Curriculum Vitae
BRIAN OSSERMAN

Office Address: Department of Mathematics, The University of California
Berkeley, CA 94720-3840 (510)643-8124
osserman@math.berkeley.edu http://www.math.berkeley.edu/~osserman

Education/Employment:

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. **Mass. Inst. of Tech.**, 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*, to appear.

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. Submitted for publication.

2004 8. Frobenius-unstable bundles and p-curvature. *Transactions of the AMS*, to appear.

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*, to appear.

2006 12. Linked Grassmannians and crude limit linear series. Submitted for publication.

2006 13. Linear series and existence of branched covers. Submitted for publication.

2006 14. The irreducibility of certain pure-cycle Hurwitz spaces, with Fu Liu. Submitted for publication.

2006 15. Deformations and automorphisms: a framework for globalizing local tangent and obstruction spaces. In preparation.

2006 16. Ascent theory for stacks, with Max Lieblich. In preparation.

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*, to appear.

Selected Lectures:

2006 Oct. **Wayne State Colloquium:** Branched covers of the Riemann sphere and algebraic curves

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

Nov. **UMass Amherst, Valley Geometry Seminar:** Enumerative problems on linear series on curves

Teaching:

2006 Fall **Graduate algebraic geometry** at the University of California, Berkeley. Responsible for entire course.

2006 Spring **Undergraduate abstract algebra** at the University of California, Berkeley. Responsible for entire course.

2005 Fall **Graduate number theory** at the University of California, Berkeley. Responsible for entire course.

2003 Spring **Grader, algebraic geometry** at MIT. Responsibilities: grading problem sets, preparing solutions, and holding office hours.

2002 Fall **Teaching assistant, calculus (univariate, multivariate, linear algebra)** at MIT. Responsibilities: leading biweekly recitations, holding office hours, and grading problem sets and tests.

Professional Activities:

Refereed: Six papers for six different journals

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

2004 Jun. Invited participant of workshop **Classical Algebraic Geometry** at Math. Forschungsinstitut Oberwolfach, Oberwolfach, Germany.

Jul. Invited speaker at conference **Algebraic Geometry: Presentations by Young Researchers** at Snowbird Joint Summer Research Conference, Snowbird, UT.

Oct. Invited speaker at AMS special session **Modern Schubert Calculus** at the AMS Central Section Meeting, Evanston, IL.

2006 Mar. (Co)Organizer of spring 2006 meeting of **Western Algebraic Geometry Seminar** at the University of California, Berkeley.

Apr. Invited speaker at AMS special session **Galois Groups in Arithmetic and Geometry** at the AMS Eastern Section Meeting, Durham, NH.

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.

Computing:

Computer algebra systems: Macaulay2 Mathematica Maple

Computer languages: C Perl HTML/CGI

References:

Aise Johan de Jong
Department of Mathematics
Columbia University
2990 Broadway
New York, NY 10027
dejong@math.columbia.edu

David Eisenbud, Director
Mathematical Sciences Research Institute
17 Gauss Way
Berkeley, CA 94720
de@msri.org

Michael Fried
Department of Mathematics
Montana State University - Billings
1500 University Drive
Billings, MT 59101-0298
mfried@math.uci.edu

Joseph Harris
Department of Mathematics
Harvard University
Boston, MA 02138
harris@math.harvard.edu

Ravi Vakil
Department of Mathematics
Stanford University
Stanford, CA 94305
vakil@math.stanford.edu

Bjorn Poonen (Teaching)
Department of Mathematics
The University of California
Berkeley, CA 94720-3840
poonen@math.berkeley.edu