

## References

- [1] M. Braun, D. Crnković, M. de Boeck, V. Mikulić Crnković, and A. Švob.  $q$ -Analogues of Strongly Regular Graphs. *to appear in Linear Algebra and its Applications*, 2023.
- [2] M. Braun, A. Wiesmaier, and N. Alnahawi. Efficient Practical Byzantine Consensus Using Random Linear Network Coding. *Annals of Telecommunications*, 78:33–51, 2023.
- [3] M. Braun, A. Wiesmaier, N. Alnahawi, and J. Geißler. On Message-based Consensus and Network Coding. In *NoF 2012 — Proceedings of the 12th International Conference on Network of the Future, October 06-08, 2021, Coimbra, Portugal*, 2021.
- [4] M. Braun. A Note on Putative  $(101, 10)$ -Arcs in  $PG(2, 11)$ . *Journal of Combinatorial Mathematics and Combinatorial Computing*, 2021.
- [5] M. Braun, J. Humpich, A. Laaksonen, and P. R. J. Östergård. New Lower Bounds on Binary Constant Weight Error-Correcting Codes. *Journal of Combinatorial Mathematics and Combinatorial Computing*, 111:213–223, 2019.
- [6] M. Braun. New Lower Bounds on the Size of  $(n, r)$ -Arcs in  $PG(2, q)$ . *Journal of Combinatorial Designs*, 27:682–687, 2019.
- [7] M. Braun, M. Kiermaier, and R. Laue. New 2-Designs over Finite Fields from Derived and Residual Designs. *Advances in Mathematics of Communications*, 13:165–170, 2019.
- [8] M. Braun, P. R. J. Östergård, and A. Wassermann. New Lower Bounds for Binary Constant Dimension Subspace Codes. *Experimental Mathematics*, 27(2):179–183, 2018.
- [9] M. Braun, E. Hess, A. Kargl, and B. Meyer. Authentication Method and Communications System used for Authentication. *Europäisches Patentamt, EP2070255 (B1)*, 2018.
- [10] M. Braun and F. Mallmann. On the  $q$ -Analog of the Revolving Door Algorithm. *Australasian Journal of Combinatorics*, 71(2):261–271, 2018.
- [11] M. Braun and A. Wassermann. Disjoint  $q$ -Steiner Systems in Dimension 13. *Electronic Notes in Discrete Mathematics*, 65:23–29, 2018.
- [12] M. Braun, M. Kiermaier, and A. Wassermann.  $q$ -Analogues of Designs: Subspace Designs. In M. Greferath, M.O. Pavčević, N. Silberstein, and M.A. Vázquez-Castro, editors, *Network Coding and Subspace Designs*, pages 171–211. Springer International Publishing, 2018.

- [13] M. Braun, M. Kiermaier, and A. Wassermann. Computational Methods in Subspace Designs. In M. Greferath, M.O. Pavčević, N. Silberstein, and M.A. Vázquez-Castro, editors, *Network Coding and Subspace Designs*, pages 213–244. Springer International Publishing, 2018.
- [14] M. Braun. Designs Over the Binary Field from the Complete Monomial Group. *Australasian Journal of Combinatorics*, 67(3):470–475, 2017.
- [15] M. Braun, M. Kiermaier, A. Kohnert, and R. Laue. Large Sets of Subspace Designs. *Journal of Combinatorial Theory A*, 147:155–185, 2017.
- [16] M. Braun, T. Etzion, P. R. J. Östergård, A. Vardy, and A. Wassermann. On the Existence of  $q$ -Analogues of Steiner Systems. *Forum of Mathematics, PI*, 4, 2016.
- [17] M. Braun, M. Kiermaier, and A. Nakić. On the Automorphism Group of a Binary  $q$ -Analog of the Fano Plane. *European Journal of Combinatorics*, 51:443–457, 2016.
- [18] M. Braun.  $q$ -Analogues of  $t$ -Wise Balanced Designs from Borel Subgroups. *Designs, Codes and Cryptography*, 78(2):383–390, 2016.
- [19] M. Braun. New Infinite Series of 2-Designs over the Binary and Ternary Field. *Designs, Codes and Cryptography*, 81(1):145–152, 2016.
- [20] M. Braun. A Gray Code for Row Reduced Echelon Forms over the Binary Field. *IEEE Transactions on Information Theory*, 61(2):829–835, 2015.
- [21] M. Braun, A. Kohnert, P. R. J. Östergård, and A. Wassermann. Large Sets of  $t$ -Designs over Finite Fields. *Journal of Combinatorial Theory A*, 124:195–202, 2014.
- [22] M. Braun and J. Reichelt.  $q$ -Analogues of Packing Designs. *Journal of Combinatorial Designs*, 22(7):306–321, 2014.
- [23] M. Braun, M. Kiermaier, and A. Nakić. On the Automorphism Group of the Binary  $q$ -Analog of the Fano Plane. In *MTNS'14 — Proceedings of the 21st International Symposium on Mathematical Theory of Networks and Systems, July 7–11, 2014, Groningen, The Netherlands*, 2014.
- [24] M. Braun. New 3-Designs over the Binary Field. *International Electronic Journal of Geometry*, 6(2):79–87, 2013.
- [25] M. Braun, T. Etzion, and A. Vardy. Linearity and Complements in Projective Space. *Linear Algebra and Its Applications*, 438(1):57–70, 2013.

- [26] M. Braun, T. Etzion, P. R. J. Östergård, A. Vardy, and A. Wassermann. On the Existence of  $q$ -Analogues of Steiner Systems. In *WCC'13 — Proceedings of International Workshop on Coding and Cryptography, April 15-19, 2013, Bergen, Norway, 2013*.
- [27] A.-L. Trautmann, F. Manganiello, M. Braun, and J. Rosenthal. Cyclic Orbit Codes. *IEEE Transactions on Information Theory*, 59(11):7386–7404, 2013.
- [28] G. Baldini, M. Braun, E. Hess, F. Oliveri, and H. Seuschek. Securing Disaster Supply Chains with Cryptography Enhanced RFID. *Disaster Prevention and Management*, 21(1), 2012.
- [29] M. Braun. A Note on the Existence of Non-Simple Designs over Finite Fields. *International Electronic Journal of Geometry*, 5(1):85–89, 2012.
- [30] M. Braun, M. Dichtl, and B. Meyer. Method and System for Confidentially Providing Software Components. *Weltorganisation für geistiges Eigentum, WO2011054643 (A1)*, 2011.
- [31] M. Braun, M. Dichtl, and B. Meyer. Method and System for the Accelerated Decryption of Cryptographically Protected User Data Units. *Deutsches Patentamt, DE102009052456 (A1)*, 2011.
- [32] M. Braun, M. Dichtl, and B. Meyer. Method and System for Resolving a Naming Conflict. *Deutsches Patentamt, DE102009052457 (A1)*, 2011.
- [33] M. Braun. Lattices, Binary Codes, and Network Codes. *Advances in the Mathematics of Communications*, 5(2):225–232, 2011.
- [34] M. Braun and A. Köpf. Devices and Methods for Establishing and Validating a Digital Certificate. *Weltorganisation für geistiges Eigentum, DE102009031143 (B3)*, 2011.
- [35] M. Braun and A. Kargl. Vorrichtung und Verfahren zum Prüfen eines Chips, auf dem ein kryptographisches Verfahren implementiert ist. *Deutsches Patentamt, DE102009031145*, 2011.
- [36] G. Baldini, F. Oliveri, H. Seuschek, E. Hess, and M. Braun. Secure RFID for Humanitarian Logistics. In *Designing and Deploying RFID Applications*. InTech, 2011.
- [37] M. Braun. A Note on Balanced Incomplete Block Designs. *International Electronic Journal of Geometry*, 3(2):49–52, 2010.
- [38] M. Braun. Authentifikation eines RFID-Tags mit einem asymmetrischen Kryptographieverfahren. *Deutsches Patentamt, DE102009022850 (A1)*, 2010.
- [39] M. Braun, U. Meyer, and S. Wetzel. Efficient Mutual Authentication for Multi-Domain RFID Systems Using Distributed Signatures. In *WISTP'10 — Workshop for Information Security Theory and Practices, April 12-14, 2010, Passau, Germany, 2010*.

- [40] M. Braun and H. Seuschek. Verfahren und System zur Authentifizierung eines Tokens. *Deutsches Patentamt, DE102008039583 (A1)*, 2010.
- [41] M. Braun, M. Franke, A. Heidenreich, and T. Layer. Vehicle data transmission method for data detection station, involves converting data into optical signal in vehicle-internal optical free jet transceiver and radiating data to external optical free jet transceiver of data detection station. *Deutsches Patentamt, DE102007059347 (B4)*, 2009.
- [42] M. Braun, H. Seuschek, and B. Meyer. Signaling system i. e. alarm signaling system, for signaling presence of person in monitored safety area of e. g. building, has test unit verifying objects as authenticated objects when message is received within time period. *Deutsches Patentamt, DE102008030083 (A1)*, 2009.
- [43] M. Braun. An Algebraic Interpretation of the  $q$ -Binomial Coefficients. *International Electronic Journal of Algebra*, 6:23–30, 2009.
- [44] M. Braun. Verfahren zur Authentifizierung eines RFID Tags. *Deutsches Patentamt, DE102008023914 (A1)*, 2009.
- [45] M. Braun. Haftetikett und Verfahren zum Kennzeichnen und zum Authentifizieren eines Gegenstandes mit Haftetiketten. *Deutsches Patentamt, DE102008016435 (A1)*, 2009.
- [46] M. Braun, A. Kargl, and B. Meyer. Verfahren zum verschlüsselten Datenaustausch und Kommunikationssystem. *Europäisches Patentamt, EP2124382 (A1)*, 2009.
- [47] M. Braun, M. Gildner, E. Hess, B. Meyer, and R. Prölss. Verfahren und System zur Kennzeichnung einer Ware als Originalware eines Warenherstellers. *Deutsches Patentamt, DE102007034527 (B4)*, 2009.
- [48] M. Braun, B. Meyer, and H. Seuschek. Verfahren zum Bereitstellen einer Funktion durch ein RFID-Tag. *Weltorganisation für geistiges Eigentum, WO2009030531 (A1)*, 2009.
- [49] G. Baldini, M. Braun, E. Hess, F. Oliveri, and H. Seuschek. The Use of Secure RFID to Support the Resolution of Emergency Crises. In *IEEE International Carnahan Conference on Security Technology, October 5-8, 2009, Zuerich, Switzerland*, 2009.
- [50] M. Braun, E. Hess, A. Kargl, and B. Meyer. Subscribers authenticating method for radio frequency identification communication system, involves encrypting calculated response and certificate associated with subscriber in randomized manner, and decrypting and authenticating response. *Deutsches Patentamt, DE102006060760 (A1)*, 2008.

- [51] M. Braun, A. Kargl, and B. Meyer. Verfahren zum verschlüsselten Datenaustausch eines Systems mit mindestens einem Datenträger und einem Lesegerät. *Deutsches Patentamt, DE102007001070 (B3)*, 2008.
- [52] M. Braun, B. Meyer, and M. Schafheutle. Device and method for coding and saving a data word. *Deutsches Patentamt, DE102007026406 (B4)*, 2008.
- [53] M. Braun, B. Meyer, and H. Seuschek. Adapter device for wireless data communication of contact-afflicted smart card, has contacting unit to approach contact surfaces of smart card. *Deutsches Patentamt, DE102007028100 (A1)*, 2008.
- [54] M. Braun, E. Hess, and B. Meyer. Using Elliptic Curves on RFID Tags. *International Journal of Computer Science and Network Security*, 2:1–9, 2008.
- [55] M. Braun, R. Falk, F. Kohlmayer, A. Köpf, M. Li, and H. Seuschek. Application of Passive Asymmetric RFID Tags in a High-Assurance Avionics Multi-Domain RFID Processing System. In *RFIDSysTech'08 — Proceedings of the 4th Workshop on RFID Systems and Technologies, June 10-11, 2008, Freiburg, Germany*, 2008.
- [56] H. Bock, M. Braun, M. Dichtl, J. Heyszl, E. Hess, W. Kargl, H. Koroschetz, B. Meyer, and H. Seuschek. A Milestone Towards RFID Products Offering Asymmetric Authentication Based on Elliptic Curve Cryptography. In *RFIDSec'08 — Proceedings of the 4th Workshop on RFID Security, July 9-11, 2008, Budapest, Hungary*, 2008.
- [57] M. Li, R. Poovendran, R. Falk, A. Köpf, K. Sampigethaya, S. Lindelman R. Robinson, M. Braun, and H. Seuschek. Multi-Domain RFID Access Control Using Asymmetric Key Based Tag-Reader Mutual Authentication. In *ICAS'08 — Proceedings of the 26th international Congress of the Aeronautical Sciences, September 14-19, 2008, Anchorage, USA*, 2008.
- [58] M. Braun. A Note on Group Invariant Incidence Functions. *International Electronic Journal of Algebra*, 2:90–99, 2007.
- [59] M. Braun and A. Kargl. A Note on Signature Standards. *Cryptology ePrint Archive, Report 2007/357*, 2007.
- [60] M. Braun, A. Kargl, and B. Meyer. Verfahren zum sicheren Ver- oder Entschlüsseln einer Nachricht. *Deutsches Patentamt, DE102005042339 (B4)*, 2007.
- [61] M. Braun, A. Kargl, and B. Meyer. Verifying points on elliptical curve for countering side channel attacks involves selecting/determining point coordinate, processing points by scalar multiplication and verifying points if they can lie on straight line. *Deutsches Patentamt, DE102006002891 (B4)*, 2007.

- [62] M. Braun, A. Kargl, B. Meyer, and S. Pyka. Data determining method for asymmetric cryptography system, involves outputting auxiliary variables, determining result of mathematical operation from two auxiliary variables, and determining updated auxiliary variables in coprocessor. *Deutsches Patentamt, DE102006014353 (B4)*, 2007.
- [63] A. Betten, M. Braun, H. Fripertinger, A. Kerber, A. Kohnert, and A. Wassermann. *Error Correcting Linear Codes. Classification by Isometry and Applications*, volume 18 of *Algorithms and Computation in Mathematics (ACM)*. Springer-Verlag, Berlin Heidelberg New York, 2006.
- [64] M. Braun. The Construction of a Point-Cyclic Resolution in  $PG(9,2)$ . *Innovations in Incidence Geometry*, 3:33–50, 2006.
- [65] M. Braun, A. Kohnert, and A. Wassermann. Construction of  $(n,r)$ -Arcs in  $PG(2,q)$ . *Innovations in Incidence Geometry*, 1:133–141, 2005.
- [66] M. Braun, A. Kohnert, and A. Wassermann. Construction of Linear Codes with Prescribed Minimum Distance. In *OC'05 — Proceedings of 4th International Workshop on Optimal Codes and Related Topics, June 17-23, 2005, Pamporovo, Bulgaria*, pages 59–63, 2005.
- [67] M. Braun, A. Kohnert, and A. Wassermann. Optimal Linear Codes from Matrix Groups. *IEEE Transactions on Information Theory*, 51(12):4247–4251, 2005.
- [68] M. Braun, A. Kohnert, and A. Wassermann. Construction of (Sometimes) Optimal Linear Codes. In *ALCOMA'05 — Proceedings of the Conference on Algebraic Combinatorics and Applications, Designs and Codes, April 3-10, 2005, Thurnau, Germany*, pages 69–75. Bayreuther Mathematische Schriften 74, 2005.
- [69] M. Braun. Some New Designs over Finite Fields. In *ALCOMA'05 — Proceedings of the Conference on Algebraic Combinatorics and Applications, Designs and Codes, April 3-10, 2005, Thurnau, Germany*, pages 58–68. Bayreuther Mathematische Schriften 74, 2005.
- [70] M. Braun, A. Kerber, and R. Laue. Systematic Construction of  $q$ -Analogues of Designs. *Designs, Codes and Cryptography*, 34(1):55–70, 2005.
- [71] M. Braun. *Konstruktion diskreter Strukturen unter Verwendung linearer Operationen auf dem linearen Verband*, volume 69. PhD thesis, Bayreuther Mathematische Schriften, 2004.
- [72] M. Braun. Construction of Linear Codes with Large Minimum Distance. *IEEE Transactions on Information Theory*, 50(8):1687–1691, 2004.

- [73] M. Braun. *Konstruktion von  $q$ -Analoga kombinatorischer Designs*.  
Master's thesis, University of Bayreuth, Germany, 2001.