

1 Biographical Sketch: Daniel Bump

1.0.1 Professional Preparation

BA (Mathematics): Reed College, 1974
PhD (Mathematics): University of Chicago, 1982

1.0.2 Academic Appointments

1995–	Professor	Stanford University
1990–1995	Associate Professor	Stanford University
1986–1990	Assistant Professor	Stanford University
1985–1986	Member	The Institute for Advanced Study, Princeton
1983–1985	Lecturer	The University of Texas at Austin

1.0.3 Publications most closely related to this project

Submitted papers are available at <http://math.stanford.edu/~bump/>

1. B. Brubaker, D. Bump and S. Friedberg, *Schur Polynomials and the Yang-Baxter Equation*, submitted for publication.
2. B. Brubaker, D. Bump, S. Friedberg, Weyl Group Multiple Dirichlet Series: Type A Combinatorial Theory, submitted.
3. B. Brubaker, D. Bump, S. Friedberg, Weyl group multiple Dirichlet series, Eisenstein series and crystal bases, submitted.
4. B. Brubaker, D. Bump, S. Friedberg and J. Hoffstein, *Weyl group multiple Dirichlet series III: twisted unstable A_r* , Ann. of Math., (2006).
5. B. Brubaker, D. Bump, S. Friedberg, Gauss sum combinatorics and metaplectic Eisenstein series, in AMS Contemp. Math. **488**, 2009.

1.0.4 Other Significant Publications

1. D. Bump and S. Friedberg, *Weyl group multiple Dirichlet series II: the stable case*, Invent. Math. 165:325–355 (2006).
2. D. Bump and P. Diaconis, *Toeplitz Minors*, J. Combin. Theory Ser. A **97** (2002), 252–271.
3. D. Bump and A. Gamburd, *On the Averages of Characteristic Polynomials from Classical Groups*, Comm. Math. Phys. 265:227–274 (2006).

4. J. Beineke and D. Bump, A Summation Formula for Divisor Functions Associated to Lattices, with Jennifer Beineke. *Forum Math.* 18 (2006).
5. D. Bump, S. Friedberg and J. Hoffstein, On some applications of automorphic forms to number theory, *Bull. AMS* **33** (1996), 157–175.

2 Synergistic Activities: Daniel Bump

1. The investigator is the author of texts *Automorphic Forms and Representations* (Cambridge) and *Lie Groups*, Springer.
2. Has mentored twelve graduate students, directed eight senior theses at Stanford and co-advised another at Reed College.
3. In 2009, gave lectures on Schur polynomials and the Yang-Baxter equation in Göttingen and in Weihai, attended by many graduate students.
4. Helped organize workshops in this area in 2005, 2006 and 2009, and helped give a mini-course on crystal bases and multiple Dirichlet series in Edinburg, 2008.
5. Contributor to SAGE Mathematical Software, methods for Lie groups, crystal bases and combinatorics.

3 Collaborators and Affiliations: Daniel Bump

Recent collaborators: Jennifer Beineke (Western New England), Ben Brubaker (MIT), YoungJu Choi (Pohang), Persi Diaconis (Stanford), Solomon Friedberg (Boston College), Alex Gamburd (Santa Cruz), David Ginzburg (Tel Aviv), Jeffrey Hoffstein (Brown), Maki Nakasuji (Stanford).

Graduate Advisors: Walter Baily (Chicago), advisor; Joe Buhler (Reed College and IDA), unofficial graduate mentor.

4 Effort allocation

Bump is an active participant in all parts of the project. His effort allocation to the project is estimated to be $2/9$ of his total effort.