

Full CV for Martha K. Smith

Web Site: <https://web.ma.utexas.edu/users/mks/>

Born: March 14, 1944 US Citizen

Education

B.A. (Mathematics, with Honors) University of Michigan December 1965

M.S. (Mathematics) University of Chicago 1967

Ph.D. (Mathematics) University of Chicago 1970

Professional Experience

1970 - 72 G.C. Evans Instructor (Mathematics), Rice University

1972 - 73 Assistant Professor (Mathematics), Washington University (St. Louis)

1973 -76 Assistant Professor (Mathematics), The University of Texas at Austin

1976 - 1985 Associate Professor (Mathematics), The University of Texas at Austin

1985 (Spring) Visiting Associate Professor (Mathematics), Massachusetts Institute of Technology

1985 - 2009 Professor (Mathematics), The University of Texas at Austin

2019 - Professor Emerita (Mathematics), The University of Texas at Austin

Professional Organizations:

Current: American Mathematical Society, Mathematical Association of America, American Statistical Association, Association for Women in Mathematics

Formerly: Association of Mathematics Teacher Educators, National Council of Teachers of Mathematics.

Professional Service:

Referee for:

Canadian Journal of Mathematics

Journal of Algebra

American Mathematical Monthly

Journal of Combinatorial Theory

Proceedings of the American Mathematical Society

Duke Mathematical Journal

Journal of the London Mathematical Society

Proceedings of the Cambridge Philosophical Society

Rocky Mountain Mathematical Journal

Mathematics Magazine

Research in Collegiate Mathematics Education

Reviewer for Mathematical Reviews

Member, Committee on Employment and Educational Policy

(American Mathematical Society, 1973 - 1977)
 Member, National Science Foundation Panel to Select Graduate Fellowship Recipients, (1974 - 1977; Chair, 1977)
 Member, Mathematics Advisory Panel, Council for International Exchange of Scholars (Fulbright Program), 1977 - 79
 Member, Mathematical Association of America Committee on Advisement and Personnel, 1979- 82
 Member, National Science Foundation Advisory Subcommittee for the Mathematical Sciences, 1980 - 1983
 Member, Committee to select Ford Prize Recipients, Mathematical Association of America, 1986
 Book Review Editor, Association for Women in Mathematics, 1988 - 89
 Cochair (with Robert Boyer, Computer Sciences) and Chair of Subcommittee on The Role of Institutions that Teach Teachers: Symposium on Encouraging Women in Math and Science, University of Texas at Austin, November 3, 1990 (Co-sponsored with Austin Community College, Concordia Lutheran College, Huston-Tillotson College, St. Edwards University, Southwest Texas State University, Southwestern University, with support from The UT College of Natural Sciences Foundation Advisory Council, IBM Corporation, Lone Star Girl Scout Council, Mobil Research and Development Corporation, Radian Corporation, RGK Foundation, Texas Instruments, 3M Center, and Women's Foundation of Texas.
 Member, National Science Foundation Panel for K-12 grants, Summer 1990
 Assessment Reviewer, Knowing Mathematics for Teaching Algebra Project, Michigan State University, 2006

Community Service

Colloquium speaker, Southwest Texas State University Honors Summer Math Camp, June 1995, 1996
 Speaker, LBJ High School Science and Technology Day, Spring 1993, 1994
 Math Booth, Juliette Low Birthday Fest, Lone Star Scout Council, October, 1994
 Problem Solving Column, Tomorrow's Women in Science and Technology (TWIST) Newsletter, 1994 - 1995
 Workshop Presenter, Expanding Your Horizons Conference, February 1991- 1994
 Workshop Presenter, Natural Sciences Spring Fling, March 1991, February 1992

Awards and Honorary Societies

1965	Graduated Summa Cum Laude, University of Michigan
1966	Woodrow Wilson Honorary Fellow
1966 - 70	National Science Foundation Graduate Fellow
1969-70	Danforth Tutor, University of Chicago
Spring 1993	Department of Mathematics Teaching Award
Spring 1995	Dad's Association Centennial Teaching Fellowship
January 1999	Louise Hay Award (Association for Women in Mathematics) for contributions to Mathematica Education.

Invited Lectures and Service to Other Universities

Algebra Colloquium, Rice University, 1970
Invited Participant, Park City ring Theory Conference, University of Utah, 1971
Ring Theory Symposium, University of Chicago, 1971
Invited Lecturer, Functional Analysis Colloquium, University of California, Berkeley, 1971
Invited Lecturer, Colloquium. University of California, San Diego, California, 1972
Invited Lecturer, Colloquium, Washington University, 1972
Invited Lecturer, Colloquium, The University of Texas at Austin, 1973
Invited talk, Mathematisches Forschungsinstitute, Oberwolfach, Germany, May, 1973
Invited talk, Special Session on Applications of Ring Theory to Group Theory, American Mathematical Society regional meeting, St Louis, Missouri, April 1975
Invited talk, Ring Theory Conference, University of Oklahoma, March 1976
Invited talk, Association for Women in Mathematics, Summer Joint Mathematics Meetings, Toronto, Canada, 1976
Invited talk, Colloquium, Northwest Missouri State University, Maryville, Missouri, April, 1977
Invited speaker, Algebra Seminar, University of Chicago, 1977
Invited participant, Symposium on Infinite Groups and Groups Rings, Mathematics Institute, University of Warwick, Warwick, England, 1978
Invited speaker, Algebra Seminar, Cambridge University, 1978
Invited speaker, Bristol University, 1978
Invited speaker, Special Session on Groups and Rings, American Mathematical Society, Washington, D.C., October 1979
Invited speaker, Special Session on Group Rings and Enveloping Algebras, American Mathematical Society, Norman Oklahoma, April 1983
Invited speaker, Colloquium, University of Utah, Salt Lake City, May 1984
Invited speaker, Algebra Seminar, University of Utah, Salt Lake City, May 1984
Invited talk, American Mathematical Society Summer Conference on Group Actions on Rings, Bowdoin College, Brunswick, Maine, July 1984
Colloquium, Washington University, St. Louis, February 1988
Colloquium, University of Wisconsin, Madison, October 1988
Colloquium, University of Wisconsin, Parkside, October 1988
Invited talk, Microprogram on Noncommutative Rings, Mathematical Sciences Research Institute, 1989
Invited talk, Algebra Seminar, University of Antwerp, May 1990
Invited talk Catholic University of Leuven (Belgium), May 1990.
Invited talk, Seminaire Malliavin, University of Paris, June 1991
Mathematics Faculty Development workshop, Huston-Tillotson College, August 1990

UNIVERSITY AND DEPARTMENTAL COMMITTEES

University Committee Service:

1987 - 89 Steering Committee, Faculty Women's Organization
 1989 - 91 Advisory Committee, Program on Gifted and Talented Programs
 1993 - 2007 Science and Mathematics Education Graduate Studies Committee
 1995 - 2000 Steering Committee, Women's Studies
 1996 - 1999 Chair, Committee to Select Recipient of Gilbert Teaching Award in Women's Studies
 1999 - 2003 UTeach Steering Committee
 2000 Selection Committee for Chancellors's Teaching Award
 2002 - 2003 Research Advisory Committee for Online Algebra Center.
 2002 - 2006 Educational Policy Committee

College Committee Service:

1990 Co-chair, Organizing Committee for the Symposium on Encouraging and Supporting Women in Math and Science
 1990 - 1994 Equal Opportunities Committee
 1999 Chair, Committee to select College nominee for Dad's Fellowship
 2004 - 2005 Search Committee, Computational Biology
 2007 - 2008 Committee to develop an Integrated Science Course for Elementary Teachers
 2007 - 2008 Advisory Committee, Division of Statistics and Scientific Computing

Department Committee Service:

2001 - 2002 Committee to revise M316K and M316L to meet new state guidelines
 2002 Committee to develop a field component for M316K
 1999 Committee to develop new undergraduate degree plans
 1996 - 97 Committee to Develop New Calculus Sequence
 1992 - 93 Chair, Algebra Qualifying Exam Committee
 1990 - 1994 Undergraduate Studies Committee
 1988-89 Visitors Committee
 1987 - 88 Administrative Subcommittee of Graduate Studies Committee
 1986 - 87 Chair, Recruiting Committee
 1979 - 85 Chair, Undergraduate-Faculty Relations Committee
 1979 - 80 Committee on Mathematics Education
 Ad Hoc Committee on recruiting Students for Honors Courses
 1976 - 1977 Chair, Colloquium Committee
 Committee on Job Opportunities
 1975 - 76 Administrative Subcommittee of the Graduate Studies Committee
 Committee on Job Opportunities
 1974 - 75 Committee for Algebra Qualifying Examination
 Chair, Committee on Job Opportunities

SIGNIFICANT ACTIVITIES IN STUDENT AFFAIRS

1974 Discussion Leader, "Through the Maze" program for women graduate students.
 1974 - 75 Faculty Sponsor, University Aikido Club
 1976 - 77 Advisor, Women in Science Program
 1978 - 85 Faculty Sponsor, Pi Mu Epsilon (undergraduate mathematic club)
 1979- 82 Advisor for Mathematics Majors

1983	Graduate Advisor, Mathematics
1985	Faculty Mentor, Honors Colloquium
1988	Faculty Mentor, Honors Colloquium
1999- 2007	Advisor for students pursuing teaching options
1999 - 2007	Advisor for undergraduate probability/statistics specialization
2000-2006	Graduate Advisor, Masters in Statistics program
2000-2007	Chair, Statistics Graduate Studies Committee
2006 - 2007	Admissions committee, Masters in Statistics program

COURSES TAUGHT

<i>Course</i>	<i>Title</i>
TC301	Plan II Freshman Seminar (Topic: Problem Solving)
TC 301	Plan II Freshman Seminar (Topic: Women in Science -- team-taught)
M302	Introduction to Mathematics
M603A	Mathematics for Business and Economics
M305G	Elementary Functions and Coordinate Geometry
M407	Mathematics for Architects
M608EA	Calculus I
M808A (408C)	Calculus I
M808B (408D)	Calculus II
M311	Linear Algebra and Matrix Theory
M316	Elementary Statistical Methods
M316K	Modern Topics in Elementary Mathematics
M333L	Structure of Modern Geometry
M427K	Advanced Calculus for Applications I
M427L	Advanced Calculus for Applications II
M340L	Matrices and Matrix Calculations
M343K	Introduction to Algebraic Structures
M358K	Applied Statistics
M360M	Mathematics as Problem Solving
M361	Theory of Functions of a Complex Variable
M175	Seminar for Future Teachers (varying topics)
M362K	Probability I
M373K	Algebraic Structures I
M373L	Algebraic Structures II
M375	Problem Solving for Teachers
M375W	Problem Solving for Teachers (substantial writing component)
M375/326K	Foundations of Number Systems
M378K	Mathematical Statistics
M680CA	Graduate Algebra I
M680CB	Graduate Algebra II
M384E	Analysis of Variance
M384G/374G	Regression Analysis
M390C	Combinatorial Group Theory
M390C	Lie Algebras

M390C	Enveloping Algebras
M390C	Algebraic Groups
M390C	Module Theory
M390C	Combinatorics
M390C	C* Algebras
M390C	Cohomology of Groups and Rings
M390C	Linear Algebra
M394C/375	Risk Analysis
M396C	Mathematics Applied to Health and the Environment (AKA "Topics in Probability and Statistics" and "Applied (Probability and Statistics)")
M398T	Supervised Teaching in Mathematics

UT Summer Statistics Institute course, 2010 - 2016:

"Common Mistakes in Using Statistics -- Spotting Them and Avoiding Them"

GRADUATE STUDENT SUPERVISION AND COMMITTEE PARTICIPATION

Ph.D. Degrees Supervised

Esther Beneish, University of Texas, 1987. *Invertible Modules* (co-supervisor with David Saltman)

George Tintera, University of Texas, 1990, *On the Stable Rank of Enveloping Algebras*

Membership on Ph.D. Committees

Howard E. Krehbiel	Amy Babich
Pearl Olson	Theo Moons (Kathol. Universiteit Leuven)
David Berman	Frank Serio
Mary Parker	Chandni Shah
Ralph Best	Tommy Bryan (Mathematics Education)
Daniel Katz	Velma Lucille Bullock (Math. Ed.)
Rodney Barto (Elect, Eng.)	Ken'ichi Kuga
Frank Shirley	Hyeng Kenn Koo
Tracy Lin Rusch (Math Ed)	Jan-ho Chun
Linda Susan Hudson Hull (Math Ed)	Robin O'Leary
Fung-Jen Luo (Math Ed)	Maria Meletiou (Math Ed)
Selina Vasquez (Math Ed)	Jayne Ann Harder (Math.Ed)
Long Ma (Petroleum Engineering)	Meredith Blue
Muath Shiyab (Math Ed)	Cynthia Schneider (Math Ed)
Theresa Jones (Math Ed)	Seon-Hi Shin (Ed. Psych)
Xuhui Li	Katie Makar (Math Ed)
Jennifer Kaplan	Hee-yeon Kim (Math Ed)
Jeremy Brown (Biology)	Margaret Bachelor (Biology)
Emily McTavish (Biology)	April wright (Biology)

Master's Degrees (Mathematics) Supervised

Frank Shirley, 1975, Idempotents in Group Algebras

Huang Tran, 1976, Some Basic Results in Finite Permutation Groups
 Ruth Rusk, 1977, Group Algebras of Finite Groups of Low Order
 Patricia Thomas Evans, 1979, Transcendental Fixed Fields
 Elizabeth Poppen, 1979, Properties of a Special Ring of Integers
 Esther Beneish, 1981, Polynomials with Galois Group PSL(27)
 David Norris, 1983, The Structure of Clifford Algebras Over
 Fields of Characteristic Not 2
 Jacqueline Bacon, 1990, Automorphisms of Polynomial Rings
 Allison Sutton, 1992, Gelfand-Kirillov Dimension of Related Rings
 Angelina Gutierrez-Zamora, 1995, Codes for Detecting and Correcting
 Consecutive Errors
 Dara Johnson, 1995, Linear Cyclic Codes
 Gwenn Sherbourne, 1997, Polya's Enumeration Theorems and Their Applications
 Margaret Batchelor, 2002, Consequences of Including Demographic Heterogeneity in
 Population Models (co-supervisor)

Membership on Other Master's Committees

Joseph Makarsky	Harlan Stewart
Charlotte Miller	Anthony Vance
Sherry Ziaja (Math Ed.)	Cathleen Ryan
Brenda Kolas (MS Statistics)	Yvonne Fok (Math. Ed.)
Eleni Apostulou (Math Ed.)	Jennifer Kaplan
Natali Teszler (MS Statistics)	Chang-Sub Lee (Statistics)
Stephen Kendrick	Rafael Vigil
Qiaoyu Zhou (Statistics)	Michele Renehan
Clare Riviello	Sherri Crim Jones

RESEARCH SUPPORT

1970 - 72	National Science Foundation (at Rice University)
1975 - 76	National Science Foundation, MPS75-08088, \$6,700
1976 - 78	National Science Foundation, MCS76-06593, \$14, 700
1979 - 82	National Science Foundation, MCS79-0092, \$16,100
1983 - 88	National Science Foundation, MCS83-01700, \$46, 850
1988 - 90	Texas Advanced Research Programs, \$33,422

Other grants:

1992 - 93	Eisenhower Program (summer institute in geometry for middle school teachers - Joint with John E. Gilbert)
1993 - 94	National Science Foundation Teacher Enhancement (Austin Area Geometry Institute - joint with John E. Gilbert)

PUBLICATIONS

Articles

On group algebras, Bull. Amer. Math. Soc., 76 (1970), 780 - 782
 Group algebras, J. Algebra, 18 (1971), 477 - 499
 Regular representations of discrete groups, J. Functional Analysis, 11(1972), 401 - 406.
 Centralizers in rings of quotients of group rings, J. Algebra, 25 (1973), 158 - 164.
 Regular representations of unimodular groups, Math. Ann, 203(1973), 183-185.
 Rings with an integral element whose centralizer satisfies a polynomial identity, Duke
 Mathematical Journal, 42(1975), 137 - 149.
 (with Susan Montgomery) Algebras with a separable subalgebra whose centralizer satisfies a
 polynomial identity, Comm. Algebra, 3(1975), 151-168.
 (with K. Bonvallet, B. Hartley, and D.S. Passman) Group rings with simple augmentation ideals,
 Proc. Amer. Math. Soc. 56(1076), 79 - 82.
 Spectra of operator equations, Michigan Math. J., 23(1976), 151-153.
 Universal enveloping algebras with subexponential but not polynomially bounded growth, Proc.
 Amer. Math. Soc., 60(1976),22-24
 Central and invariant conditions in group algebras, Houston J. Math., 3(1977), 125 - 130.
 Growth of algebras, in Ring Theory II, Proceedings of the Second Oklahoma Conference, Marcel
 Dekker, New York, 1977
 Derivations of group algebras of finitely-generated, torsion-free groups, Houston J. Math.,
 49(1978), 277 - 288.
 Automorphisms of enveloping algebras of solvable Lie algebras, Comm. Algebra (16) 11(1983)
 (with M. Gilchrist) Noncommutative UFD's are often PID's, Math. Proc. Cam. Phil. Soc.,
 95(1984), 417 - 419
 Central zero divisors in group algebras, Proc. Amer. Math. Soc., 91(1984). 529 - 531
 Eigenvalues of automorphisms of polynomial rings in two variables, Houston J. Math., 10(1984)
 Semi-invariant rings, Comm. Algebra, 14(1985), 1283 - 1298.
 Weight spaces of Lie algebra modules, Proc. Amer. Math. , 95(1985), 524 - 526.
 Stably tame automorphisms of polynomial rings, J. Pure Appl. Algebra, 58 (1989), 209 - 212.
 What a research mathematician can do to foster the development of future secondary math
 teachers, UME Trends, August 1992.
 Alternative to the lecture method in teaching geometry, UME Trends, October 1992.
 Values and Mathematics, UME Trends, January 1993.
 Response to Theory and Practice Question, AMTE Connections, 14 (March 2005), 10

Books

(with S. Montgomery et al.) (Editors), Selected Papers on Algebra, Mathematical Association of
 America, 1977.
 (with J. Brewer) (Editors), Emmy Noether, Marcel Dekker, New York, 1981.

Web site (Includes many teaching relevant materials) <https://web.ma.utexas.edu/users/mks/>