

Benjamin Otto

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Work Experience

Visiting Assistant Professor, Bowling Green State University, 2009-present

Education

Ph.D. in Mathematics, May 2009

University of Wisconsin-Madison, Madison, Wisconsin
advisor: Dr. I. Martin Isaacs

M.A. in Mathematics, May 2002

Bowling Green State University, Bowling Green, Ohio

B.S. in Mathematics, May 2001

Bowling Green State University, Bowling Green, Ohio
Summa Cum Laude

Research

Interests: characters, groups, nilpotent algebras

Selected Papers:

- *Two bounds for the nilpotence class of an algebra*, Proceedings of the American Mathematical Society **138** (2010)
- *Constituents of supercharacters and Kirillov functions*, Archiv der Mathematik (to appear)
- *Sets of integers as superdegrees and superclass sizes* (in preparation)

Selected Presentations:

- Constituents of Supercharacters and Kirillov Functions, BGSU Colloquium, 2010
- Permutation Characters, BGSU Algebra Seminar, 2010
- Bounding the nilpotence class of an algebra, Kent State University Colloquium, 2009
- Other graphs of groups, BGSU Algebra Seminar, 2009
- Supercharacters, Kirillov functions, and logarithms, BGSU Algebra Seminar, 2009
- The coplactic algebra, UW-Madison Lie Theory Seminar, 2009
- Supercharacters of algebra groups, Joint Mathematics Meetings Poster Session, 2009
- Subdegrees and the common divisor graph, UW-Madison Group Theory Seminar, 2008
- Abelian algebra groups I and II, UW-Madison Group Theory Seminar, 2007
- The Lie algebra G_2 , UW-Madison Combinatorics Seminar, 2006
- Fixed point spaces, UW-Madison Group Theory Seminar, 2005
- Subnormal subgroups of factored groups, UW-Madison Group Theory Seminar, 2004

Research (continued)**Selected Professional Meetings and Conferences:**

- Ohio NExT Workshop, Kenyon College, 2009
- Lattice-ordered Groups and MV-algebras, BGSU, 2009
- Conference on Character Theory of Finite Groups, Valencia, 2009
- Joint Mathematics Meetings, Washington, D.C., 2009
- Introductory Workshop on the Representation Theory of Finite Groups, MSRI, 2008
- Groups, Rings and Algebras, UW-Madison, 2005
- Knot Theory and 3-Manifolds, MSRI, 2004
- Triangulations of Point Sets, MSRI, 2003
- Joint Mathematics Meetings, New Orleans, 2000

Organizations: American Mathematical Society, Kappa Mu Epsilon, Mathematical Association of America, Mathematical Sciences Research Institute, Ohio Project NExT, Pacific Institute for Mathematical Sciences, Phi Beta Kappa

Service

Committee on Teaching Assistant Policies and Procedures (UW-Madison, 2007-2009)

Teaching Assistant Evaluation Committee (UW-Madison, 2007-2009)

Treasurer of Kappa Mu Epsilon's Ohio Alpha Chapter (2000-2001)

Teaching

- **Undergraduate research advisor:** developed original problem, solicited undergraduate math majors, chose one whose background and future interests best matched the project, and am currently acting as mentor as the student researches
- **Advanced Mathematics Topics for Early Adulthood Teachers:** capstone course for education students, flexibility and familiarity with many topics necessary
- **Modern Geometry:** professor, most of the course is devoted to student presentations of proofs, frequent interactions with students outside of class necessary
- **Teaching Math in Urban Schools:** created and instructed graduate-level professional development course for current high school teachers. Despite the name, this was a newly designed course about high school students transitioning into the university environment.
- **Discrete Mathematics:** professor, solely responsible for every aspect of course
- **Algebra:** summer lecturing teaching assistant, solely responsible for every aspect of course
- **Trigonometry, Algebra:** lecturing teaching assistant, sole contact with students
- **Techniques in Ordinary Differential Equations, Calculus-Functions of Several Variables, Calculus and Analytic Geometry I and II, Basic Calculus:** teaching assistant, organized discussion sections with varying levels of oversight
- **Math Tutorial:** ran intensive discussion sections for students at high risk of failing
- **Summer Collegiate Experience, Mathlab:** drop-in help for math classes
- **Tutoring:** extensive experience in topics from high school geometry to abstract algebra

Awards

Conference travel support, NSF and BGSU, 2009

Conference travel support, UW-Madison Algebra Patent Fund, 2009

Travel Grant, UW-Madison Mathematics Department, 2008, 2009

MSRI financial support, 2003, 2004, 2008

National Science Foundation VIGRE Graduate Fellowship, 2002-2003, 2005, 2007

References

Dr. I. Martin Isaacs

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Dr. Robert L. Wilson

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