

References

- [ARS06a] A. Agashe, K. A. Ribet, and W. A. Stein, *The Manin Constant*, JPAM Coates Volume (2006), <http://modular.math.washington.edu/papers/ars-manin/>.
- [ARS06b] ———, *The Modular Degree, Congruence Primes and Multiplicity One*, IMRN Coates Volume (2006), <http://modular.math.washington.edu/papers/ars-congruence/>.
- [AS02] A. Agashe and W. Stein, *Visibility of Shafarevich-Tate groups of abelian varieties*, J. Number Theory **97** (2002), no. 1, 171–185.
- [AS05] ———, *Visible evidence for the Birch and Swinnerton-Dyer conjecture for modular abelian varieties of analytic rank zero*, Math. Comp. **74** (2005), no. 249, 455–484 (electronic), With an appendix by J. Cremona and B. Mazur. MR 2085902
- [BCDT01] C. Breuil, B. Conrad, F. Diamond, and R. Taylor, *On the modularity of elliptic curves over \mathbf{Q} : wild 3-adic exercises*, J. Amer. Math. Soc. **14** (2001), no. 4, 843–939 (electronic). MR 2002d:11058
- [BCP97] W. Bosma, J. Cannon, and C. Playoust, *The Magma algebra system. I. The user language*, J. Symbolic Comput. **24** (1997), no. 3–4, 235–265, Computational algebra and number theory (London, 1993). MR 1 484 478
- [Bir71] B. J. Birch, *Elliptic curves over \mathbf{Q} : A progress report*, 1969 Number Theory Institute (Proc. Sympos. Pure Math., Vol. XX, State Univ. New York, Stony Brook, N.Y., 1969), Amer. Math. Soc., Providence, R.I., 1971, pp. 396–400.
- [BMSW06] B. Bektemirov, B. Mazur, W. Stein, and M. Watkins, *Average Ranks of Elliptic Curves: Tension Between Data and Conjecture*, Bulletins of the AMS (2006), to appear.
- [CM00] J. E. Cremona and B. Mazur, *Visualizing elements in the Shafarevich-Tate group*, Experiment. Math. **9** (2000), no. 1, 13–28. MR 1 758 797
- [Cre] J. E. Cremona, *Tables of Elliptic Curves*, <http://www.maths.nott.ac.uk/personal/jec/ftp/data/>.
- [Dem05] Lassina Dembélé, *Explicit computations of Hilbert modular forms on $\mathbf{Q}(\sqrt{5})$* , Experiment. Math. **14** (2005), no. 4, 457–466. MR MR2193808
- [GJP⁺05] G. Grigorov, A. Jorza, S. Patrikis, C. Patrascu, and W. Stein, *Verification of the Birch and Swinnerton-Dyer Conjecture for Specific Elliptic Curves*, (Submitted) <http://modular.math.washington.edu/papers/bsdalg/> (2005).

- [Gri05] G. Grigorov, *Kato's Euler System and the Main Conjecture*, Harvard Ph.D. Thesis (2005).
- [Gro91] B. H. Gross, *Kolyvagin's work on modular elliptic curves, L-functions and arithmetic* (Durham, 1989), Cambridge Univ. Press, Cambridge, 1991, pp. 235–256.
- [JBS03] A. Jorza, J. Balakrishna, and W. Stein, *The Smallest Conductor for an Elliptic Curve of Rank Four is Composite*, <http://modular.math.washington.edu/rank4/> (2003).
- [JS05] D. Jetchev and W. Stein, *Visibility of Shafarevich-Tate Groups at Higher Level*, in preparation.
- [Ked01] Kiran S. Kedlaya, *Counting points on hyperelliptic curves using Monsky-Washnitzer cohomology*, J. Ramanujan Math. Soc. **16** (2001), no. 4, 323–338. MR MR1877805 (2002m:14019)
- [Ked04] K. Kedlaya, *Computing zeta functions via p -adic cohomology*, Algorithmic number theory, Lecture Notes in Comput. Sci., vol. 3076, Springer, Berlin, 2004, pp. 1–17.
- [Kol90] V. A. Kolyvagin, *Euler systems*, The Grothendieck Festschrift, Vol. II, Birkhäuser Boston, Boston, MA, 1990, pp. 435–483. MR 92g:11109
- [Kol91a] ———, *On the structure of Selmer groups*, Math. Ann. **291** (1991), no. 2, 253–259. MR 93e:11073
- [Kol91b] ———, *On the structure of Shafarevich-Tate groups*, Algebraic geometry (Chicago, IL, 1989), Springer, Berlin, 1991, pp. 94–121.
- [McC91] W. G. McCallum, *Kolyvagin's work on Shafarevich-Tate groups, L-functions and arithmetic* (Durham, 1989), Cambridge Univ. Press, Cambridge, 1991, pp. 295–316. MR 92m:11062
- [Mes86] J.-F. Mestre, *La méthode des graphes. Exemples et applications*, Proceedings of the international conference on class numbers and fundamental units of algebraic number fields (Katata) (1986), 217–242.
- [MR04] B. Mazur and K. Rubin, *Pairings in the arithmetic of elliptic curves*, Modular curves and abelian varieties, Progr. Math., vol. 224, Birkhäuser, Basel, 2004, pp. 151–163. MR MR2058649 (2005g:11095)
- [MST06] B. Mazur, W. Stein, and J. Tate, *Computation of p -adic heights and log convergence*, To appear in Documenta Mathematica's Coates Volume.
- [PR03] Bernadette Perrin-Riou, *Arithmétique des courbes elliptiques à réduction supersingulière en p* , Experiment. Math. **12** (2003), no. 2, 155–186. MR MR2016704

- [Rib91] K. A. Ribet, *Lowering the levels of modular representations without multiplicity one*, International Mathematics Research Notices (1991), 15–19.
- [Rib92] ———, *Abelian varieties over \mathbf{Q} and modular forms*, Algebra and topology 1992 (Taejŏn), Korea Adv. Inst. Sci. Tech., Taejŏn, 1992, pp. 53–79. MR 94g:11042
- [Rub91] K. Rubin, *The “main conjectures” of Iwasawa theory for imaginary quadratic fields*, Invent. Math. **103** (1991), no. 1, 25–68. MR 92f:11151
- [Sch83] P. Schneider, *Iwasawa L -functions of varieties over algebraic number fields. A first approach*, Invent. Math. **71** (1983), no. 2, 251–293. MR 85d:11063
- [Shi73] G. Shimura, *On the factors of the jacobian variety of a modular function field*, J. Math. Soc. Japan **25** (1973), no. 3, 523–544.
- [SIM] SIMUW, *Summer Institute of Mathematics at University of Washington*, <http://modular.math.washington.edu/simuw/>.
- [SJ05] W. Stein and D. Joyner, *Sage: System for algebra and geometry experimentation*, Communications in Computer Algebra (SIGSAM Bulletin) **39** (June 2005), no. 2, <http://sage.sourceforge.net/>.
- [Ste] W. Stein, *Visibility of mordell-weil groups*, 20, to appear in Documenta Mathematica.
- [Ste04a] ———, *The Modular Forms Database* <http://modular.math.washington.edu/tables>.
- [Ste04b] ———, *Studying the Birch and Swinnerton-Dyer Conjecture for Modular Abelian Varieties Using MAGMA*, to appear in J. Cannon, ed., *Computational Experiments in Algebra and Geometry*, Springer-Verlag (2004).
- [Ste05] ———, *Elementary Number Theory*, <http://modular.math.washington.edu/ent/>, 2005.
- [Ste07] ———, *Explicitly Computing Modular Forms*, Graduate Studies in Mathematics, American Math. Society, 2007, With an appendix by Paul Gunnells.
- [SW02] W. Stein and M. Watkins, *A database of elliptic curves—first report*, Algorithmic number theory (Sydney, 2002), Lecture Notes in Comput. Sci., vol. 2369, Springer, Berlin, 2002, pp. 267–275. MR MR2041090 (2005h:11113)
- [SW04] ———, *Modular parametrizations of Neumann-Setzer elliptic curves*, Int. Math. Res. Not. (2004), no. 27, 1395–1405. MR MR2052021

(2005c:11070)

- [Tat66] J. Tate, *On the conjectures of Birch and Swinnerton-Dyer and a geometric analog*, Séminaire Bourbaki, Vol. 9, Soc. Math. France, Paris, 1965/66, pp. Exp. No. 306, 415–440.