

Benjamin B. Brubaker

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APPOINTMENTS AND EDUCATION

- **Stanford University**, Stanford, California.
Szegő Assistant Professor of Mathematics, 2003 - Present.
- **Brown University**, Providence, Rhode Island.
Ph. D. in Mathematics, 2003.
Sc. M. in Mathematics, 2000.
Dissertation titled “Analytic Continuation for Cubic Multiple Dirichlet Series,” written under the direction of thesis advisor Jeffrey Hoffstein.
- **Amherst College**, Amherst, Massachusetts.
A.B. *summa cum laude* with highest distinction in Mathematics, 1998.

RESEARCH INTERESTS

- Number Theory and Lie Groups
- Automorphic Forms
- Special Values of L-Series; Eisenstein Series; Metaplectic Forms

TEACHING EXPERIENCE

- 9/03–Present **Assistant Professor**, Stanford University - Planned and taught courses for graduate students, undergrad math majors, and incoming first-years.
- 9/00–12/01 **Teaching Fellow**, Brown University - Responsible for teaching and planning my own calculus courses of various levels.
- 6/01–9/03 **Instructor**, Brown Summer Studies - Designed and taught number theory and calculus immersion courses for high school students, now both permanent offerings in the summer curriculum.
- 9/00–1/02 **Teaching Consultant**, Boston College Case Studies Project - Evaluated materials for use in training of mathematics instructors (with book published by the AMS as Issues in Mathematics Education, vol. 10).

APPOINTMENTS AND AWARDS

- **Senior Personnel – NSF FRG Research Grant** (2004) - A focused research grant from the NSF (DMS-0354662) for work on multiple Dirichlet series among Boston College, Brown, Columbia, and Stanford researchers.
- **President’s Award for Teaching Excellence** (2003) - Brown’s university-wide award given annually to up to four graduate student teachers.
- **George Irving Hopkins Dissertation Fellowship** (2002) - One-year research grant from Brown University awarded for outstanding progress toward a thesis.
- **Mathematics Department Outstanding Teaching Award** (2002)
- **Best Overall Score - “Critical Review”** (Fall 2000, Spring 2001, Fall 2001) - Received the highest score among all faculty in the math department on a university-wide student survey of teaching for all three semesters as a head instructor at Brown University (available online at www.brown.edu/Students/Critical_Review).
- **Phi Beta Kappa** (1998) - membership from Amherst College.

RECENT INVITED LECTURES AND CONFERENCE TALKS

- **New York Number Theory Seminar** (Dec. 1, 2005)
- **Michigan Number Theory Seminar** (Nov. 21, 2005)
- **Texas A&M Number Theory Seminar** (Nov. 9, 2005)
- **Wisconsin Number Theory Seminar** (Fall, 2005)
- **Bretton Woods Workshop on Multiple Dirichlet Series** (Summer, 2005)
- **Urbana-Champaign Number Theory Seminar** (Spring, 2005)
- **Stanford Math Competition Address to High-Schoolers** (Winter, 2005)
- **Claremont Five College Colloquium** (Fall, 2004)
- **AIM/Stanford Number Theory Seminar** (Fall, 2004)
- **Illinois Number Theory Conference** (Summer, 2004)
- **UCLA Number Theory Seminar** (Spring, 2004)
- **Princeton/IAS Number Theory Seminar** (Spring, 2004)
- **Automorphic Forms Workshop, Santa Barbara** (Spring, 2004)
- **UC-Berkeley Number Theory Seminar** (Spring, 2004)

PUBLICATIONS

1. **Non-vanishing twists of $GL(2)$ automorphic L -functions**, with A. Bucur, G. Chinta, S. Frechette, and J. Hoffstein, *Int. Math. Res. Not.* (2004) **78**, 4211–4239.
2. **Cubic twists of $GL(2)$ automorphic L -functions**, with S. Friedberg and J. Hoffstein, *Invent. Math.* (2005) **160**, no. 1, 31–58.
3. **On Kubota’s Dirichlet series**, with D. Bump. To appear in *J. Reine Angew. Math.*
4. **Weyl group multiple Dirichlet series I**, with D. Bump, G. Chinta, S. Friedberg, and J. Hoffstein. Submitted for publication.
5. **Weyl group multiple Dirichlet series II**, with D. Bump and S. Friedberg. To appear in *Invent. Math.*
6. **Weyl group multiple Dirichlet series III**, with D. Bump, S. Friedberg, and J. Hoffstein. Submitted for publication.
7. **Residues of Weyl Group Multiple Dirichlet Series Associated to $GL(n+1)$** , with D. Bump. Submitted for publication.
8. **Mean values for cubic twists of Dirichlet L -functions**, In preparation.

(Preprints available at math.stanford.edu/~brubaker)

OTHER SYNERGISTIC ACTIVITIES

- Co-Organizer, Graduate Teacher Training Seminar, Stanford University, 2003-present
- Advisor to Undergraduate Math Majors, including projects with C. Erickson on geometry of the zeta function in the critical strip and B. Hough on reciprocity laws.
- Co-Organizer, AIM/Stanford Number Theory Seminar and Stanford Representation Theory Seminar
- Reviewer, several journals and Math Reviews.

REFERENCES

- Daniel Bump, Stanford University
- Jeffrey Hoffstein, Brown University (Thesis Advisor)
- Solomon Friedberg, Boston College
- Ken Ono, University of Wisconsin-Madison
- Leon Simon, Stanford University (Teaching Reference)