

Lisa Townsley

Academic Professional, Mathematics
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FIELDS OF INTEREST

Algebra, particularly group cohomology; also technology in mathematics education, particularly computer algebra systems.

EDUCATION

Santa Clara University, Santa Clara, CA.; B.S. 1981
Northwestern University, Evanston, IL; M.S. 1983; Ph.D. 1988

PROFESSIONAL EXPERIENCE

9/08-present Academic Professional, UGA Mathematics
1997-8/08 Professor, Benedictine University
9/91-8/97 Associate Professor, Benedictine University
(formerly Illinois Benedictine College)
9/87-8/91 Assistant Professor, Illinois Benedictine College
9/86-8/87 Instructor, full-time, Hamline University
9/85-6/86 Instructor, part-time, University of Minnesota
9/84-6/85 Adjunct Instructor, Northwestern University College
9/84-12/84 Adjunct Instructor, Elmhurst College

ADMINISTRATIVE EXPERIENCE

Math 1113 (Precalculus) Course Coordinator, 2008-present (UGA)
Faculty Assembly Chairperson, 2006-2008 (Benedictine University)
Honors Committee chairperson, 2000-2007 (Benedictine University).
AAUP-Illinois Conference Board member and Treasurer, 2003-2008.
ISMAA Board member 2004-2007
Faculty Welfare Committee (over 10 years experience, responsible for rafting many contractual changes) (Benedictine University)
Associate chairperson for mathematics within joint Mathematics/CS Department, 1994-1998 (Benedictine University).

REFERENCES

Dean Ralph Meeker, Benedictine University College of Science
Professor Caren Diefenderfer, Hollins College, Department of Mathematics
Professor Steven Schlicker, Grand Valley State University, Department of Mathematics

PROFESSIONAL ORGANIZATIONS

Mathematical Association of America, American Mathematical Society, Sigma Xi, Association for Women in Mathematics, American Association of University Professors, Phi Beta Kappa.

CONFERENCE LEADERSHIP

Conference co-chair, Tenth International Conference on Technology in Collegiate Mathematics, November 6-9, 1997. Approximately 1500 attendees. Benedictine University was a co-host institution.

Conference chairperson, ISMAA (Illinois State MAA annual meeting), April 7-8, 2006. Conference hosted at North Central College. Record attendance exceeding 250 attendees, including record student attendance.

GRANTS

Title III summer stipend and release time at Benedictine University to generate new department-wide calculus laboratory experiments using DERIVE, WebCT, and other technological tools, June 2004-May 2005.

HHMI Directed student research at Benedictine University, \$12,000, "Space Group Investigations with MAGMA", June-July 2003.

NSF MRI Grant 0116202, \$70,953 for computing support, CO-PI with Mark Carlson (CO-PI, physics) and PI Ralph Meeker (computer science), August, 2001.

Benedictine University Summer Research Support, \$1998, June 2000; \$2168, June 2001.

NSF Instrumentation Grant for a dedicated Mathematics Laboratory, \$35,617, DUE 9351472, March 1993

OTHER EXPERIENCES

AMS Short Course Subcommittee member, solicit and select short courses in applied mathematics for Joint MAA/AMS meetings each January, 2007-2010.

CLEP Committee member, writing and updates of new Precalculus Exam for college credit, Fall 2003-present, the test is active since January, 2006.

Program Committee, International Conference on Technology in Collegiate Mathematics, Strand Chair for 1998, 1999, and 2000 conferences.

Program Committee, The Fourth International Derive-TI92(89) Conference, Liverpool, UK, 2000.

Journal referee, The Pentagon and The International Journal of Computer Algebra in Mathematics Education, 1993-2009.

Reader and Table Leader/Question Leader, AP Calculus Exams, June 1991-2001, 2004, 2005.

Consultant to College Board, author of textbook, video, webpage reviews, AP Central website, 2001-present; and reviewer/editor for teacher training materials, 2002-present.

Editorial board member, www.mathdemos.org, 2004-2008.

PUBLICATIONS

“Testing Across Precalculus Sections Using WebAssign”, Proceedings of the Twenty-first International Conference on Technology in College Mathematics, Pearson Education Inc, 2008.

“Calculus Lab Transformation: from Derive to Derive and Biology”, Proceedings of DES-TIME conference, Dresden 2006.

Kaur, M. and Townsley, L., “Derive - A Mathematical Assistant”, Proceedings of DES-TIME conference, Dresden 2006.

Comar, T. and Townsley, L., “A Common Calculus Laboratory Course for Traditional Calculus and Biocalculus Students”, Proceedings of the International Conference on Technology in collegiate Mathematics, Orlando 2006.

“Proving the Fundamental Theorem of Calculus”, AP Calculus training coursepack, 2005.

“Why we use Theorem in Calculus”, Web article on <http://apcentral.collegeboard.com>, 2005.

“Why *DO* We Use Theorem in Calculus?”, Proceedings of the Conference: Technology and its Integration into Mathematics Education, Montreal Canada, 2004.

Carlson, J.F. and L. Townsley, *The Cohomology Rings of Finite Groups*, Kluwer, 2003.

”Multimedia Classes: Can there *ever* be too much technology?” Proceedings of the Vienna International Symposium on Integrating Technology into Mathematics Education, Vienna Austria, 2002.

“Crossroads: Choosing a 'New' CAS Platform”, Proceedings of the Thirteenth International Conference on Technology in College Mathematics, Addison-Wesley-Longman, 2000.

“Computer Algebra in Abstract Algebra”, invited submission to The International Journal of Computer Algebra in Mathematics Education, 1999.

“Enhancing College-Level Understanding of Group Theory with Technology”, Proceedings of the Fourth International Conference on Technology in Mathematics Teaching, Plymouth, UK, 1999.

“High-Tech Discoveries We Never Expected”, co-author James Kulich, Proceedings of the Ninth Annual International Conference on Technology in College Mathematics, Addison-Wesley, 1997.

The State of Computer Algebra in Mathematics Education, Berry, et. al, editors, contributing editor, Chartwell-Bratt, 1997.

“Using DERIVE to Teach Calculus”, Co-author Barbara Victor, in Graham, et al, *Mathematical Activities with DERIVE*, Chartwell-Bratt, 1997.

The DERIVE Calculus Workbook, Co-author Barbara Victor, HarperCollins, 1994. (Also Instructor's Guide)

“DERIVE use for Matrix Algebra and Linear Algebra Instruction”, Proceedings of the Fifth Annual International Conference on Technology in College Mathematics, Lewis Lum, editor, Addison-Wesley, 1994.

“Integrating Precalculus into Calculus I using DERIVE”, Proceedings of the Fourth International Conference on Technology in College Mathematics, Addison-Wesley, 1993.

“Calculus - Reformation or Affirmation? A Survey of Other Disciplines”, PRIMUS Vol. 1, No. 4, December 1991.

“Applications of Set Theory and Topology to Economics”, *Journal of Undergraduate Mathematics*, March, 1981.

PRESENTATIONS (since 2000)

“Using WebAssign for Uniform Assessment in Precalculus, 1300 Students at a Time “ Joint MAA/AMS meetings, San Francisco, January 2010.

“ Uniform Assessment of Precalculus Skills Using WebAssign”, Computer Minicourse at ICTCM (International Conference on Technology in Collegiate Mathematics), New Orleans, March 2009.

“A Joint Computer Lab can Serve Both Biocalculus and Traditional Calculus Students”, Joint MAA/AMS meetings, San Diego, January 2008.

“Introduction to Characters and Representations”, Elmhurst College Seminar, Elmhurst, March 2007.

“Using DERIVE to Emphasize Understanding in Linear Algebra”, Joint MAA/AMS meetings, New Orleans, January 2007.

"Calculus Lab Transformation: from Derive to Derive and Biology", DES-TIME conference, Dresden, July 2006.

"Derive-A Mathematical Assistant", workshop presented with M. Kaur, DES-TIME conference, Dresden, July 2006.

Invited panelist at Mathfest, “AP Calculus Workshop: Focusing on the Fundamental Theorem”, Albuquerque NM, 8/2005.

“Math Majors at a "science serious" Liberal Arts College”, Mathfest, Albuquerque NM, 8/2005.

Invited panelist on jobs for new PhDs, ISMAA, Galesburg IL, 4/2005.

“The New CLEP Exam in Precalculus”, ISMAA, Galesburg IL, 4/2005 and Mathfest, Albuquerque NM, 8/2005.

“Introduction to DERIVE 6.0”, International Conference on Technology in Collegiate Mathematics, New Orleans, 10/2004.

“Why *DO* We Use Theorem in Calculus?”, International Conference: Technology and its Integration into Mathematics Education, Montreal Canada, July 2004 and ICTCM in New Orleans, 10/2004.

Invited Panelist , MAA Project Next Session on publication in mathematics, MAA Mathfest, Boulder CO, 8/2003.

“Multimedia Classes: Can there ever be too much technology?”, Vienna International Symposium on Integrating Technology into Mathematics Education, Vienna Austria, 7/2002.

Panel Coordinator and Moderator, “Restructuring the Mathematics Bachelor Degree”, Joint MAA/AMS meetings, New Orleans, 1/2001.

Panel Coordinator and Moderator, “Moving Beyond Computation”, International Conference on Technology in College Mathematics, Atlanta, 11/2000.

Panel Coordinator and Moderator, “Q&A on IAP”, ISMAA annual meeting, North Central College, 4/2000.

“Using DERIVE to Teach Calculus”, Invited Presentation to ISMAA annual meeting,
North Central College, 4/2000.