

INVITED MATHEMATICS RESEARCH LECTURES:

1. Lessons Learned in the Teaching and Learning of Mathematics, 2010 Joint Mathematics Meeting, San Francisco, 2010.
2. Understanding the Thurston Model of Hyperbolic Space, MAA Southern California-Nevada Section Fall Meeting, 2009.
3. Understanding the Thurston Model of Hyperbolic Space, California State University - Channel Islands, November, 2007.
4. Averaging, Discrete Means, Coalition Building, and a Paradox of Social Choice, California Polytechnic University - San Luis Obispo, September, 2007.
5. Understanding the Thurston Model of Hyperbolic Space, Fall meeting of the Ohio Section of the MAA (dinner talk), October 2006.
6. Averaging, Discrete Means, Coalition Building, and a Paradox of Social Choice, Fall meeting of the Ohio Section of the MAA (main address), October 2006.
7. A Paradoxical Coloring of Escher's Angels and Devils, California State University - Long Beach, Mathematics Colloquium, November 2004.
8. T -Orders on the Coxeter Groups, Center for Cryptographic Research, San Diego, March 2003.
9. A Paradoxical Coloring of Escher's Angels and Devils, Claremont Colleges Mathematics Colloquium, November 2002.
10. Phan type theorems, Buildings in Geometric Group Theory, Würzburg, Germany, May 2002.
11. $1/19$ th of a generating function, MAA - Ohio Section meeting, April, 2002.
12. A simple definition of the universal Grassmannian order, AMS-MAA Joint Mathematics Meetings, January 2002.

13. A new proof of Phan's theorem, AMS Central Section Meeting, September 2001.
14. A Paradoxical Coloring of Escher's Angels and Devils, Kansas State University, Mathematics Departmental Colloquium, March 2000.
15. Exponentiation of Infinite Dimensional Lie Algebras – Kansas State University, Algebra Seminar, March 2000.
16. Lights Out!, Fall Meeting, Ohio Section of the MAA, October, 1999.
17. Affine Λ -buildings and higher order buildings, Conference on (Moufang) n -gons and (Twin) Buildings, Ghent, Belgium, June, 1999.
18. Paradoxically coloring Escher's Circle Limit IV, Ohio State University Group Theory and Graduate Student Seminar, May, 1998.
19. An Escher version of the Banach-Tarski paradox: Spring meeting of the Ohio chapter of the MAA: hour-long invited address, 1998.
20. Higher order buildings as $Z \times Z$ -buildings, AMS Meeting, Central Section, March 1998.
21. Extensions of Kac-Moody twin buildings using quasi-real roots – AMS Meeting, Central Section, May 1997.
22. Exponentiation of Infinite Dimensional Lie Algebras – University of Toledo, June, 1996.
23. Affine Λ -Buildings – Mathematisches Forschungsinstitut, Oberwolfach, Germany, April, 1996.
24. Exponentiation of Infinite Dimensional Lie Algebras – University of Michigan (Group Theory and Lie Theory Seminar), April, 1996.
25. Exponentiation of Infinite Dimensional Lie Algebras – Kent State University, February, 1996.
26. Generalized Λ - n -gons and Twin Trees – preliminary report – AMS Meeting, Central Section, Special Session on Groups and Geometries – Manhattan Kansas, March 1994.

27. Special Imaginary Roots of Kac-Moody Lie Algebras – Bowling Green State University, March 1993.
28. Special Imaginary Roots of Kac-Moody Lie Algebras – University of Chicago Group Theory Seminar, November 1992.
29. When can a building be twinned? – preliminary report – AMS Meeting, Central Section, Special Session on Groups and Geometries, Dayton, OH, October 1992.
30. Signed Dynkin Diagrams and Related Groups – XXIst Ohio State - Denison Conference, May, 1992.
31. Special Imaginary Roots of Kac-Moody Lie Algebras – AMS Meeting, Baltimore, MD, January 1992.
32. Generalized Spherical Buildings – Mathematisches Forschungsinstitut Oberwolfach , Special Session on Groups and Geometries, July 1991.
33. A Groupoid Approach to Buildings – Ohio State University, May 1991.
34. Buildings and Groupoids – AMS Meeting, Southeastern Section, Special Session on Finite Groups and Geometries – Tampa, FL, March 1991.
35. A Groupoid Approach to Buildings – Colorado State University, March 1991.
36. Affine Λ -Buildings – Yale University, October 1990.
37. Affine Λ -Buildings – AMS Meeting, Central Section, Special Session on Groups and Geometries – Manhattan, KS, March 1990.
38. Affine Λ -Buildings – Kansas State University, November 1989.

**INVITED LECTURES
MATHEMATICS EDUCATION
and
SCHOLARSHIP OF TEACHING AND LEARNING**

1. Transfer and the Role of Community, Carnegie Colloquium for the Scholarship of Teaching and Learning, Madison, WI, April, 2006.
2. Interaction of Affective and Cognitive Knowledge Domains in a first year workshop course, Conference on Affective Cognitive Knowledge and the Scholarship of Teaching and Learning, Oxford College (of Emory University) March, 2006.
3. Assessing Disciplinary Understanding, International Society for the Scholarship of Teaching and Learning annual meeting, Vancouver, October, 2005.
4. Panelist, Listening to student voices, Carnegie Colloquium on the Scholarship of Teaching and Learning, Atlanta, March 2005.
5. Panelist, Capstone Courses, American Association of Colleges and Universities national conference, January 2005.
6. The Role of Fifteen Minute Problems, AMS-MAA Joint Mathematics Meetings, Atlanta, January 2005.
7. SoTL Collaboration, A Case Study, (co-presented with J. Dewar) Inaugural Conference of the International Society for the Scholarship of Teaching and Learning, Bloomington IN, October 2004.
8. Rich Representations of Student Learning, (co-presented with J. Dewar) Inaugural Conference of the International Society for the Scholarship of Teaching and Learning, Bloomington IN, October 2004.
9. Students' Journey on the Path to Proficiency in Proof (co-presented with J. Dewar), Carnegie Foundation, June 2004.
10. Mathematical Knowledge, Transfer, and Community, (co-presented with J. Dewar) Carnegie Foundation, June 2004.

11. What types of questions promote deep learning and how might we find out? Carnegie Colloquium on the Scholarship of Teaching and Learning, San Diego, April 2004, (panelist and organizer).
12. Taking on a Writing Intensive Course, AMS-MAA Joint Mathematics Meetings, Phoenix, January 2004.
13. The Story of Neal, University of Illinois conference on the Scholarship of Teaching and Learning, January 2003.
14. Student Research Projects in a Mathematics Capstone Course for Secondary Teachers, AMS-MAA Joint Mathematics Meetings, January 2003.
15. Student Learning in a Mathematics Capstone Class for Future Teachers, Oxford College of Emory University, Conference on the Scholarship of Teaching and Learning, November 2002.
16. My Course Portfolio: A window on student learning and an entrance to further study, Disciplinary Styles in the Scholarship of Teaching and Learning, Rockhurst, KS, April 2002.
17. Poster presentation on course portfolio, AAHE National Conference on Higher Education, March 2002.
18. Panelist AMS-MAA Joint Mathematics Meetings, 2002, Course Portfolios, January 2002.
19. What is the Scholarship of Teaching and Learning, Conference on New Directions in the Scholarship of Teaching and Learning, Bowling Green State University, Nov. 2001.
20. The effects of semester long research projects on a mathematics capstone class, Michigan State University, Mathematics Education seminar, March 2001.
21. Semester Long Mathematics Research Projects, Conference on the Scholarship of Teaching and Learning, Youngstown State University, February, 2001.

22. An Example of a Capstone Course for Secondary Education Majors, AMS-MAA Joint Mathematics Meeting, January 2001.
23. The Many Discourses of the Scholarship of Teaching and Learning, Michigan State University, November 2000.
24. Preparation of Mathematics Secondary Teachers - A Capstone Perspective, the MAA CRAFTY Conference, Michigan State University, November 2000.

INVITED STUDENT (COLLEGIATE) PRESENTATIONS

1. Mathematical Pi(e), Grand Valley State College, Grand Valley, MI, October 1999, KME initiation talk.
2. Lights Out!, Xavier University, Cincinnati, OH, September, 1999.
3. Lights Out!, John Carroll University, Cleveland, OH, April, 1999.

INVITED SCHOOL PRESENTATIONS

1. Harry Potter Math, Conneaut Elementary School 5th grade class, November, 1999.

OTHER INVITED PRESENTATIONS

1. Co-Organizer and Presenter: MAA Minicourse: A Beginner's guide to the Scholarship of Teaching and Learning, AMS-MAA Joint Mathematics Meetings, January, 2006, San Antonio, TX.
2. Panelist for Project NExT panel discussion on professional development, Joint Mathematics Meeting, 1998.
3. Co-Organizer and moderator of AMS Panel Discussion: The Job Market for Mathematics Ph.D.s, Joint Mathematics Meetings, January, 1997.
4. The Job Market for Mathematics Ph.D.s. – Michigan Sectional Meeting of the MAA, May, 1996.
5. Co-Organizer and Presenter of MAA Minicourse at the Joint Mathematics Meetings, January 1995. Title: Learning About Today's Job Market.
6. Panelist – AMS-MAA-SIAM Committee on Employment Opportunities - Young Mathematicians Network Panel Discussion, Joint Mathematics Meetings, January 1994.