



Henning Stichtenoth: List of Publications

I. Books and Edited Volumes

[8] Algebraic Function Fields and Codes (2nd edition of [3]). Graduate Texts in Mathematics **254**, Springer Verlag (2009), ca. 350 pp.

[7] Topics in Geometry, Coding Theory and Cryptography (ed., with A. Garcia). Algebra and Applications, Vol.6, Springer Verlag (2006), ca. 200 pp.

[6] Finite Fields and Applications (ed., with G. L. Mullen and A. Poli). Proceedings of the 7th International Conference Fq7, Toulouse 2003, Springer Lecture Notes in Computer Science **2948**.

[5] Finite Fields with Applications to Coding Theory, Cryptography and Related Areas (ed., with G. Mullen and H. Tapia-Recillas), Proceedings of the 6th International Conference on Finite Fields and Applications, Springer-Verlag, Berlin, (2002).

[4] Coding Theory, Cryptography and Related Areas (ed., with J. Buchmann, T. Høholdt and H. Tapia-Recillas), Proceedings of the Conference in Guanajuato, Mexico, 1998. Springer Verlag Berlin (2000).

[3] Algebraic Function Fields and Codes. Springer Universitext (1993), ca. 260 pp.

[2] Coding Theory and Algebraic Geometry (ed., with M. A. Tsfasman). Springer Lecture Notes in Mathematics **1518** (1991).

[1] Algebraische Funktionenkörper einer Variablen. Vorlesungen aus dem Fachbereich Mathematik der Universität Essen (1978), 120 pp.

II. Research Articles

[71] (with A. Garcia and C. Güneri) A Generalization of the Giulietti-Korchmaros Maximal Curve. To appear in *Adv. Geom.*

[70] (with C. Güneri and I. Taskin) Further Improvements on the Designed Minimum Distance of Algebraic Geometry Codes. *J. of Pure and Appl. Algebra* **213** (2009), 87-97.

[69] (with A. Bassa and A. Garcia) A New Tower over Cubic Finite Fields. *Moscow Math. J.* **8** (2008), 401-418.

[68] (with A. Garcia) Some Remarks on the Hasse-Arf Theorem. In: *Contemp. Math.*, vol. **461** (2008), 141-146.

[67] (with A. Bassa) A simplified proof for the limit of a tower over a cubic finite field. In: *J. Number Th.* **123** (2007), 154-169.

[66] (with A. Garcia) Explicit Towers of Function Fields over Finite Fields. In: *Topics in Geometry, Coding Theory and Cryptography* (eds. A. Garcia and H. Stichtenoth), Springer Verlag (2006), 1-58.

[65] (with A. Garcia) On the Galois closure of towers. In: *AMS/IP Studies in Advanced Mathematics*, vol. **41** (2007), 85-92.

[64] Transitive and self-dual codes attaining the Tsfasman-Vladut-Zink bound, *IEEE Trans. Inform. Th.* **52** (2006), 2218-2224.

[63] (with A. Garcia) A maximal curve which is not a Galois subcover of the Hermitian curve. *Bull. Braz. Math. Soc.* **37** (2006), 139-152.

[62] (with P. Beelen and A. Garcia) Towards a classification of recursive towers of function fields. *Finite Fields Appl.* **12** (2006), 56-77.

[61] (with A. Garcia) Some Artin-Schreier towers are easy. *Moscow Math. J.* **5** (2005), 767-774.

[60] (with C. P. Xing) Excellent non-linear codes from algebraic function fields. *IEEE Trans. Inform. Theory* **51** (2005), 4044-4046.

- [59] (with J. Bezerra and A. Garcia) An explicit tower of function fields over cubic finite fields and Zink's lower bound. *J. Reine Angew. Math.* **589** (2005), 159-199.
- [58] (with S. Ling and S. Yang) A class of Artin-Schreier towers with finite genus. *Bull. Braz. Math. Soc.* **36** (2005), 393-401.
- [57] (with P. Beelen and A. Garcia) On towers of function fields over finite fields. In: *Arithmetic, Geometry and Coding Theory (AGCT 2003)*, Semin. Congr. **11**, Soc. Math. France, Paris (2005), 1-20.
- [56] (with A. Garcia) Asymptotics for the genus and the number of rational places in towers of function fields over a finite field. *Finite Fields Appl.* **11** (2005), 434-450.
- [55] (with P. Beelen and A. Garcia) On ramification and genus of recursive towers. *Portugal. Math.* **62** (2005), 231-243.
- [54] (with W. D. Banks, F. Luca and I. E. Shparlinski) On the value set of $n!$ modulo a prime. *Turk. J. Math.* **29** (2005), 169-174.
- [53] (with P. Beelen and A. Garcia) On towers of function fields of Artin-Schreier type. *Bull Braz. Math. Soc.* **35** (2004), 151-164.
- [52] (with F. Özbudak) Constructing linear unequal protection codes from algebraic curves. *IEEE Trans. Inform. Th.* **49** (2003), 1523-1527.
- [51] (with A. Garcia) On Tame Towers over Finite Fields. *J. Reine Angew. Math.* **557** (2003), 53 - 80.
- [50] (with W.-C. W. Li and H. Maharaj) New optimal towers of function fields over small finite fields. In: *Proceedings of the 5th Int. Symp. on Algorithmic Number Theory, ANTS-5* (eds. C. Fieker and D. R. Kohel), Springer Lecture Notes in Computer Science **2369** (2002), 372-389.
- [49] (with F. Özbudak) Note on Niederreiter-Xing's propagation rule for linear codes. *Applic. Algebra in Engin., Commun. and Comp.* **13** (2002), 53 - 56.
- [48] Explicit constructions of towers of function fields with many rational places. In: *Proceedings of the 3rd European Congress of Mathematics, Barcelona, 2000*, Vol. 2, C. Casacuberta et al. (eds.), Progress in Mathematics **202**, 219 - 224, Birkhäuser-Verlag, 2001.
- [47] (with I. Aleschnikov, V. Deolalikar, P. V. Kumar and K. Shum) A Low-Complexity Algorithm for Construction of Algebraic Geometric Codes better than

the Gilbert-Varshamov-Bound. *IEEE Trans. Inform. Th.* **47** (2001), 2225 - 2241.

[46] (with I. Aleschnikov, V. Deolalikar and P. V. Kumar) Towards a basis for the space of regular functions in a tower of function fields meeting the Drinfeld-Vladut bound. In: *Finite Fields and their Applications (Proceedings of \mathbb{F}_q5 , Augsburg 1999)*, D. Jungnickel and H. Niederreiter (eds.), 14 - 24, Springer Verlag, 2001.

[45] (with I. Aleschnikov, P. V. Kumar and K. Shum) On the splitting of places in a tower of function fields meeting the Drinfeld-Vladut bound. *IEEE Trans. Inform. Th.* **47** (2001), 1613 - 1619.

[44] (with I. Aleschnikov, P. V. Kumar and K. Shum) Integral bases in a tower of function fields. In: *Proc. 7th Intern. Workshop on Algebraic and Combinatorial Coding Theory ACCT, Bansko, Bulgaria (2000)*, 23 - 28.

[43] (with A. Garcia) Skew pyramids of function fields are asymptotically bad. In: *Coding Theory, Cryptography and Related Areas (eds. J. Buchmann et al.)*, pp. 111 - 113, Springer Verlag Berlin, 2000.

[42] (with A. Garcia and C. P. Xing) On subfields of the Hermitian function field. *Compositio Mathematica* **120** (2000), 137 - 170.

[41] (with F. Özbudak) Constructing codes from algebraic curves. *IEEE Trans. Inform. Th.* **45** (1999), 2502 - 2505.

[40] (with A. Garcia) On Chebyshev Polynomials and Maximal Curves. *Acta Arith.* **90** (1999), 301 - 311.

[39] (with A. Garcia) A Class of Polynomials over Finite Fields. *Finite Fields Appl.* **5** (1999), 424 - 435.

[37] (with F. Özbudak) Curves with many points and configurations of hyperplanes over finite fields. *Finite Fields Appl.* **5** (1999), 436 - 449.

[38] The Fermat curve in characteristic p . In: *Finite Fields: Theory, Applications and Algorithms (eds. R. C. Mullin and G. L. Mullen)*. *AMS Contemporary Mathematics* vol. **225** (1999), 123 - 130.

[37] (with R. Pellikaan and F. Torres) Weierstrass semigroups in an asymptotically good Tower of Function Fields. *Finite Fields Appl.* **4** (1998), 381 - 392.

[36] (with A. Garcia and M. Thomas) On Towers and Composita of Towers of Function Fields over Finite Fields. *Finite Fields Appl.* **3** (1997), 257 - 274.

- [35] (with A. Garcia) On the asymptotic behaviour of some towers of function fields over finite fields. *Journal of Number Theory*, **61** (1996), 248 - 273.
- [34] (with A. Garcia) Asymptotically good towers of function fields over finite fields. *C. R. Acad. Sci. Paris, Ser. I*, **322**, 1067 - 1070 (1996).
- [33] (with I. Duursma and C. Voss) Generalized Hamming Weights for Duals of BCH Codes, and Maximal Algebraic Function Fields. In: *Arithmetic, Geometry and Coding Theory* (eds. R. Pellikaan et al.) pp. 53 - 66. De Gruyter, Berlin-New York, 1996.
- [32] (with A. Garcia) Algebraic function fields over finite fields with many rational places. *IEEE Trans. Inform. Th.* **41**, No. 6 (1995), 1548-1563.
- [31] Algebraic-geometric codes. *AMS Proc. of Symp. in Applied Math.* (ed. R. Calderbank), Vol. **50**, 139 - 152 (1995).
- [30] (with A. Garcia) A tower of Artin-Schreier extensions of function fields attaining the Drinfeld-Vladut bound. *Invent. Math.* **121** (1995), 211 - 222.
- [29] (with C. P. Xing) On the structure of the divisor class group of a class of curves over finite fields. *Arch. Math.* **65** (1995), 141 - 150.
- [28] (with C. P. Xing) The genus of maximal function fields. *Manuscr. Math.* **86** (1995), 217 - 224.
- [27] (with H.-G. Rück) A Characterization of Hermitian Function Fields over \mathbb{F}_{q^2} . *J. Reine Angew. Math.* **457** (1994), 185 - 188.
- [26] (with P. V. Kumar and K. Yang) On the Weight Hierarchy of Geometric Goppa Codes. *IEEE Trans. on Inform. Th.* **40** (1994), 913 - 920.
- [25] (with C. Voss) Generalized Hamming Weights of Trace Codes. *IEEE Trans. on Inform. Th.* **40** (1994), 554 - 558.
- [24] (with G. Frey and M. Perret) On the Different of Abelian Extensions of Global Fields. In 'Coding Theory and Algebraic Geometry', *Springer Lecture Notes in Mathematics* (eds. M. A. Tsfasman and H. Stichtenoth) **1518** (1991), 26-32.
- [23] (with A. Garcia) Elementary Abelian p -Extensions of Algebraic Function Fields. *Manuscr. Math.* **72** (1991), 67-79.

- [22] (with J. P. Hansen) Group Codes on Certain Algebraic Curves with Many Rational Points. *Applicable Algebra in Engineering, Communication and Computing AAECC* **1** (1990), 67-77.
- [21] (with M. Kruse) Ein Analogon zum Primzahlsatz für algebraische Funktionenkörper. *Manuscr. Math.* **69** (1990), 219-221.
- [20] On Automorphisms of Geometric Goppa Codes. *J. of Algebra* **130** (1990), 113-121.
- [19] Algebraic-Geometric Codes Associated to Artin-Schreier Extensions of $\mathbb{F}_q(z)$. *Proceedings of the Second International Workshop on Algebraic and Combinatorial Coding Theory, Leningrad* (1990), 203-206.
- [18] On the Dimension of Subfield Subcodes. *IEEE Trans. on Inform. Th.* **36** (1990), 90-93.
- [17] (with C. Voss) Asymptotically Good Families of Subfield Subcodes of Geometric Goppa Codes. *Geometriae Dedicata* **33** (1990), 111-116.
- [16] Which Extended Goppa Codes are Cyclic? *J. Comb. Theory Ser. A* **51** (1989), 205-220.
- [15] (with Y. Driencourt) A Criterion for Self-Duality of Geometric Codes. *Communications in Algebra* **17** (1989), 885-898.
- [14] A Note on Hermitian Codes over $GF(q^2)$. *IEEE Trans. on Inform. Theory* **34** (1988), 1345-1348.
- [13] Self-dual Goppa Codes. *J. Pure and Appl. Algebra* **55** (1988), 199-211.
- [12] (with R. Brandt) Die Automorphismengruppen hyperelliptischer Kurven. *Manuscr. Math.* **55** (1986), 83-92.
- [11] s -Erweiterungen algebraischer Funktionenkörper. *Arch. Math.* **43** (1984), 27-31.
- [10] Zur Realisierbarkeit endlicher Gruppen als Automorphismengruppen algebraischer Funktionenkörper. *Math. Zeitschr.* **187** (1984), 221-225.
- [9] Die Ungleichung von Castelnuovo. *J. Reine Angew. Math.* **348** (1984), 197-202.

- [8] Zur Divisorklassengruppe eines Kongruenzfunktionenkörpers. Arch. Math. **32** (1979), 336-340.
- [7] Die Hasse-Witt-Invariante eines Kongruenzfunktionenkörpers. Arch. Math. **33** (1979), 357-360.
- [6] p -Klassengruppen algebraischer Funktionenkörper. Arch. Math. **32** (1979), 452-457.
- [5] Zur Konservativität algebraischer Funktionenkörper. J. Reine Angew. Math. **301** (1978), 30-45.
- [4] Über das Geschlecht eines inseparablen Funktionenkörpers. Manuscr. Math. **14** (1974), 173-182.
- [3] Algebraische Funktionenkörper einer Variablen mit Teilkörpern von beliebig hohem Geschlecht. Arch. Math. **25** (1974), 379-384.
- [2] Über die Automorphismengruppe eines algebraischen Funktionenkörpers von Primzahlcharakteristik. Teil 2: Ein spezieller Typ von Funktionenkörpern. Arch. Math. **24** (1973), 615-631.
- [1] Über die Automorphismengruppe eines algebraischen Funktionenkörpers von Primzahlcharakteristik. Teil 1: Eine Abschätzung der Ordnung der Automorphismengruppe. Arch. Math. **24** (1973), 524-544.