

CONTACT INFORMATION	1057 Evans Hall Department of Mathematics University of California, Berkeley Berkeley, CA 94709 USA	<i>Phone:</i> (+1) 510 508 0255 <i>Email:</i> david.m.brown.jr@gmail.com <i>Web:</i> http://math.berkeley.edu/~brownda
RESEARCH INTERESTS	Broad: Number Theory, Arithmetic Geometry, Algebraic Geometry. Specific: p-adic Cohomology, Arithmetic of Varieties, Stacks, Moduli, Galois Representations, non-abelian techniques in arithmetic.	
EDUCATION	<p>University of California, Berkeley, California USA Ph.D. Candidate, Mathematics, expected graduation date: May 2010 Dissertation Topic: “Rigid Cohomology for Algebraic Stacks” Adviser: Bjorn Poonen (MIT); co-advised by Brian Conrad (Stanford)</p> <p>Technical University of Budapest, Budapest, Hungary Budapest Semesters in Mathematics Two semesters of study (Spring 2002, Spring 2004).</p> <p>The University of Arizona, Tucson, Arizona USA B.S., Mathematics with Honors, December, 2003</p>	
HONORS AND AWARDS	<p>NDSEG National Defense Science and Engineering Graduate Fellowship, Spring 2006 NSF National Science Foundation Graduate Research Fellowship, Spring 2005 Outstanding Senior, Department of Mathematics, Fall 2003 Goldwater Scholarship, Spring 2003</p>	
PUBLICATIONS (PRIMARY)	<p><i>Rigid Cohomology for Algebraic Stacks</i>; David Brown; in preparation (thesis). <i>Overconvergent de Rham-Witt Cohomology for Algebraic Stacks</i>; David Brown and Chris Davis; in preparation. <i>Abelian Varieties with Maximal Galois Action</i>; David Brown and David Zywinia; in preparation. <i>Grothendieck’s Existence Theorem for Good Moduli Spaces: Gerbal Case</i>; David Brown and Anton Geraschenko; in preparation. <i>Primitive Integral Solutions to $x^2 + y^3 = z^{10}$</i>; David Brown; to be submitted, arXiv:0911.2932.</p>	
PUBLICATIONS (UNDERGRADUATE)	<p><i>The Galois Group of Cyclotomic Fields of Fermat Primes</i>; David Brown and Daniel Madden; preprint. <i>Crack azimuths on Europa: The G1 lineament sequence revisited</i>; Alyssa R. Sarid, Richard Greenberg, Gregory V. Hoppa, David M. Brown Jr., and Paul Geissler; <i>Icarus</i>, 2005; 173 (2).</p>	
SEMINARS ORGANIZED	<p><i>Arithmetic Geometry and Moduli Spaces in Algebraic Geometry</i>; Zhejiang University in Hangzhou, China. Planned and ran tutorial sessions. (Summer 2009) <i>Berkeley Student Algebraic and Arithmetic Geometry Seminar</i>; with Dan Erman and Tony Varilly (Spring and Fall 2008)</p>	

Deformation Theory Workshop; MSRI. Ran problem sessions. (Summer 2007)
Student Number Theory Seminar; with Tony Varilly. UC Berkeley. (Spring 2007)
Many Cheerful Facts (UC Berkeley's graduate student colloquium); with Adam Booth. (Spring and Fall 2005)

SEMINAR
PRESENTATIONS

De Rham Cohomology, and the Infinitesimal Site; Stanford Student Arithmetic Geometry Seminar. (Spring 2009)
De Rham Cohomology, and the Infinitesimal Site; MSRI Graduate Student Seminar, UC Berkeley. (Spring 2009)
Artin's Representation Theorem; Student Arithmetic and Algebraic Geometry Seminar (Fall 2008)
The Siegel Modular Variety; Shimura Varieties Student Seminar. (Fall 2008)
GIT and moduli of curves; RAGS (Rest of Algebraic Geometry Seminar), UC Berkeley. (Fall 2008)
Surfaces with $p_g = 0$ and $q \geq 1$; RAGS (Rest of Algebraic Geometry Seminar), UC Berkeley. (Fall 2008)
Formal GAGA: Base Change; Clay sponsored EGA seminar. (Summer 2008)
A basic introduction to rigid cohomology; Olsson Student Seminar, UC Berkeley. (Spring 2008)
The infinitesimal site; Olsson Student Seminar, UC Berkeley. (Spring 2008)
The Chabauty-Coleman bound at a prime of bad reduction; Berkeley Number Theory Seminar, UC Berkeley. (Spring 2008)
An introduction to crystalline cohomology; Student Algebraic and Arithmetic Geometry Seminar, UC Berkeley (Spring 2008)
The Method of Chabauty and Coleman; STAGE (Seminar on Topics in Algebra, Geometry, etc.), MIT. (Fall 2007)
Deformation Theory and Surface Obstructions; BAGS: MIT/Harvard Student Geometry Seminar. (Fall 2007)
The Riemann-Hilbert Correspondence; D-Modules Seminar; UC Berkeley (Summer 2007)
Modular Curves as Smooth $\mathbb{Z}[1/N]$ -Schemes; Student Number Theory Seminar, UC Berkeley. (Spring 2007)
Number Theory for Everyone; Graduate Student Colloquium, UC Berkeley (A talk about many fun consequences of the solution to Hilbert's tenth problem). (Fall 2006)
Derived Schemes; Derived Algebraic Geometry Seminar, UC Berkeley. (Fall 2006)
Generalized Fermat Equations and Descent; Graduate Student Colloquium, UC Berkeley. (Fall 2005)
The Galois Group of Cyclotomic Fields of Fermat Primes; Budapest Semesters Reunion, Budapest, Hungary. (Summer 2005)
An Infinitude of Proofs (of the infinitude of primes); Graduate Student Colloquium, UC Berkeley. (Spring 2005)

TEACHING
EXPERIENCE

University of California, Berkeley, Berkeley, California USA
Graduate Student Instructor. Led discussion sections (3 hours per week per section). Wrote weekly quizzes, graded quizzes and exams, and held office hours.

- Multivariable Calculus (UC Berkeley, Math 53), Fall 2006
- Calculus II (UC Berkeley, Math 1B), Spring 2005
- Calculus I (UC Berkeley, Math 1A), Fall 2004

Ha:San High School, Tucson, AZ Fall 2002 - Spring 2003
CATTS (Collaboration to Advance Teaching, Technology and Science) Fellowship. Used fellowship to spend 15 hours a week in a local Native American high school as a teaching assistant for two

classes (one Algebra 1 and one Geometry) and helped to develop science curriculum and projects geared toward students with extremely weak backgrounds.

SYNERGISTIC
ACTIVITIES

Math Overflow (2009, with Anton Gerashenko)
Created a highly successful math Q&A/discussion website (<http://mathoverflow.com>); the new idea is to adopt (with permission) the architecture of the highly successful programming site (<http://stackoverflow.com>).

SOFTWARE SKILLS

Proficient in Magma

MORE INFO

Visit math.berkeley.edu/~brownda for more detailed information, including preprints and research and teaching statements.

REFERENCES

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