VITA

CYNTHIA HUFFMAN

ADDRESS:

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EDUCATION:

1994   Ph.D. in Mathematics, New Mexico State University, Las Cruces, New Mexico
1987   M.S. in Mathematics, Pittsburg State University, Pittsburg, Kansas (Graduate Dean's Scholastic
      Honors, 4.00)
1986   B.S.Ed. in Mathematics, Pittsburg State University, Pittsburg, Kansas (Summa cum laude, 4.00)

WORK EXPERIENCE:

2013 – present University Professor, Pittsburg State University

2006 – 2013   Professor, Pittsburg State University

2002 – 2008   Assistant Coordinator of the PSU Writing Across the Curriculum Program

1999 – 2006   Associate Professor, Pittsburg State University

1994 – 1999   Assistant Professor, Pittsburg State University

1993 – 1994   Teaching Associate, Cornell University

1988 – 1993   Graduate Assistant, New Mexico State University

1992 – 1993   Senior Support Staff, National Science Foundation Young Scholars Mathematics
      Workshop in the Rockies

1986 – 1987   Graduate Assistant, Pittsburg State University

RESEARCH INTERESTS: Mediated Instruction
                           History of Mathematics
                           Undergraduate Mathematics Education
                           Computational Commutative Algebra

MEMBERSHIPS: American Mathematical Society
                    Kappa Mu Epsilon (Faculty Advisor, 1995-96, 2003 - 2015,
                        Corresponding Secretary, Kansas Alpha, 1996-99, Regional
                        Director, 2001- 2008, National Treasurer, 2007 - 2015, National
                        Historian, 2017 - present)
                    Kansas Association of Teachers of Mathematics
                    Mathematical Association of America
                    MOKAN Chapter of the National Council of Teachers of Mathematics
                    New Mexico State Alumni Association
                    Phi Kappa Phi Honor Society (Chapter VP, 1985-87)
                    Phi Delta Kappa Honor Society
                    Pittsburg State University Alumni Association

DISTINCTIONS AND HONORS:

Mathematical Association of America (MAA) Deborah and Franklin Haimo Award for Distinguished College or University Teaching of Mathematics Nominee (2016)
KSMAA Award for Distinguished College or University Teaching of Mathematics (2015)
PSU Outstanding Faculty Award (2010, 2014)
PSU Outstanding Faculty Award Nominee (2000, 2007, 2010, 2014)
PSU College of Arts & Sciences Excellence in Teaching award (2003, 2016)
PSU College of Arts & Sciences Excellence in Service award (2019)
PSU Athletic Council Outstanding Faculty Recognition (2017)
Mathematical Association of America (MAA) Certificate of Meritorious Service (2002)
PSU OpenPITT Open Resource Materials Development Grant (2018)
PSU Summer Teaching Innovation Grant (1998, 2003, 2013, 2017)
PSU Leadership Class (2008)
PSU Outstanding Alumni Award (2002)
American Association for the Advancement of Science (AAAS) Women's International Science Collaboration travel grant (2001)
National Research Council (NRC) Collaboration in Basic Science and Engineering travel grant (2001)
Association for Women in Mathematics (AWM) travel grant (1996, 2000)
National Science Foundation (NSF) Educational Materials Development grant (support personnel 2001-2003, sub-contractor 2004-2007)
PSU Faculty Development Curriculum Grant for Internationalization (2009, 2010)
PSU Research grant (2000, 2001, 2002)
PSU College of Education Enhancement of Multicultural Education minigrant (2000, 2004)
VIP listee with Marquis Who's Who (2019)
International Who's Who of Professional and Business Women (2000, 2002, 2003)
Who's Who Among America's Teachers (2000, 2004, 2005)
Who's Who of American Women, 25th Silver Anniversary Edition (2005)
Who's Who of American Women (2007, 2008-2009, 2010-2011)
Who's Who in American Education (2006-2007, 2007-2008)
Who's Who in Science and Engineering (2006-07, 2007-2008)
Who's Who in America (2007, 2013, 2014, 2015, 2016, 2019)
Cambridge Who's Who (2007-2008), Honor Edition (2008)
MAA Project NExT Fellow (1994-95)
MAA Project NExT Consultant (2006 – present)

PROFESSIONAL SERVICE:

- MAA Classroom Resource Material Editorial Board (Associate Editor 2011 – 2019, Editor in Chief 2019 – present)
- Secretary/Treasurer, History of Mathematics Special Interest Group of the Mathematical Association of America (2018 – present)
- National Historian, Kappa Mu Epsilon Mathematics Honor Society (2017 – present)
- National Treasurer, Kappa Mu Epsilon Mathematics Honor Society (2007 – 2015)
- Regional Director, Kappa Mu Epsilon Mathematics Honor Society (2001 – 2008)
- Mathematical Association of America (MAA) Board of Governors (2012 – 2015)
- Chair-Elect (2008 – 2009), Chair (2009-2010), Kansas Section of the MAA
- Information Coordinator and Webmaster and Newsletter Editor, Kansas Section of the Mathematical Association of America (1996 – present)
- PSU eLearning Academy Steering Committee and Course Reviewer
- Directed over 60 Masters Research Projects
- Numerous (over 300) presentations at local, state, national, and international levels on research, teaching, mediated instruction, mathematics and business, mathematics and music, mathematics and puzzles, …

COMMUNITY SERVICE:

- Loan Supervisory Committee for the Kansas Teachers Community Credit Union Executive Board (2005 - 2015)
- Habitat for Humanity of Crawford County Executive Board (2008-2012)
- Numerous programs for civic and social groups on mathematics, handbell solo ringing, and international travel

PUBLICATIONS:

1. *An Algorithmic Proof of Suslin's Stability Theorem for Polynomial Rings*, with H. Park, Journal of Algebra **178**, (1995), p. 277-298.
2. *An Algorithm for the Quillen-Suslin Theorem for Monoid Rings*, with R. Laubenbacher, Journal of Pure and Applied Algebra **117-118**, (1997), p. 395-429.
3. *Review of An Introductory Course in Commutative Algebra. by A. W. Chatters & C. R. Hajarnavis and Introduction to Algebra. by Peter J. Cameron*, The American Mathematical Monthly, **106** No. 5, (May 1999), p. 481-483. (Article DOI: 10.2307/2589171; Stable URL: http://library.pittstate.edu:2091/stable/2589171)
4. *A New Algorithm for the Quillen-Suslin Theorem*, with R. Laubenbacher, Contributions to Algebra and Geometry **41**, (2000), p. 23-32.
5. *Factoring Multivariate Polynomial Matrices*, Proc. Digital Signal Processing & Appl'ns **2**, (2000), p. 291-293.
6. *The Quillen-Suslin Theorem and the Design and Implementation of Multi-Dimensional Filter Banks*, with M. Tchobanou, Proc. Digital Signal Processing and Its Applications **2**, (2000), p. 314-315.
7. *Formulating a Plan for Your Professional Future*, with G. Ashline, J. Case, and K. Pearson, MAA Focus, (May/June 2001), p. 7-9.
8. *Design of M-D Filter Banks by Factorization of M-D Polynomial Matrices*, with M. Tchobanou, Proc. Intl. Conf. on Information, Communications, and Signal Processing, (2001).
9. *Gröbner Bases – A Powerful Tool for Solving DSP Tasks*, Proc. Digital Signal Processing and Its Applications **1**, (2002), p. 163-165.
10. *Factorization of M-D polynomial matrices for design of M-D multirate systems*, with M. Tchobanou, Proc. Intl. Symposium on Mathematical Theory of Networks and Systems, (2002).
11. *Design and Implementation of 2-D and 3-D Multirate Systems*, with O. Bolshakova, V. Klyushkin, V. Mironov, S. Stephachew, M. Tchobanou, Proc. Intl. TICSP Wkshp on Spectral Methods and Multirate Signal Processing, (2002).
12. *Implementation Issues in 2-D Filter Bank Design Based on Matrix Factorization*, with M. Tchobanou, Proc. XI European Signal Processing Conf., (2002).
13. *Effective implementation of M-D multirate systems by factorization of M-D polynomial polyphase matrices*, with M. Tchobanou, Proc. Digital Signal Processing and Its Applications, (2003), p. 156-158.
14. *The Algebra Underlying Account Rules: A Teaching Note*, with R. Casey and D. O'Bryan, Accounting Instructors' Report, (2003).
15. *Writing to Learn for Elementary Statistics*, with A. Jayawardhana, Proc. Joint Statistical Meetings, (2005).
16. *PascGalois Classroom Resources: Mathematics for Elementary Education*, with N. Zumoff, published online in 2007 by the PascGalois Project at http://www.pascgalois.org/.
17. *PascGalois Mathematics for Elementary Education Classroom Resources*, with N. Zumoff, Loci (July 2008), DOI: 10.4169/loci002638.
18. *MAA 2009 Study Tour of Egypt,* with S. McCracken, S. Riehl, P. Schumer, B. Warren, MAA Focus, Vol. 29, No. 6, (Dec. 2009/Jan. 2010), p. 14-15.
19. *Roman Road Trip: Study Tour,* with Jackie Dewar, MAA Focus, Vol 32, No 6, (Dec. 2012/Jan. 2013), p. 29-30.
20. *Maya Geometry in the Classroom*, with J. Diamantopoulos, Loci Convergence (August 2013) - http://www.maa.org/publications/periodicals/convergence/maya-geometry-in-the-classroom.
21. *Inside Passage Alaska,* with Jackie Dewar, MAA Focus, Vol. 33, No. 6, (Dec. 2013/Jan. 2014), p. 20-23.

PUBLICATIONS continued:

22. *The Greek Streaker and the Secret of the Prayer Book*, video, (April 2014), http://libguides.pittstate.edu/history-of-math .
23. *Making a Right Angle the Maya Way*, with J. Diamantopoulos, Plus Magazine, (Sept. 2014), http://plus.maths.org/content/making-right-angle-maya-way .
24. *Napoleon and Mathematics: A Case Study of the Interplay between Mathematics and History*, with C. Childers, The Midwest Quarterly, Vol. 56, No. 3 (Spring 2015), p. 209-216.
25. Translation of *A solution of certain Diophantine problems* by Leonhard Euler from Latin to English, *Euler Archive* (peer-reviewed), http://eulerarchive.maa.org/pages/E474.html .
26. *Ancient Indian Rope Geometry in the Classroom*, with S. Thuong, Convergence (October 2015) - http://www.maa.org/press/periodicals/convergence/ancient-indian-rope-geometry-in-the-classroom.
27. *Mathematical Treasures at the Linda Hall Library*, Convergence (January 2017, July 2017, and June 2018), DOI:10.4169/convergence20170101, https://www.maa.org/press/periodicals/convergence/mathematical-treasures-at-the-linda-hall-library
28. *More Classroom Activities Based on Ancient Indian Rope Geometry*, with S. Thuong, Convergence (May 2018) - https://www.maa.org/press/periodicals/convergence/more-classroom-activities-based-on-ancient-indian-rope-geometry.
29. Translation of *A problem of a certain construction of Pappus of Alexandria* by Leonhard Euler from Latin to English, with Cameron Friend, (peer-reviewed), http://eulerarchive.maa.org/pages/E543.html .

SELECTED INVITED TALKS:

4/18   *A Mathematical Treasure Trove in Our Own Backyard (A Look at Primary Sources in Mathematics at the Linda Hall Library),* invited keynote address, Kappa Mu Epsilon (Mathematics Honor Society) North Central/South Central Regional Convention, Emporia, KS

3/17   *Bell-y Math: Connections between Mathematics and Change Ringing*, faculty-led workshop, Kappa Mu Epsilon (Mathematics Honor Society) National Convention, Springfield, MO

1/13   *Geometry and Baroque Architecture in Turin, Italy*, special presentation, History of Math Special Interest Group of the MAA annual meeting, San Diego, CA

10/08   *Mathematical Rhythms: the nature of rhythm and pattern from a mathematical perspective*, invited lecture for the opening reception of the exhibit "The Art of Rhythm" at the Little Room Gallery in Pittsburg, Kansas

2/02   *Gröbner Bases – A Powerful Tool for Solving DSP Tasks*, plenary talk, Fourth International Conference and Exhibition, Digital Signal Processing and Its Applications, Moscow, Russia

11/00   *Factoring Polynomial Matrices*, Third International Conference and Exhibition, Digital Signal Processing and Its Applications, Moscow, Russia

10/99   *Computational Methods in Commutative Algebra*, Colloquium, University of Missouri-Rolla

9/98   *A Computational Proof of Gubeladze's Theorem*, Colloquium, University of Kansas

1/97   *Trivializing Vector Bundles Over Affine Toric Varieties*, AMS Special Session on Computational Algebraic Geometry, Joint Mathematics Meetings, San Diego

10/96   *An Algorithm for the Quillen-Suslin Theorem for Monoid Rings*, AMS Special Session on Commutative Algebra, Lawrenceville, NJ

For more information, including a complete list of professional presentations (over 300), Master's Research Problems supervised (60), and Courses Taught (over 40), see https://www.pittstate.edu/math/faculty-pages/cynthia-huffman.html .