016) pp. 7245–7252.
- [17] N. DELFOSSE AND G. ZÉMOR, **A homological upper bound on critical probabilities for hyperbolic percolation**, *Annales de l’Institut Henri Poincaré D*, Vol. 3, No 2 (2016) pp. 139–161.
- [18] D. MIRANDOLA AND G. ZÉMOR, **Critical pairs for the Product Singleton Bound**, *IEEE Trans. on Information Theory*, IT-61, No 9 (2015) pp. 4928–4937.
- [19] I. CASCUDO, R. CRAMER, D. MIRANDOLA, AND G. ZÉMOR, **Squares of random linear codes**, *IEEE Trans. on Information Theory*, IT-61, No 3 (2015) pp. 1159–1173.
- [20] N. KASHYAP AND G. ZÉMOR, **Upper bounds on the size of grain-correcting codes**, *IEEE Trans. on Information Theory*, IT-60, No 8 (2014) pp. 4699–4709.
- [21] J.P. TILlich AND G. ZÉMOR, **Quantum LDPC codes with positive rate and minimum distance proportional to the square root of the blocklength**, *IEEE Trans. on Information Theory*, IT-60, No 2 (2014) pp. 1193–1202.
- [22] A. COUVREUR, N. DELFOSSE AND G. ZÉMOR, **A Construction of Quantum LDPC Codes from Cayley Graphs**, *IEEE Trans. on Information Theory*, IT-59, No 9 (2013) pp. 6087–6098.
- [23] N. DELFOSSE AND G. ZÉMOR, **Upper Bounds on the Rate of Low Density Stabilizer Codes for the Quantum Erasure Channel**, *Quantum Information & Computation*, Vol. 13, No 9&10 (2013) pp. 0793–0826.
- [24] O. SERRA AND G. ZÉMOR, **A Structure Theorem for Small Sumsets in Non-abelian Groups**, *European Journal of Combinatorics*, Vol. 34, No 8 (2013) pp. 1436–1453.

- [25] A. MAZUMDAR, A. BARG AND G. ZÉMOR, **Constructions of Rank Modulation Codes**, *IEEE Trans. on Information Theory*, IT-59, No 2 (2013) pp. 1018–1029.
- [26] C. BACHOC AND G. ZÉMOR, **Bounds for binary codes relative to pseudo-distances of  $k$  points**, *Advances in Mathematics of Communications*, Vol. 4, No. 4 (2010) pp. 547–565.
- [27] J. BOUTROS, A. GUILLEN I FABREGAS, E. BIBLIERI AND G. ZÉMOR, **Low-Density Parity-Check Codes for Nonergodic Block-Fading Channels**, *IEEE Trans. on Information Theory*, IT-56, No 9 (2010) pp. 4286 - 4300.
- [28] O. SERRA AND G. ZÉMOR, **Large sets with small doubling modulo  $p$  are well covered by an arithmetic progression**, *Annales de l'Institut Fourier*, 59 no. 5 (2009), pp. 2043–2060.
- [29] A. BARG, A. MAZUMDAR AND G. ZÉMOR, **Weight distribution and decoding of codes on hypergraphs**, *Advances in Mathematics of Communications*, Vol. 2, No 4 (2008) pp. 433–450.
- [30] J. BRINGER, H. CHABANNE, G. COHEN, B. KINDARJI AND G. ZÉMOR, **Theoretical and Practical Boundaries of Binary Secure Sketches**, *IEEE Transactions on Information Forensics & Security*, Vol. 3, No. 4. (2008), pp. 673–683.
- [31] P. GABORIT AND G. ZÉMOR, **Asymptotic improvement of the Gilbert-Varshamov bound for linear codes**, *IEEE Trans. on Information Theory*, IT-54, No 9 (2008) pp. 3865–3872.
- [32] A. LEVERRIER, R. ALLÉAUME, J. BOUTROS, G. ZÉMOR ET P. GRANGERIER, **Multidimensional reconciliation for continuous-variable quantum key distribution**, *Physical Review A*, vol. 77, 042325 (2008).
- [33] Y. O. HAMIDOUNE, O. SERRA ET G. ZÉMOR, **On Some Subgroup Chains Related to Kneser's Theorem**, *Journal de Théorie des nombres de Bordeaux*, vol. 20 (2008), pp. 125–130.
- [34] Y. O. HAMIDOUNE, O. SERRA ET G. ZÉMOR, **On the critical pair theory in abelian groups : Beyond Chowla's Theorem**, *Combinatorica*, vol. 28 No 4 (2008) pp. 441-467.
- [35] P. GABORIT AND G. ZÉMOR, **On the construction of dense lattices with a given automorphism group**, *Annales de l'Institut Fourier*, vol. 57 No. 4 (2007), pp. 1051–1062.

- [36] J. BOUTROS AND G. ZÉMOR, **On quasi-cyclic interleavers for parallel turbo codes**, *IEEE Trans. on Information Theory*, IT-52, No 4 (2006) pp. 1732–1739.
- [37] A. BARG AND G. ZÉMOR, **Distance properties of expander codes**, *IEEE Trans. on Information Theory*, IT-52, No 1 (2006) pp. 78–90.
- [38] Y. O. HAMIDOUNE, O. SERRA ET G. ZÉMOR, **On the critical pair theory in  $\mathbb{Z}/p\mathbb{Z}$** , *Acta Arithmetica*, Vol. 121, No 2, (2006) pp. 99–115.
- [39] A. BARG, AND G. ZÉMOR, **Concatenated codes : serial and parallel**, *IEEE Trans. on Information theory*, IT-51, No 5 (2005) pp. 1625–1634.
- [40] A. BARG, AND G. ZÉMOR, **Error exponents of expander codes under linear-complexity decoding**, *SIAM J. on Discrete Mathematics*, vol. 17, No 3, (2004) pp. 426–445.
- [41] J-P. TILlich AND G. ZÉMOR, **The Gaussian isoperimetric inequality and error probabilities for the Gaussian channel**, *IEEE Trans. on Information theory*, IT-50 No 2 (2004) pp. 328–331.
- [42] A. BARG, AND G. ZÉMOR, Error exponents of expander codes, *IEEE Trans. on Information theory*, IT-48 No 6, (2002) pp. 1725–1729.
- [43] A. BARG, G. COHEN, S. ENCHEMA, G. KABATIANSKI AND G. ZÉMOR, A hypergraph approach to the identifying parent property: the case of multiple parents, *SIAM J. on Discrete Math.*, vol. 14, No 3, (2001) pp. 423–431.
- [44] G. ZÉMOR, **On Expander Codes**, *IEEE Trans. on Information theory*, IT-47 No 2, (2001) pp. 835–837.
- [45] G. COHEN, S. LITSYN, AND G. ZÉMOR, Binary  $B_2$ -Sequences : a new upper bound, *JCT-A*, vol. 94, No 1 (2001) pp 152–155.
- [46] G. COHEN, I. HONKALA, A. LOBSTEIN AND G. ZÉMOR, On codes identifying vertices in the two-dimensional square lattice with diagonals, *IEEE Trans. on Computers* vol. 50 (2001) pp. 174–176.
- [47] O. SERRA AND G. ZÉMOR, On a generalisation of a theorem by Vosper, *INTEGERS Electronic J. Combinatorial Number Theory* 0 (2000) #A10.
- [48] G. COHEN, I. HONKALA, A. LOBSTEIN AND G. ZÉMOR, Bounds for codes identifying vertices in the hexagonal grid, *Siam Journal on Discrete Math.*, vol. 13, No 4, (2000) pp. 492–504.
- [49] J-P TILlich AND G. ZÉMOR, Isoperimetric inequalities and the probability of a decoding error, *Combinatorics, Probability & Computing*, vol. 9, (2000) pp. 465–479.

- [50] G. COHEN, S. ENCHEVA AND G. ZÉMOR, Copyright protection for digital data, *IEEE Communications letters*, 4, (2000) pp. 158–160.
- [51] L. BASSALYGO, G. COHEN AND G. ZÉMOR, Codes with forbidden distances, *Discrete Math.* 213, (2000) pp. 3–11.
- [52] G. COHEN, S. ENCHEVA AND G. ZÉMOR, Antichain codes, *Designs, Codes and Cryptography*, vol. 18 (1999) pp. 71–80.
- [53] G. COHEN, J. RIFÁ, J. TENA AND G. ZÉMOR, On the Characterization of Linear Uniquely Decable Codes, *Designs, Codes and Cryptography*, vol. 17, No 1/2/3, (1999) pp. 87–96.
- [54] G. COHEN AND G. ZÉMOR, Subset sums and coding theory, *Astérisque*, 258, (1999) pp. 327–339.
- [55] G. COHEN, I. HONKALA, A. LOBSTEIN AND G. ZÉMOR, **New Bounds for Codes Identifying Vertices in Graphs**, *The Electronic Journal of Combinatorics*, vol. 6(1) (1999) R19.
- [56] G. ZÉMOR, An upper bound on the size of the Snake-in-the-box, *Combinatorica*, 17 (2) (1997) pp. 287–298.
- [57] J-P. TILLICH AND G. ZÉMOR, Optimal cycle codes constructed from Ramanujan graphs, *Siam Journal on Discrete Math.*, vol. 10, No 3, (1997) pp. 447–459.
- [58] L. DECREUSEFOND AND G. ZÉMOR, On the error-correcting capabilities of cycle codes of graphs, *Combinatorics, Probability & Computing*, vol. 6 (1997) pp. 27–38.
- [59] Y. O. HAMIDOUNE AND G. ZÉMOR, On zero-free subset sums, *Acta Arithmetica*, LXXVIII (1996) pp. 143–153.
- [60] G. COHEN, S. LITSYN, AND G. ZÉMOR, On greedy algorithms in coding theory, *IEEE Trans. on Information theory*, IT-42 (1996) pp. 2053–2057.
- [61] G. COHEN, S. LITSYN, AND G. ZÉMOR, On the traveling salesman problem in Hamming spaces, *IEEE Trans. on Information theory*, IT-42 (1996) pp. 1274–1276.
- [62] G. COHEN, S. LITSYN, A. VARDY AND G. ZÉMOR, Tilings of binary Spaces, *Siam Journal on Discrete Math.*, vol. 9 No 3, (1996) pp. 393–412.
- [63] G. ZÉMOR AND G. COHEN, The threshold probability of a code, *IEEE Trans. on Information theory*, IT-41 (1995) pp. 469–477.

- [64] G. COHEN, S. LITSYN AND G. ZÉMOR, Upperbounds on generalized distances *IEEE Trans. on Information theory*, IT-40 (1994) pp. 2090–2092.
- [65] G. COHEN AND G. ZÉMOR, Intersecting codes and independent families *IEEE Trans. on Information theory*, IT-40 (1994) pp. 1872–1881.
- [66] G. ZÉMOR, Hash functions and Cayley Graphs, *Designs, Codes and Cryptography*, 4 (1994) pp. 381-394.
- [67] G. ZÉMOR, A generalisation to non-commutative groups of a theorem of Mann, *Discrete Math.* 126 (1994) pp. 365–372.
- [68] G. COHEN AND G. ZÉMOR, Write-Isolated Memories, *Discrete Math.* vol. 114 (1993).
- [69] G. ZÉMOR, Subset sums in binary spaces, *European Journal of Combinatorics*, 13 (1992) pp. 221-230.
- [70] G. ZÉMOR AND G. COHEN, Applications of coding theory to interconnection networks *Discrete Applied Math.* 37/38 (1992) pp. 553-562.
- [71] G. ZÉMOR AND G. COHEN, Error-correcting WOM-codes, *IEEE Trans. on Information theory*, IT-37 (1991) pp. 730-735.
- [72] G. ZÉMOR, On positive and negative atoms of Cayley digraphs, *Discrete Appl. Math.* 23 (1989) pp. 193-195.
- [73] G. COHEN AND G. ZÉMOR, An application of combinatorial group theory to coding, *ARS COMBINATORIA* 23 A (1987) pp. 81–89.

### Conference proceedings

- [74] WOUTER ROZENDAAL AND G. ZÉMOR, A worst-case analysis of a renormalisation decoder for Kitaev’s toric code, *IEEE Symposium on Information Theory, ISIT 2023*, pp. 625–629.
- [75] A. LEVERRIER AND G. ZÉMOR, Efficient decoding up to a constant fraction of the code length for asymptotically good quantum codes, *ACM-SIAM Symposium on Discrete Algorithms (SODA23)*, pp. 1216–1244.
- [76] A. LEVERRIER AND G. ZÉMOR, Quantum Tanner Codes, *63rd Annual IEEE Symposium on Foundations of Computer Science (FOCS)*, pp. 872–883, 2022.

- [77] C. AGUILAR-MELCHOR, N. ARAGON, V. DYSERYN, P. GABORIT AND G. ZÉMOR, **LRPC Codes with Multiple Syndromes: Near Ideal-Size KEMs Without Ideals** *Post-Quantum Cryptography - PQCrypto 2022*, Springer LNCS 13512, pp. 45–68.
- [78] A. LEVERRIER, V. LONDE AND G. ZÉMOR, Towards Local Testability for Quantum Coding **Towards Local Testability for Quantum Coding**, *12th Innovations in Theoretical Computer Science Conference (ITCS)*, 2021.
- [79] S. EVRAI, T. KAUFMAN AND G. ZÉMOR, Decodable quantum LDPC codes beyond the square root distance barrier using high dimensional expanders, *IEEE 61st Annual Symposium on Foundations of Computer Science FOCS*, pp. 218–227, 2020.
- [80] N. RON-ZWI, M. WOOTTERS AND G. ZÉMOR, **Linear-time erasure list-decoding of expander codes**, *IEEE Symposium on Information Theory, ISIT 2020*, pp. 379–383.
- [81] C. GAVOILLE, G. KACHIGAR AND G. ZÉMOR, **Localisation-Resistant Random Words with Small Alphabets**, in *Combinatorics on Words, Proceedings*, 2019, Springer LCNS 11682, pp. 193–206.
- [82] N. ARAGON, O. BLAZY, P. GABORIT, A. HAUTEVILLE AND G. ZÉMOR, **Durandal: a rank metric based signature scheme**, *Eurocrypt 2019*, Springer LNCS 11478, pp. 728–758.
- [83] J. BOUTROS, U. EREZ, J. VAN WONTERGHEM, G. SHAMIR AND G. ZÉMOR, **Geometric shaping: low-density coding of Gaussian-like constellations**, *2018 IEEE Information Theory Workshop (ITW)*, 25-29 Nov. 2018, publisher IEEE.
- [84] J-C. DENEUVILLE, P. GABORIT AND G. ZÉMOR, **Ouroboros: A simple, secure and efficient key exchange protocol based on Coding Theory**, *Post-Quantum Cryptography - PQCrypto 2017* Utrecht, Springer LNCS 10346, pp. 18–34.
- [85] G. SPINI AND G. ZÉMOR, **Perfectly Secure Message Transmission in Two Rounds**, *Theory of Cryptography Conference (TCC) 2016-B*, Beijing, Springer LNCS 9985, pp. 286–304.
- [86] G. SPINI AND G. ZÉMOR, **Secure Network Coding with Feedback**, *IEEE Symposium on Information Theory, ISIT 2016*, July 10-15, Barcelona, pp. 2339–2343.
- [87] A. LEVERRIER, J-P. TILLICH AND G. ZÉMOR, **Quantum Expander Codes**, *56th Annual IEEE Symposium on Foundations of Computer Science (FOCS)*, pp. 810–824, 2015.

- [88] P. GABORIT, O. RUATTA, J. SCHREK AND G. ZÉMOR, RankSign: An Efficient Signature Algorithm Based on the Rank Metric, *PQCrypto 2014*, LNCS 8772, Springer.
- [89] P. GABORIT, O. RUATTA, J. SCHREK AND G. ZÉMOR, New Results for Rank-Based Cryptography, *AfricaCrypt 2014*, LNCS 8469, Springer, pp. 1–12.
- [90] G. CASTAGNOS, S. RENNER AND G. ZÉMOR, High-order masking by using coding theory and its application to AES, *14th IMA International Conference on Cryptography and Coding, IMACC 2013, Springer LNCS 8308*, pp. 193–212, 2013.
- [91] N. KASHYAP AND G. ZÉMOR, Upper Bounds on the Size of Grain-Correcting Codes, *IEEE Symposium on Information Theory, ISIT 2013*, July 7-12, Istanbul.
- [92] N. DI PIETRO, G. ZÉMOR AND J. BOUTROS, New results on Construction A Lattices based on Very Sparse Parity-Check Matrices, *IEEE Symposium on Information Theory, ISIT 2013*, July 7-12, Istanbul.
- [93] N. DI PIETRO, J. BOUTROS, G. ZÉMOR AND L. BRUNEL, Integer Low-Density Lattices based on Construction A. *2012 IEEE Information Theory Workshop, ITW 2012*, September 3–7, Lausanne.
- [94] P. GABORIT, J. SCHREK AND G. ZÉMOR, Full Cryptanalysis of the Chen Identification Protocol. *Post-Quantum Cryptography 4th International Workshop, PQCrypto 2011*, Taipei. Springer LNCS 7071, pp. 35–50.
- [95] A. COUVREUR, N. DELFOSSE AND G. ZÉMOR, A Construction of Quantum LDPC Codes from Cayley Graphs, Proceedings of the *IEEE Symposium on Information Theory, ISIT 2011*, July 31 - August 5, St-Petersburg.
- [96] A. BARG AND G. ZÉMOR, List Decoding of Product Codes by the MinSum Algorithm, Proceedings of the *IEEE Symposium on Information Theory, ISIT 2011*, July 31 - August 5, St-Petersburg.
- [97] A. BARG, A. MAZUMDAR AND G. ZÉMOR, Constructions of Rank Modulation Codes, Proceedings of the *IEEE Symposium on Information Theory, ISIT 2011*, July 31 - August 5, St-Petersburg.
- [98] N. DELFOSSE AND G. ZÉMOR, Quantum erasure-correcting codes and percolation on regular tilings of the hyperbolic plane, Proc. of *IEEE Information Theory Workshop (ITW) 2010*, Dublin.

- [99] O. SERRA AND G. ZÉMOR, Cycle codes of graphs and MDS array codes, proceedings of *Eurocomb 2009*, Electronic Notes in Discrete Math. Vol 34, pp. 95–99.
- [100] J.P. TILlich AND G. ZÉMOR **Quantum LDPC codes with positive rate and minimum distance proportional to  $n^{1/2}$** , Proceedings of the *IEEE Symposium on Information Theory, ISIT 2009*, Seoul, pp.799-804.
- [101] G. ZÉMOR, On Cayley Graphs, Surface Codes, and the Limits of Homological Coding for Quantum Error Correction, in *Coding and Cryptology, second international workshop IWCC 2009*, LNCS 5557, Springer pp. 259-273.
- [102] C. PETIT, J-J. QUISQUATER, J-P. TILlich AND G. ZÉMOR, **Hard and easy Components of Collision Search in the Zemor-Tillich Hash Function: new Attacks and Reduced Variants with Equivalent Security**, *RSA Conference 2009, Cryptographers' Track*, LNCS 5473, Springer pp. 182-194.
- [103] G. COHEN, H. RANDRIAM AND G. ZÉMOR, **Witness sets**, *Coding Theory and Applications*, 2nd International Castle Meeting, ISMCTA 2008, Spain, LNCS 5228, Springer, pp. 37-45.
- [104] J. BOUTROS, G. ZÉMOR, A. GUILLÉN Y FÀBREGAS AND E. BIGLIERI, **Full-Diversity Product Codes for Block Erasure and Block Fading Channels**, *IEEE Information Theory Workshop (ITW)*, Porto, Portugal, May 2008.
- [105] J-P. TILlich AND G. ZÉMOR, **Collisions for the LPS Expander Graph Hash Function**, *Eurocrypt 2008*, Istanbul, LNCS 4965, Springer, pp. 254–269.
- [106] J. BRINGER, H. CHABANNE, G. COHEN, B. KINDARJI AND G. ZÉMOR, Optimal Iris Fuzzy Sketches, *First IEEE International Conference on Biometrics: Theory, Applications, and Systems*, 2007. BTAS 2007, Washington.
- [107] J. BOUTROS, A. GUILLÉN Y FÀBREGAS, E. BIGLIERI AND G. ZÉMOR, **Design and analysis of low-density parity-check codes for block-fading channels**, *Information Theory and Applications Workshop*, janvier-février 2007, Information Theory and Applications Center (ITA), UCSD.
- [108] G. COHEN AND G. ZÉMOR, Syndrome coding for the wire-tap channel revisited, *IEEE Information Theory Workshop (ITW'06)* Chengdu, Chine, 2006, pp. 33–36.
- [109] P. GABORIT AND G. ZÉMOR, Asymptotic improvement of the Gilbert-Varshamov bound for binary linear codes, in proc. of *IEEE International Symposium on Information Theory*, juillet 2006, pp. 287–291.

- [110] J-P. TILLICH AND G. ZÉMOR, On the minimum distance of structured LDPC codes with 2 variable nodes of degree 2 per parity-check equation, in proc. of *IEEE International Symposium on Information Theory*, juillet 2006, pp. 1549–1553.
- [111] A. BARG AND G. ZÉMOR, **Multilevel generalizations of expander codes**, in *Algebraic coding theory and information theory*, A. Ashikhmin and A. Barg (Eds), Amer. Math. Soc., DIMACS series in Discrete Math. and Theoretical Computer Science, Vol. 68, pp. 69–84, 2005.
- [112] G. COHEN AND G. ZÉMOR, The wire-tap channel applied to biometrics, *International Symposium on Information Theory and Applications*, Parma, Italie, octobre 2004.
- [113] S. LÉVEILLER, G. ZÉMOR, J. BOUTROS, AND P. GUILLOT, A new cryptanalytic attack for PN-generators filtered by a Boolean function, *Selected areas in Cryptography*, 9th Annual workshop, St. John's, Lecture notes in Comput. Sci. 2595, Springer-Verlag, 2003, pp. 232–249.
- [114] G. COHEN, S. LITSYN ET G. ZÉMOR, Binary codes for collusion-secure fingerprinting, in *ICISC 2001*, 4th International Conference Seoul, Lecture Notes in Comput. Sci. 2288, Springer-Verlag, 2002, pp. 178–185.
- [115] S. LÉVEILLER, J. BOUTROS, P. GUILLOT, AND G. ZÉMOR, Cryptanalysis of Nonlinear Filter Generators with  $\{0, 1\}$ -Metric Viterbi Decoding, in *Cryptography and Coding*, 8th IMA International Conference Cirencester, Lecture notes in Comput. Sci. 2260, Springer-Verlag, 2001, pp. 402–414.
- [116] G. COHEN, I. HONKALA, A. LOBSTEIN AND G. ZÉMOR, On identifying codes, in *Codes and Association Schemes*, A. Barg and S. Litsyn Eds., Vol. 54 of DIMACS Series in discrete math. and theoretical computer science, AMS 2001, pp. 97–109.
- [117] G. ZÉMOR, On iterative decoding of cycle codes of graphs, in *Codes, Systems, and Graphical Models*, Vol. 123 of IMA Volumes in Math. and its Applications, Springer-Verlag, 2001, pp. 311–326.
- [118] H. SAWAYA, S. VIALLE, J. BOUTROS AND G. ZÉMOR, Performance Limits of Compound Codes with Symbol-Based Iterative Decoding, in *WCC2001, International Workshop on Coding and Cryptography*, Electronic Notes in Discrete Math., Vol. 6, April 2001, pp 433-443.
- [119] J-P TILLICH AND G. ZÉMOR, An Overview of the Isoperimetric Method in Coding Theory, (invited paper) in *Cryptography and Coding*, Cirencester, december 1999, Lecture notes in Comput. Sci. 1746, Springer-Verlag, pp 129–134.

- [120] J. BOUTROS, O. POTHIER AND G. ZÉMOR, Generalized low density (Tanner) codes, in *IEEE International Conference on Communications, ICC'99*, june 1999, pp. 441–445 vol. 1.
- [121] G. COHEN, A. LOBSTEIN, D. NACCACHE AND G. ZÉMOR, How to improve an exponentiation black-box, in *Eurocrypt'98* Lecture notes in Comput. Sci. 1403, Springer-Verlag, pp. 211–220.
- [122] J-P TILLICH AND G. ZÉMOR, Hashing with  $SL_2$ , in *CRYPTO'94*, Lecture notes in Comput. Sci. 839, Springer-Verlag, pp. 40–49.
- [123] G. COHEN, LL HUGUET AND G. ZÉMOR, Bounds on generalized weights, in *First French-Israeli workshop on algebraic coding*, Paris, july 1993 Lecture notes in Comput. Sci. 781, Springer-Verlag, pp. 270–277.
- [124] J-P TILLICH AND G. ZÉMOR, Group-theoretic hash functions, in *First French-Israeli workshop on algebraic coding*, Paris, july 1993 Lecture notes in Comput. Sci. 781, Springer-Verlag, pp. 90–110.
- [125] G. ZÉMOR, Threshold effects in codes, in *First French-Israeli workshop on algebraic coding*, Paris, july 1993 Lecture notes in Comput. Sci. 781, Springer-Verlag, pp. 278–286.
- [126] G. COHEN, C. VAN EIJL, G. ZÉMOR, Error-correcting for WIMs and WUMs, *AAECC9* New Orleans, oct. 1991, Lecture notes in Comput. Sci. 539, Springer-Verlag, pp. 159–170.
- [127] G. ZÉMOR, An extremal problem related to the covering radius of binary codes, *First French-Soviet workshop on algebraic coding* Paris, july 1991, Lecture notes in Comput. Sci. 573 Springer-Verlag, pp. 42–51.
- [128] G. ZÉMOR, Hash functions and graphs with large girths, *Eurocrypt'91*, Lecture notes in Comput. Sci. 547, Springer-Verlag, pp. 508–511.

## Biography

- [129] A. PLAGNE, O. SERRA AND G. ZÉMOR, Yahya Ould Hamidoune's mathematical journey: A critical review of his work, *European Journal of Combinatorics*, Vol. 34 (2013) 1207–1222.

## Book

- [130] G. ZÉMOR, *Cours de cryptographie*, Cassini, 2000.

## **Patent**

[131] (WO/2010/000965) Method and device for protecting the integrity of data transmitted over a network (EN) / Procédé et dispositif de protection de l'intégrité de données transmises sur un réseau (FR).

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<http://www.wipo.int/pctdb/fr/wo.jsp?WO=2010000965>