

Meri Hughes

UMHB Math Department
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Education

University of Texas at Arlington
Ph.D. in Mathematics, 2009
Thesis: *Uniqueness of Minimal Acyclic Complexes*
Thesis Advisor: Dr. David Jorgensen

Baylor University
M.S. in Mathematics, 1995
Thesis: *On Reed-Solomon Codes*
Thesis Advisor: Dr. David Arnold

East Texas Baptist University
Bachelor of Science in Education
Summa Cum Laude
Texas Lifetime Teaching Certificate, Mathematics and Theatre Arts

Professional Experience

University of Mary Hardin-Baylor	Belton, TX
Associate Professor of Mathematics	08/2013 - present
Chair, Mathematics & Physics	06/2012 - 05/2016
Mathematics Program Coordinator	08/2011 - 05/2016
Assistant Professor of Mathematics	08/2009-08/2013

University of Nebraska	Lincoln, NE
Visiting Professor, IMMERSE Fellow	05/2010-08/2010

Graduate Teaching Assistant, Math Dept. The University of Texas at Arlington	Arlington, TX 09/2006-08/2009
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Mathematics Instructor Weatherford College	Weatherford, TX 08/1997-05/2006
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Adjunct Mathematics Instructor Dallas Baptist University	Dallas, TX 06/96-12/1997
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Adjunct Mathematics Instructor Tarrant County College, Southeast Campus	Arlington, TX 08/1996-08/1997
Assistant Professor of Mathematics, temporary Dallas Baptist University	Dallas, TX 08/1995-05/1996
Graduate Teaching Assistant, Math Dept. Baylor University	Waco, TX 08/1993-05/1995
Student Teacher, 8th Grade Mathematics Hallsville Independent School District	Hallsville, TX 01/1993-05/1993

Research Interests

- Minimal Acyclic Complexes
- Combinatorics of Polynomial Rings
- Inquiry-Based Learning in the History of Mathematics Classroom

Courses Taught

Abstract Algebra	Analysis
History of Mathematics, <i>study abroad</i>	Linear Algebra
Calculus I, II, and III	Precalculus
Precalculus, <i>online</i>	College Algebra
College Algebra, <i>online</i>	Business Calculus
Business Precalculus	Math for Liberal Arts
Elementary and Intermediate Algebra	Mathematics Review
Math for Elementary Teachers	Calculus for Mid-Level Educators
Calculus for Computer Science	Statistics

Honors and Awards

- Outstanding Mentor Award, GAANN Celebration, April, 2015
- Outstanding GAANN Fellow, April, 2011
- Calculus Bowl Championship Coach, April, 2011
- IMMERSE Fellowship Recipient, UNL, 2010
- Kappa Mu Epsilon, Texas Kappa Chapter Inductee, 2010
- Outstanding Graduate Student, UTA Math Dept., 2008-2009
- Outstanding Graduate Teaching Award, UTA Math Dept., 2007-2008
- UTA ACES Student Research Day, Dean's Award, 2008
- UTA ACES Student Research Day, Honorable Mention, 2007
- Phi Kappa Phi, 2007

Professional Memberships

Mathematical Association of America (MAA)
MAA Texas Section, Level II Director
Math Alliance, Faculty Mentor
Gulf States Math Alliance, Faculty Mentor
Phi Kappa Phi Honor Society
Texas Academic Administrators in the Mathematical Sciences
Texas NExT
Kappa Mu Epsilon Mathematics Honor Society
Alpha Chi

Professional Service

- UMHB Faculty advisor for Delta Psi Theta, UMHB Math Club, 2009-present
- Honors Thesis Advisor, Jacob Baron, *The Mathematics of Gerrymandering*, 2017-18
- UMHB Faculty advisor for Kappa Mu Epsilon, Texas Kappa, 2016-17
- UMHB Mathematics & Physics Department Chair, 2012-2016
- UMHB Mathematics Program Coordinator, 2011-2016
- MAA Texas Section Executive Council, Level II Director, 2013-present
- Math Alliance Faculty Mentor
- Gulf States Mathematical Alliance Faculty Mentor, 2016-present
- UMHB Center for Excellence in Learning and Teaching Advisory Board, College of Science, representative, 2013-present
- UMHB Graduation Committee, Assistant Marshal, 2014-present
- UMHB Science Saturday Mathematics Coordinator, 2010-present
- UMHB STEM Day Mathematics Coordinator, 2016-present
- UMHB Mathematics WE Coordinator, 2015-2017
- UMHB Faculty Assembly Treasurer, 2013-14
- UMHB Mathematics Education Faculty Search Committee, Chair, 2014-15
- UMHB Science Education Faculty Search Committee, 2014-15
- UMHB Mathematics Faculty Search Committee, 2016-17
- UMHB Mathematics Faculty Search Committee, Chair, 2012-13, 2014-15, 2015-16, 2017-18
- UMHB Faculty Council Nominating Committee, 2017-18
- UMHB Learning Covenant Committee, College of Science Representative, 2011-2013
- UMHB Faculty Spiritual Life Committee, 2011-2013
- UMHB Professional Growth and Development Committee, 2009-2011
- UMHB Admissions and Financial Aid Committee, 2014-17
- UMHB Faculty Affairs Committee, 2017-18
- Texas Small School Academic Contest, Math Judge and Announcer, 2010-2014
- WISE (Women in Science Extravaganza) Girl Scout Day Math Coordinator, 2010, 2011
- Research Advisor, Ashli Lawson, *Green's Theorem and Blood Flow*, 2011

- Master's Thesis Committee, Daryl Wallace, Texas A&M Central Texas, 2010
- Middle School Math Day, Organizer, UTA, 2009.
- Chapter Co-President of the Association for Women in Mathematics, UTA Chapter, 2007-2009
- Math and Science Day, Workshop Instructor, Capture the Polygon, Riverside Middle School, UTA, November, 2009
- Math Day Workshop, Mobius Strips, Martin High School, Arlington ISD, July, 2008
- Math and Science Retreat, Workshop Developer, Riverside Middle School, Fort Worth ISD, February, 2008
- Coyote Area Mathematics Championship, Founder and Contest Director, Weatherford College, 2003 -2006 (An area h.s. math contest in its 15th year)
- Christmas in April Community Outreach Coordinator, Weatherford College, 1999-2002
- Workshop Coordinator, Developing Critical Thinking Skills, Christian Women's Fellowship Retreat, November, 2001
- Member of various committees at Weatherford College, Employee Activities, SACS Section IV, Professional Development, Textbook Committees, Math Department Hiring Committees, etc., 1997-2006

Presentations

History of Mathematics via London, Paris, and Cern, Special Session on "Encouraging Effective Teaching Innovation," MAA Mathfest, July, 2017

Creating a Positive Learning Environment, UMHB Learning Covenant Teaching Academy, November, 2015 and April, 2016

Study Abroad with History of Math, MAA Texas Section 95th Annual Meeting San Antonio, April, 2015

Examining Uniqueness of Minimal Acyclic Complexes from a Push-Forward Perspective, 1051st Meeting of the American Mathematical Society, Waco, 2010

Uniqueness of Minimal Acyclic Complexes on Monomial Algebras, American Mathematical Society, 2009 Joint Mathematics Meeting, Washington, D.C.

Minimal Acyclic Complexes on Conca-generated Monomial Algebras, Algebra Seminar, University of Texas at Arlington, 2009

On Infinite Syzygies, AMS Session on Homological Algebra, 2008 Joint Mathematics Meeting, San Diego, CA

Building a Free Resolution, Topics in Homological Algebra, University of Texas at Arlington, December, 2008

Periodicity and Minimal Acyclic Complexes, Algebra Seminar, University of Texas at Arlington, September, 2007

Guided Note-taking in a Developmental Math Course, Developmental Educator's Exchange, Wimberly, TX, January, 2000

Publications and Developments

(with C. Alvis) *Precalculus, Instructional Videos for MATH 1320 Online*, UMHB, 2017

(with C. Alvis) *College Algebra, Instructional Videos for MATH 1306 Online*, UMHB, 2016

(with D. Jorgensen and L. Sega) *On acyclic complexes of free modules*, *Mathematica Scandinavica*, (2009)

Uniqueness of minimal acyclic complexes, August 2008, Doctoral Thesis, UTA

Reed-Solomon Codes, May, 1995, Master's Thesis, BU