

Curriculum Vitae

BRIAN OSSERMAN

Office Address: Department of Mathematics
 One Shields Ave.
 The University of California
 Davis, CA 95616 (530)754-5406
 osserman@math.ucdavis.edu <http://math.ucdavis.edu/~osserman>

Education/Employment:

- 2007 – Assistant Professor, **University of California**, Davis, CA
- 2004 – 2007 NSF Postdoctoral Research Fellow, **University of California**, Berkeley, CA
- 2004, Spring JSPS Postdoctoral Fellow, **Res. Inst. for Math. Sci.**, Kyoto, Japan
- 2004 Ph.D. **Massachusetts Institute of Technology**, Cambridge, MA, Mathematics
- 1999 A.B. **Harvard University**, Cambridge, MA, Mathematics (Summa Cum Laude)

Scientific/Academic Honors:

- 2004 – 2007 **National Science Foundation Postdoctoral Research Fellowship**
- 2004, July **Clay Mathematics Institute Liftoff Fellowship**
- 2004, Spring **Japan Society for the Promotion of Science Postdoctoral Fellowship**
- 1999 – 2002 **National Science Foundation Graduate Research Fellowship**

Research Interests:

Algebraic Geometry, Arithmetic Geometry

Research Publications:

- 2004 Limit linear series in positive characteristic and Frobenius-unstable vector bundles on curves. PhD thesis, MIT.
- 2003 1. The number of linear series on curves with given ramification, *International Mathematics Research Notices* **2003**, no. 47, 2513–2527.
- 2004 2. Linear series over real and p -adic fields. *Proceedings of the AMS*, **134** (2006), no. 2, 989–993.
- 2004 3. Mochizuki’s crys-stable bundles: a lexicon and applications. *Publications of RIMS*, **43** (2007), 95–119.
- 2004 4. Mochizuki’s indigenous bundles and Ehrhart polynomials, with Fu Liu. *Journal of Algebraic Combinatorics*, **23** (2006), no. 2, 125–136.
- 2004 5. Rational functions with given ramification in characteristic p . *Compositio Mathematica*, **142** (2006), no. 6, 433–450.
- 2004 6. A limit linear series moduli scheme. *Annales de l’Institut Fourier*, **56** (2006), no. 4, 1165–1205.
- 2004 7. Logarithmic connections with vanishing p -curvature. Preprint.
- 2004 8. Frobenius-unstable bundles and p -curvature. *Transactions of the AMS*, **360** (2008), no. 1, 273–305.
- 2004 9. The generalized Verschiebung for curves of genus 2. *Mathematische Annalen*, **336** (2006), no. 4, 963–986.
- 2004 10. Deformations of covers, Brill-Noether theory, and wild ramification. *Mathematical Research Letters*, **12** (2005), no. 4, 483–491.

- 2006 11. Flatness of the linked Grassmannian, with David Helm. *Proceedings of the AMS*, **136** (2008), no. 10, 3383–3390.
- 2006 12. Linked Grassmannians and crude limit linear series. *International Mathematics Research Notices* **2006**, No. 25, Article ID 25782, 1–27.
- 2006 13. Linear series and existence of branched covers. *Compositio Mathematica*, **144** (2008), no. 1, 89–106.
- 2006 14. The irreducibility of certain pure-cycle Hurwitz spaces, with Fu Liu. *American Journal of Mathematics*, to appear.
- 2008 15. Deformations and automorphisms: a framework for globalizing local tangent and obstruction spaces. Preprint.
- 2008 16. Ascent theory for stacks, with Max Lieblich. Preprint.

Expository Publications:

- 2005 Two degeneration techniques for maps of curves. *Snowbird Lectures in Algebraic Geometry*, 137–143, Contemporary Mathematics 388, AMS, 2005.
- 2006 The Riemann Hypothesis for elliptic curves, with Jasbir Chahal. *American Mathematical Monthly*, **115** (2008), no. 5, 431–432.
- 2007 The Weil conjectures, in *Princeton Companion to Mathematics*.

Selected Lectures:

- 2008 Aug. **Oberwolfach workshop, Arithmetic Algebraic Geometry:** Tamely branched covers and degenerations
- 2007 Jul. **UPenn Algebra Seminar:** Connectedness of certain Hurwitz spaces
- 2006 Oct. **University of Michigan Algebraic Geometry Seminar:** Of functors and stacks
- Apr. **Columbia Algebraic Geometry Seminar:** Beyond Schlessinger: deformation stacks
- Apr. **Durham AMS Special Session, Galois Groups in Arithmetic and Geometry:** Progress on Riemann existence via degenerations
- Feb. **Bellingham Algebraic Geometry Seminar:** Limit linear series: an overview
- 2005 Sep. **Berkeley Representation Theory, Combinatorics, and Geometry Seminar:** Identities of Ehrhart polynomials arising from algebraic geometry
- 2004 Dec. **Orsay Seminar on Arithmetic and Algebraic Geometry:** Tamely ramified covers of the projective line
- Oct. **Evanston AMS Special Session, Modern Schubert Calculus:** Transversality of non-general Schubert cycles
- Oct. **Brown Algebraic Geometry Seminar:** Elementary applications of a technical theorem
- Jul. **Snowbird JSRC, Algebraic Geometry: Presentations by Young Researchers:** Two degeneration techniques for maps of curves
- Apr. **Kyoto University Algebraic Geometry Seminar:** Frobenius-unstable vector bundles and the generalized Verschiebung
- Jan. **MSRI, Program on Topological Aspects of Real Algebraic Geometry:** Real linear series on curves
- 2003 Dec. **Harvard-MIT Algebraic Geometry Seminar:** Limit linear series: simple cases in positive characteristic

Teaching:

- 2008 Fall **Graduate differential geometry**, at the University of California, Davis.
- 2008 Fall **Introductory calculus**, at the University of California, Davis.
- 2008 Summer **Undergraduate applied linear algebra**, at the University of California, Davis.
- 2008 Spring **Graduate algebra**, at the University of California, Davis.
- 2008 Winter **Graduate number theory** (reading course), at the University of California, Davis.
- 2007 Fall **Introductory calculus**, at the University of California, Davis.
- 2007 Spring **Graduate algebraic geometry** at the University of California, Berkeley.
- 2006 Fall **Graduate algebraic geometry** at the University of California, Berkeley.
- 2006 Spring **Undergraduate abstract algebra** at the University of California, Berkeley.
- 2005 Fall **Graduate number theory** at the University of California, Berkeley.

Professional Activities:

Journals refereed: Advances in Mathematics, American Mathematical Monthly, Canadian Mathematical Bulletin, Commentari Mathematici Helvetici, Compositio Mathematica, International Mathematics Research Notices, Journal of Pure and Applied Algebra, Proceedings of the AMS, Transactions of the AMS

Seminars (co)organized: Davis Geometry and Topology Seminar, Berkeley Commutative Algebra and Algebraic Geometry Seminar, Berkeley-Stanford Algebraic Geometry Colloquium.

- 2008 Aug. Invited speaker at workshop **Arithmetic Algebraic Geometry** at Math. Forschungsinstitut Oberwolfach, Oberwolfach, Germany.
- Jun. Invited participant of workshop **Classical Algebraic Geometry** at Math. Forschungsinstitut Oberwolfach, Oberwolfach, Germany.
- 2007 Jul. (Co)Organizer of summer graduate workshop **Deformation Theory in Algebraic Geometry** at MSRI, Berkeley, CA.
- May Invited participant of workshop **Arithmetic and Differential Galois Groups** at Math. Forschungsinstitut Oberwolfach, Oberwolfach, Germany.
- 2006 Jun. Invited participant of workshop **Classical Algebraic Geometry** at Math. Forschungsinstitut Oberwolfach, Oberwolfach, Germany.
- Apr. Invited speaker at AMS special session **Galois Groups in Arithmetic and Geometry** at the AMS Eastern Section Meeting, Durham, NH.
- Mar. (Co)Organizer of spring 2006 meeting of **Western Algebraic Geometry Seminar** at the University of California, Berkeley.
- 2004 Oct. Invited speaker at AMS special session **Modern Schubert Calculus** at the AMS Central Section Meeting, Evanston, IL.
- Jul. Invited speaker at conference **Algebraic Geometry: Presentations by Young Researchers** at Snowbird Joint Summer Research Conference, Snowbird, UT.
- Jun. Invited participant of workshop **Classical Algebraic Geometry** at Math. Forschungsinstitut Oberwolfach, Oberwolfach, Germany.

Computing:

Computer algebra systems: Macaulay2 Mathematica Maple
 Computer languages: C Perl HTML/CGI