

# Arithmetic and Diophantine Geometry

14Gxx

- [1] Matthew H. Baker, Enrique González-Jiménez, Josep González, and Bjorn Poonen, *Finiteness results for modular curves of genus at least 2*, Amer. J. Math. **127** (2005), no. 6, 1325–1387. MR MR2183527
- [2] Edoardo Ballico, Antonio Cossidente, and Alessandro Siciliano, *External flats to varieties in symmetric product spaces over finite fields*, Finite Fields Appl. **9** (2003), no. 3, 300–309. MR MR1983050 (2004c:14041)
- [3] Tatiana Bandman, Gert-Martin Greuel, Fritz Grunewald, Boris Kunyavskii, Gerhard Pfister, and Eugene Plotkin, *Identities for finite solvable groups and equations in finite simple groups*, Compos. Math. **142** (2006), no. 3, 734–764. MR MR2231200 (2007d:20027)
- [4] Arthur Baragar and Ronald van Luijk, *K3 surfaces with Picard number three and canonical vector heights*, Math. Comp. **76** (2007), no. 259, 1493–1498 (electronic). MR MR2299785
- [5] M. Borovoi, J.-L. Colliot-Thélène, and A. N. Skorobogatov, *The elementary obstruction and homogeneous spaces*, Duke Math. J. **141** (2008), no. 2, 321–364. MR MR2376817
- [6] Nigel Boston, *Reducing the Fontaine-Mazur conjecture to group theory*, Progress in Galois theory, Dev. Math., vol. 12, Springer, New York, 2005, pp. 39–50. MR MR2148459
- [7] Kristian Brander, *An optimal unramified tower of function fields*, Algebraic geometry and its applications, Ser. Number Theory Appl., vol. 5, World Sci. Publ., Hackensack, NJ, 2008, pp. 351–365. MR MR2484064 (2010b:14051)
- [8] Friederike Brezing and Annegret Weng, *Elliptic curves suitable for pairing based cryptography*, Des. Codes Cryptogr. **37** (2005), no. 1, 133–141. MR MR2165045
- [9] Ezra Brown, Bruce T. Myers, and Jerome A. Solinas, *Hyperelliptic curves with compact parameters*, Des. Codes Cryptogr. **36** (2005), no. 3, 245–261. MR MR2162578

- [10] Nils Bruin, *Visualising Sha[2] in abelian surfaces*, Math. Comp. **73** (2004), no. 247, 1459–1476 (electronic). MR MR2047096 (2005c:11067)
- [11] Jan H. Bruinier and Tonghai Yang, *CM values of automorphic Green functions on orthogonal groups over totally real fields*, 2010.
- [12] Patrick Corn, *The Brauer-Manin obstruction on del Pezzo surfaces of degree 2*, Proc. Lond. Math. Soc. (3) **95** (2007), no. 3, 735–777. MR MR2368282 (2009a:14027)
- [13] Patrick Corn, *Tate-Shafarevich groups and K3 surfaces*, Math. Comp. **To appear** (2007).
- [14] R. de la Bret'che and T.D. Browning, *Manin's conjecture for quartic del Pezzo surfaces with a conic fibration*, 2008.
- [15] Jan Denef and Frederik Vercauteren, *An extension of Kedlaya's algorithm to Artin-Schreier curves in characteristic 2*, Algorithmic Number Theory (Sydney, 2002), Lecture Notes in Comput. Sci., vol. 2369, Springer, Berlin, 2002, pp. 308–323. MR MR2041093 (2005d:11088)
- [16] Xander Faber and Benjamin Hutz, *On the number of rational iterated pre-images of the origin under quadratic dynamical systems*, 2008.
- [17] Xander Faber, Benjamin Hutz, Patrick Ingram, Rafe Jones, Michelle Manes, Thomas J. Tucker, and Michael E. Zieve, *Uniform bounds on pre-images under quadratic dynamical systems*, Math. Res. Lett. **16** (2009), no. 1, 87–101. MR MR2480563
- [18] Tom Fisher, *A new approach to minimising binary quartics and ternary cubics*, Math. Res. Lett. **14** (2007), no. 4, 597–613. MR MR2335986 (2008k:11058)
- [19] ———, *Finding rational points on elliptic curves using 6-descent and 12-descent*, J. Algebra **320** (2008), no. 2, 853–884. MR MR2422319
- [20] E. V. Flynn, *The Hasse principle and the Brauer-Manin obstruction for curves*, Manuscripta Math. **115** (2004), no. 4, 437–466. MR MR2103661 (2005j:11047)
- [21] David Freeman and Kristin Lauter, *Computing endomorphism rings of Jacobians of genus 2 curves over finite fields*, Algebraic geometry and its applications, Ser. Number Theory Appl., vol. 5, World Sci. Publ., Hackensack, NJ, 2008, pp. 29–66. MR MR2484047

- [22] Steven D. Galbraith, *Weil descent of Jacobians*, Discrete Appl. Math. **128** (2003), no. 1, 165–180, International Workshop on Coding and Cryptography (WCC 2001) (Paris). MR MR1991424 (2004m:14046)
- [23] Steven D. Galbraith and Xibin Lin, *Computing pairings using  $x$ -coordinates only*, Des. Codes Cryptogr. **50** (2009), no. 3, 305–324. MR MR2480678
- [24] Ralf Gerkmann, *Relative rigid cohomology and deformation of hypersurfaces*, Int. Math. Res. Pap. IMRP (2007), no. 1, Art. ID rpm003, 67. MR MR2334009
- [25] Josep González and Victor Rotger, *Non-elliptic Shimura curves of genus one*, J. Math. Soc. Japan **58** (2006), no. 4, 927–948. MR MR2276174 (2007k:11093)
- [26] Cem Güneri, Henning Stichtenoth, and Ihsan Taşkın, *Further improvements on the designed minimum distance of algebraic geometry codes*, J. Pure Appl. Algebra **213** (2009), no. 1, 87–97. MR MR2462987
- [27] Johan P. Hansen, *Toric varieties, Hirzebruch surfaces and error-correcting codes*, Appl. Algebra Engrg. Comm. Comput. **13** (2002), no. 4, 289–300. MR MR1953195 (2003j:14029)
- [28] David Harari and Tamás Szamuely, *Galois sections for abelianized fundamental groups*, Math. Ann. **344** (2009), no. 4, 779–800, With an appendix by E. V. Flynn. MR MR2507624
- [29] Florian Hess, *A note on the Tate pairing of curves over finite fields*, Arch. Math. (Basel) **82** (2004), no. 1, 28–32. MR MR2034467 (2004m:14040)
- [30] Christopher Holden, *Mod 4 Galois representations and elliptic curves*, Proc. Amer. Math. Soc. **136** (2008), no. 1, 31–39 (electronic). MR MR2350385
- [31] David Holmes, *Canonical heights on hyperelliptic curves and effective  $Q$ -factoriality for arithmetic surfaces*, 2010. MR 14G40; 11G30, 11G50, 37P30
- [32] E. W. Howe and K. E. Lauter, *Improved upper bounds for the number of points on curves over finite fields*, Ann. Inst. Fourier (Grenoble) **53** (2003), no. 6, 1677–1737. MR MR2038778 (2005c:11079)
- [33] Everett W. Howe, *Supersingular genus-2 curves over fields of characteristic 3*, Computational arithmetic geometry, Contemp. Math., vol. 463, Amer. Math. Soc., Providence, RI, 2008, pp. 49–69. MR MR2459989 (2009j:11103)

- [34] Everett W. Howe, Kristin E. Lauter, and Jaap Top, *Pointless curves of genus three and four*, Arithmetic, Geometry and Coding Theory (AGCT 2003), Sémin. Congr., vol. 11, Soc. Math. France, Paris, 2005, pp. 125–141. MR MR2182840 (2006g:11125)
- [35] Nathan Owen Ilten and Hendrik Süß, *AG codes from polyhedral divisors*, 2008.
- [36] Farzali A. Izadi and V. Kumar Murty, *Counting points on an abelian variety over a finite field*, Progress in Cryptology—Indocrypt 2003, Lecture Notes in Comput. Sci., vol. 2904, Springer, Berlin, 2003, pp. 323–333. MR MR2092391 (2005f:11127)
- [37] Rafe Jones and Jeremy Rouse, *Iterated endomorphisms of abelian algebraic groups*, Proc. London Math. Soc. **100** (2010), 763–794.
- [38] Samuel Kadziela, *Rigid analytic uniformization of curves and the study of isogenies*, Acta Appl. Math. **99** (2007), no. 2, 185–204. MR MR2350208
- [39] Kiran S. Kedlaya, *Computing zeta functions via  $p$ -adic cohomology*, Algorithmic Number Theory, Lecture Notes in Comput. Sci., vol. 3076, Springer, Berlin, 2004, pp. 1–17. MR MR2137340 (2006a:14033)
- [40] Kenji Koike and Annegret Weng, *Construction of CM Picard curves*, Math. Comp. **74** (2005), no. 249, 499–518 (electronic). MR MR2085904 (2005g:11103)
- [41] Aristides Kontogeorgis and Victor Rotger, *On abelian automorphism groups of Mumford curves and applications to Shimura curves*, 2006.
- [42] Andrew Kresch and Yuri Tschinkel, *Integral points on punctured abelian surfaces*, Algorithmic Number Theory (Sydney, 2002), Lecture Notes in Comput. Sci., vol. 2369, Springer, Berlin, 2002, pp. 198–204. MR MR2041084 (2005d:11081)
- [43] ———, *On the arithmetic of del Pezzo surfaces of degree 2*, Proc. London Math. Soc. (3) **89** (2004), no. 3, 545–569. MR MR2107007 (2005h:14060)
- [44] ———, *Effectivity of Brauer-Manin obstructions*, Adv. Math. **218** (2008), no. 1, 1–27. MR MR2409407
- [45] L. Kulesz, G. Matera, and É. Schost, *Uniform bounds on the number of rational points of a family of curves of genus 2*, J. Number Theory **108** (2004), no. 2, 241–267. MR MR2098638 (2005h:11130)

- [46] Gilles Lachaud and Christophe Ritzenthaler, *On a conjecture of Serre on abelian threefolds*, Algebraic Geometry and its applications, Proceedings of the First SAGA conference, Papeete, France 2007, 2008, pp. 1–28.
- [47] Alan G. B. Lauder, *Counting solutions to equations in many variables over finite fields*, Found. Comput. Math. **4** (2004), no. 3, 221–267. MR MR2078663 (2005f:14048)
- [48] ———, *A recursive method for computing zeta functions of varieties*, LMS J. Comput. Math. **9** (2006), 222–269 (electronic). MR MR2261044 (2007g:14022)
- [49] F. Leprévost, M. Pohst, and A. Schöpp, *Rational torsion of  $J_0(N)$  for hyperelliptic modular curves and families of Jacobians of genus 2 and genus 3 curves with a rational point of order 5, 7 or 10*, Abh. Math. Sem. Univ. Hamburg **74** (2004), 193–203. MR MR2112831 (2005h:11131)
- [50] John Little and Hal Schenck, *Toric surface codes and Minkowski sums*, SIAM J. Discrete Math. **20** (2006), no. 4, 999–1014 (electronic). MR MR2272243
- [51] Adam Logan, *The Brauer-Manin obstruction on del Pezzo surfaces of degree 2 branched along a plane section of a Kummer surface*, Math. Proc. Cambridge Philos. Soc. **144** (2008), no. 3, 603–622. MR MR2418706
- [52] Michelle Manes,  *$Q$ -rational cycles for degree-2 rational maps having an automorphism*, Proc. Lond. Math. Soc. (3) **96** (2008), no. 3, 669–696. MR MR2407816 (2009a:14029)
- [53] David Savitt, *The maximum number of points on a curve of genus 4 over  $F_8$  is 25*, Canad. J. Math. **55** (2003), no. 2, 331–352, With an appendix by Kristin Lauter. MR MR1969795 (2004i:11059)
- [54] Éric Schost, *Computing parametric geometric resolutions*, Appl. Algebra Engrg. Comm. Comput. **13** (2003), no. 5, 349–393. MR MR1959170 (2003k:13035)
- [55] R. Shaw, *The polynomial degrees of Grassmann and Segre varieties over  $GF(2)$* , Discrete Math. **308** (2008), no. 5-6, 872–879. MR MR2378937
- [56] Edlyn Teske, *An elliptic curve trapdoor system (extended abstract)*, High Primes and Misdemeanours: Lectures in Honour of the 60th Birthday of Hugh Cowie Williams, Fields Inst. Commun., vol. 41, Amer. Math. Soc., Providence, RI, 2004, pp. 341–352. MR MR2076258

- [57] Ronald van Luijk, *Quartic K3 surfaces without nontrivial automorphisms*, Math. Res. Lett. **13** (2006), no. 2-3, 423–439. MR MR2231128 (2007b:14084)
- [58] Ronald van Luijk, *Cubic points on cubic curves and the Brauer-Manin obstruction on K3 surfaces*, 2007.
- [59] Bianca Viray, *A family of varieties with exactly one pointless rational fiber*, 2009.
- [60] John Voight, *Shimura curves of genus at most two*, Math. Comp. **78** (2009), no. 266, 1155–1172. MR MR2476577
- [61] Gabor Wiese, *Dihedral Galois representations and Katz modular forms*, Doc. Math. **9** (2004), 123–133 (electronic). MR MR2054983 (2005c:11065)