William A. Stein — *Curriculum Vitae*

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Employment

- **Harvard University**, Benjamin Peirce Assistant Professor, 2001–present.
- **NSF** Postdoctoral Fellowship, 2000–2001, 2003–2004.
- Defense consulting (see http://dssg.ida.org), 2002–2003.

Education

- **University of California at Berkeley**, Ph.D., May 2000,
  Explicit approaches to modular abelian varieties.

Publications

17. *Constructing Elements in Shafarevich-Tate Groups of Modular Motives* (19 pages), with N. Dummigan and M. Watkins, to appear in Swinnerton-Dyer birthday volume.
16. *Approximation of Infinite-Slope Modular Eigenforms By Finite-Slope Eigenforms* (13 pages), with R. Coleman, to appear in the Dwork Proceedings.
15. *$J_1(p)$ has connected fibers*, with B. Conrad and B. Edifxhoven (70 pages), to appear in Documenta Mathematica.
14. *Shafarevich-Tate Groups of Nonsquare Order* (12 pages), to appear in the 2002 MCAV proceedings.
13. *Visible Evidence for the Birch and Swinnerton-Dyer Conjecture for Rank* 0 *Modular Abelian Varieties* (30 pages), with A. Agashe, to appear in Mathematics of Computation.
12. *A Database of Elliptic Curves–First Report* (10 pages), in ANTS V proceedings, Sydney, Australia, 2002.
11. *Visibility of Shafarevich-Tate Groups of Abelian Varieties* (19 pages), with A. Agashe, to appear in J. Number Theory.
10. *Transportable modular symbols* (12 pages), with H. Verrill, LMS J. Comput. Math., **4** (2001), 170–181.
9. Appendix to Lario and Schoof's *Some computations with Hecke rings and deformation rings* (1 page), with A. Agashe, to appear in Experiment. Math.
8. *There are genus one curves over* $\mathbf{Q}$ *of every odd index* (9 pages), to appear in J. Reine Angew. Math. (Crelle's Journal).
7. *Component groups of optimal quotients of Jacobians* (20 pages), with B. Conrad, to appear in Math. Res. Letters.
6. *The field generated by the points of small prime order on an elliptic curve* (7 pages), with L. Merel, Internat. Math. Res. Notices, 2001, no. 20, 1075–1082.
5. *An introduction to computing modular forms using modular symbols* (10 pages), to appear in an MSRI proceedings volume.
4. *Mod* 5 *approaches to modularity of icosahedral Galois representations* (18 pages), with K. Buzzard, to appear in Pacific J. Math.

3. *Lectures on Serre's conjectures* (95 pages), with K. A. Ribet, in Arithmetic Algebraic Geometry, IAS/Park City Math. Inst. Series, Vol. 9, 143–232.
2. *Component groups of quotients of $J_0(N)$* (9 pages), with D. Kohel, Proceedings of the 4th International Symposium (ANTS-IV), Leiden, Netherlands, July 2–7, 2000, Springer, 2000.
1. *Empirical evidence for the Birch and Swinnerton-Dyer conjectures for modular Jacobians of genus 2 curves* (22 pages), with E. V. Flynn, F. Lep-révost, E. F. Schaefer, M. Stoll, J. L. Wetherell, Math. of Comp. **70** (2001), no. 236, 1675–1697.

Books in progress

· *Elementary Number Theory and Elliptic Curves* (250 page book), under contract for Springer-Verlag's UTM series.

· *Lectures on Modular Forms and Galois Representations* (200 page book), with K. A. Ribet, intended for Springer-Verlag's Universitext series.

Computation

· Author of the modular forms and modular symbols parts of MAGMA (Three visits to Sydney, Australia to work with the MAGMA group.)

· The Modular Forms Database:
http://modular.fas.harvard.edu/Tables/.

Equipment Grants

Each of the following grants provided substantial computing resources to many members of the department:

· Sun Education Grant ($70K Sun Fire V480 server), 2003.

· 12 Processor Cluster ($20K from W. R. Hearst III and Harvard), 2002.

· Vice Chancellor Research Grant (six-processor cluster), 1999.

Fellowships

· NSF Postdoctoral Research Fellowship, 2000–2001, 2003-2004.

· Clay Mathematics Institute Liftoff Fellowship, Summer 2000.

· Two years support from competitive fellowships at Berkeley.

Teaching

Harvard University

· *Modular Abelian Varieties*, graduate course, Fall 2003.

· *Freshman Seminar on Elliptic Curves*, Spring 2003.

· *Elementary Number Theory*, Fall 2001 and 2002.

· *Linear Algebra*, Fall 2001 and Spring 2002.

Recent Seminar organization

· *Harvard Modular Curves Seminar*, 2000–2003.

NSF Sponsored IAS/Park City Mathematics Institute

· *Teaching Assistant*, Summer 1999. Led problem sessions and prepared notes for Ken Ribet's course on Serre's conjectures for advanced number theory graduate students.

University of California at Berkeley

- *Curriculum Development*, Fall 1997–Summer 1998. Developed curriculum materials and MATLAB software for workshop-based calculus and linear algebra courses at UC Berkeley.
- *Instructor*, Summer 1997. Discrete Mathematics.
  Evaluation average: 6.1 out of 7.
- *Teaching Assistant*, Fall 1995–Spring 1997.

Northern Arizona University

- *Teaching*, 1994–1995. Taught complete undergraduate courses on elementary combinatorics and algebra.

Personal

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References

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