

Karl J. Smith
Mathematics Department
Santa Rosa Junior College
680 Sonoma Mountain Parkway
Petaluma, CA 94954



Professor emeritus

RÉSUMÉ

EDUCATION

1965 B.A., Mathematics
University of California at Los Angeles
1967 M.A., Mathematics
University of California at Los Angeles
1979 Ph.D., Mathematics Education
Southeastern University

TEACHING EXPERIENCE

1965-1967 Culver City Junior High School
1967-1968 Whitworth College
1968-2003 Santa Rosa Junior College
1973-1978 Mathematics Department Chairman, Santa Rosa Junior College

CHURCH EXPERIENCE

1975-1976 Vice-President, Bethlehem Lutheran Church
1977-1978 President, Bethlehem Lutheran Church
1982-1983 Vice-President, Bethlehem Lutheran Church
1984-1985 President, Bethlehem Lutheran Church
1986-1987 Secretary, Bethlehem Lutheran Church
1988-1991 Stewardship Chairperson, Bethlehem Lutheran Church
1992-1993 Vice-President, Bethlehem Lutheran Church
1994 President, Bethlehem Lutheran Church
1996 President, Bethlehem Lutheran Church
1997-1998 Secretary, Bethlehem Lutheran Church
1999-2000 President, Bethlehem Lutheran Church
2004-2007 Treasurer, Sierra Pacific Synod
2002-2010 Treasurer, Bethlehem Lutheran Church

GRANTS AND FUNDRAISING

1986 Involved in obtaining a Sloan grant for AMATYC summer institutes.
1985-1987 Principal fund-raiser for the Bethlehem Lutheran Church Children's Center
1989 Involved in a NSF AMATYC-CCAJC grant proposal for networking mathematics and industry
1989 Established a Grant Committee to seek grants and funding sources for two-year colleges
1990-1992 NSF grant reviewer
1990-1992 Organized and launched the non-profit AMATYC Future Fund
2006-2007 *Lutheran Center Project*; I raised \$100,000 to purchase land for a school, chapel, and office building in Rwamagana, Rwanda.
2007-present *Rwanda School Project* This is an outgrowth of the *Lutheran Center Project*. I am president of the school board. We have raised over \$2.5 million.

PROFESSIONAL ACTIVITIES

I am very active in local, state, and national professional groups and am Past-President of the American Mathematical Association of Two-Year Colleges. My main professional concern is to improve the mathematics education for students in the U.S. by being an outspoken advocate for better teaching at all levels. I believe the key to educational success depends upon dedicated, well-paid teachers who really care about their students, while at the same time demanding excellence from their students. I believe that one individual can make a difference.

Member of the following professional organizations:

American Mathematical Association of Two-Year Colleges

National Council of Teachers of Mathematics

Mathematical Association of America

California Mathematics Council

California Mathematics Council of Community Colleges

1978-1980	Member-at-Large, California Mathematics Council for Community Colleges
1979-1983	Founding Editor, <i>Western AMATYC News</i>
1980-1983	Western Vice President of the American Mathematical Association of Two-Year Colleges
1983-1985	Secretary of the American Mathematical Association of Two-Year Colleges
1985-1987	President-elect of the American Mathematical Association of Two-Year Colleges
1987-1989	President of the American Mathematical Association of Two-Year Colleges
1989-1991	Past-President of the American Mathematical Association of Two-Year Colleges
1980-1989	Executive Board of the American Mathematical Association of Two-Year Colleges
1983-1985	MAA visiting lecturer and consultant
1984	Participant in the Sloan Conference on Future Directions of Two-Year College Mathematics
1983-1989	Member of the joint MAA-AMATYC Panel for Curriculum in the Two-Year Colleges
1985	Participant in the National Study of Resources for Collegiate Mathematics
1987-1990	Member of the Accreditation Committee of the Mathematical Association of America
1987	Member of the Remediation Committee of the Mathematical Association of America
1987-1992	Member of the Two-Year College Committee of the Mathematical Association of America
1987-1989	Member of the College Board of Mathematical Sciences
1987-1989	MAA visiting lecturer and consultant
1989-1991	Executive Committee of the College Board of Mathematical Sciences
1988-1991	Member of the Council of Scientific Society Presidents
1989-1991	Member of the Mathematics and Science Education Committee of the Council of Scientific Society Presidents
1989	Chairperson of the Committee on Mathematics Excellence
1990	Chairperson of the Nominations and Election Committee of the American Mathematical Association of Two-Year Colleges
1990-1996	Editorial Committee of <i>UME Trends: News and Reports on Undergraduate Mathematics Education</i>
1990	Invited participant to the Conference Board of the Mathematical Sciences Workshop on Graduate Education, Washington, D.C.
1990	Invited participant to the National Summit on Mathematics Assessment, Washington, D.C.
1991	Invited participant to the Conference Board of Mathematical Sciences conference on <i>Graduate Education in Transition</i> , Washington, D.C.
1992-1995	MAA visiting lecturer and consultant

OTHER AWARDS

1959	Eagle Scout
1965	Graduated <i>cum laude</i> from the University of California at Los Angeles
1967	National Teaching Fellow in Mathematics
1979	Outstanding Young Men of America Award
1980	Outstanding Educator Award
1979	Listed in <i>Leaders in American Education</i>
1983	Listed in <i>Who's Who Among Scholars</i>
1985	Listed in <i>Who's Who in American Education</i>
1986	Listed in <i>International Who's Who in Education</i>
1989	Outstanding Teacher Award
1990	Listed in <i>Who's Who in the West</i> , 23rd Edition
1990	Invited to lead a <i>People-to-People</i> Delegation to the Soviet Union
1991	Nominated for the biannual national <i>Mathematics Excellence Award</i>
1992	Listed in <i>Who's Who in California</i>
1992	Listed in <i>2,000 Notable American Men</i>
1993	Listed in <i>Who's Who in America</i> , 47th Edition
1993	Listed in <i>Who's Who in the West</i> , 24th Edition
1994	Listed in <i>Dictionary of International Biography</i>
1994	Listed in <i>Men of Achievement</i> , Sixteenth Edition
1995	Listed in <i>Who's Who in Science and Engineering</i> , 3rd Edition
1995	Listed in <i>Who's Who in the West</i> , 25th Edition
1997	Listed in <i>Who's Who in the West</i> , 26th Edition
1998	Listed in <i>Who's Who Among America's Teachers</i> , 5th Edition
1999	First of six inducted into the Council of Fellows for innovation of presentation of materials in publishing.
2019	Listed in <i>Who's Who in America</i> , 47th Edition

PUBLICATIONS

I have written 41 mathematics textbooks using the premise that students can learn mathematics if it is presented to them through the use of concrete examples designed to develop original thinking, abstraction, and problem solving skills. Over two million students have learned mathematics from my textbooks.

BOOKS

Algebra and Trigonometry, Brooks/Cole, Pacific Grove, 1987
Analytic Geometry, One Unit Series, Brooks/Cole, Pacific Grove, 1991
Analytic Geometry: A Refresher, Brooks/Cole, Pacific Grove, 1974
Arithmetic for College Students, Brooks/Cole, Pacific Grove, 1981
Basic Mathematics, Brooks/Cole, Pacific Grove, 1981
Business Mathematics, 2nd Ed., Wm C. Brown, Dubuque, 1988
Calculus with Applications, 2nd Ed., Brooks/Cole, Pacific Grove, 1992
College Mathematics and Calculus, 2nd Ed., Brooks/Cole, Pacific Grove, 1992
Essentials of Trigonometry, 4th Ed., Brooks/Cole, Pacific Grove, 2006
Finite Mathematics, 3rd Ed., Brooks/Cole, Pacific Grove, 1992
Finite Mathematics: A Discrete Approach, Scott, Foresman, 1975
Geometry, One Unit Series, Brooks/Cole, Pacific Grove, 1991
Handbook for Calculus, Prentice Hall, Englewood Cliffs, 1999
Introduction to Symbolic Logic, Brooks/Cole, Pacific Grove, 1974
Mathematics: Its Power and Utility, 10th Ed., Brooks/Cole, Pacific Grove, 2013
Mathematics for Business, Wm. C. Brown, Dubuque, 1990
The Nature of Algebra, Brooks/Cole, 2003
The Nature of Geometry and Probability, Brooks/Cole, 2003
The Nature of Mathematics, 13th Ed., Brooks/Cole, Pacific Grove, 2017

Precalculus, 5th Ed., Brooks/Cole, 1993
Precalculus: A Functional Approach to Graphing and Problem Solving, Jones and Bartlett, Sudbury, 2013
Problem Solving, One Unit Series, Brooks/Cole, Pacific Grove, 1991
Student Mathematics Handbook for Calculus, 4th Edition, Prentice Hall, 2006
Student Survival and Solutions Manual for Calculus, 4th Edition, Prentice Hall, 2006
Student Survival and Solutions Manual for the Nature of Mathematics, 12th Edition, Brooks/Cole, Pacific Grove, 2011
Student Survival and Solutions Manual for Mathematics Its Power and Utility, 10th Edition, Brooks/Cole, Pacific Grove, 2013
Student Survival and Solutions Manual for Precalculus, Jones and Bartlett, Sudbury, 2013
Symbolic Logic, One Unit Series, Brooks/Cole, Pacific Grove, 1991
Trigonometry for College Students, 7th Ed., Brooks/Cole, Pacific Grove, 1998

COAUTHORED BOOKS

Algebra and Trigonometry, Brooks/Cole, Pacific Grove, 1979
Beginning Algebra for College Students, 4th Ed., Brooks/Cole, Pacific Grove, 1990
BioCalculus, Wiley, Hoboken, NJ, in progress
Calculus, 7th Ed., Kendall Hunt, 2017
Calculus for the Life Sciences, Wiley, 2014
College Algebra, 4th Ed., Brooks/Cole, Pacific Grove, 1989
Intermediate Algebra for College Students, 4th Ed., Brooks/Cole, Pacific Grove, 1989
Multivariable Calculus, Prentice Hall, Englewood Cliffs, 1995
Primer for College Algebra, Brooks/Cole, Pacific Grove, 1990
Single Variable Calculus, Prentice Hall, Englewood Cliffs, 1995
Study Guide for Elementary Algebra, 2nd Ed., Brooks/Cole, Pacific Grove, 1980
Study Guide for Intermediate Algebra, 2nd Ed., Brooks/Cole, Pacific Grove, 1985
Study Guide for Algebra, Brooks/Cole, Pacific Grove, 1990

ARTICLES

"A Curriculum in Flux, Mathematics at Two-Year Colleges," Ed. Ron M. Davis, Report of the Joint Subcommittee on Curriculum at Two-Year Colleges, MAA-AMATYC, 1989
"A Short Trip from Publisher to Professor to Bookstore to Students," *Offshoots*, December 1, 1987
"Challenge for the 1990s," *Two-Year College Mathematics for the 1990s*, Special edition of *The AMATYC Review*, Vol. 11, Number 1 (Part 2), Fall 1989
"CBMS Profile of AMATYC," *FOCUS*, January-February, 1988
"Complimentary Textbooks: Selling Ourselves Short," *The Chronicle of Higher Education*, October 14, 1987
"Congressional Report," *AMATYC NEWS*, Vol. 4, No. 2, Spring, 1989
"Inventing a Numeration System," *Arithmetic Teacher*, Vol. 20, No. 7, Nov. 1976
"It's Not Funny! Cartoons in Textbooks," *CMC³ Newsletter*, Vol. V, No. 2, July 1978
"Keno Expectation," *Two-Year College Mathematics Journal*, Vol. 3, No. 2, Fall 1972
"Letter to the Editor," *MathAMATYC Educator*, Vol. 6, No. 1, September 2014
"Liberal Arts Mathematics," *Resources in Education*, Nov. 1984
"Liberal Arts Mathematics--Cornerstone or Dinosaur," *New Directions in Two-Year College Mathematics*, Springer-Verlag, 1985
"Pascal's Triangle," Feature Article, *Two-Year College Mathematics Journal*, Vol. 4, No. 1, Fall 1972
"Presidential Message," *AMATYC NEWS*, Vol. 3, No. 1, Winter 1988
"Presidential Message," *AMATYC NEWS*, Vol. 3, No. 2, Fall 1988
"Presidential Message," *AMATYC NEWS*, Vol. 3, No. 3, Spring 1989
"Presidential Message," *AMATYC NEWS*, Vol. 4, No. 1, Fall 1989
"Presidential Message," *AMATYC NEWS*, Vol. 4, No. 2, Spring 1990
"Publishing's Gray Market," *The Magazine of Higher Learning*, Sept./Oct., 1987
"Plunging Into Geometry," *California Mathematics Journal*, Vol. 1, No. 2, 1976

INVITED ADDRESSES

I am an active and interesting speaker who has given numerous speeches and in-service training programs at local, state, national, and international conventions. Also, I am an active problem-solver with published solutions in the *Two-Year College Mathematics Journal*, *Journal of Recreational Mathematics*, and *The MATYC Journal*. I love to talk and write about mathematics, but most of all I love teaching mathematics.

NATIONAL ADDRESSES

- “Crisis in Mathematics Education: A Teacher's Perspective,” **Invited speaker to the 75th Anniversary Meeting of the Mathematical Association of America**, Columbus, Ohio, August 11, 1990
- “Computer Science Accreditation and Its Impact Upon Two-Year Colleges,” Panel member, National Meeting of the Association for Computing Machinery, Atlanta, GA, Feb. 24, 1988
- “Curriculum at Two-Year Colleges: A Report,” Panel member, national convention of The American Mathematical Association of Two-Year Colleges, Kansas City, KS, Oct. 31, 1987
- “Mathematical Reflections,” **Keynote address**, Sixth Conference of the Association of Christians in the Mathematical Sciences, Grand Rapids, MI, May 27, 1987
- “Mathematical Reflections, Standing on the Shoulders of Giants,” Invited speaker at the 67th Annual Meeting of the National Council of Teachers of Mathematics, Orlando, FL, April 13, 1989
- “Mathematics Is Not a Spectator Sport,” Invited address, Name-of-Site Meeting of the National Council of Teachers of Mathematics, El Paso, TX, Feb. 26, 1976; Invited address at the national convention of The American Mathematical Association of Two-Year Colleges, Atlanta, GA, Oct. 14, 1977; Invited address (a repeat performance was requested), national convention of The American Mathematical Association of Two-Year Colleges, Houston, TX, Oct. 12, 1978
- “Mathematics Term Projects,” Invited speaker, national convention of The Association of Two-Year Colleges, Washington, DC, Oct. 12, 1980
- “Motivation in Mathematics,” Invited speaker at the 62nd Annual Meeting of the National Council of Teachers of Mathematics, San Francisco, CA, April 25, 1984
- “Motivation in Precalculus,” Invited speaker at the 50th Annual Meeting of the American Mathematical Association of Two-Year Colleges, Boston, MA, November 12, 2010
- “Percepts of the College Textbook Industry,” Panel member, National Association of College Stores, Anaheim, CA, April 13, 1987
- “Presidential Report for the 90s,” Opening session, American Mathematical Association of Two-Year Colleges, Baltimore, MD, October 26, 1989
- “Publishing a Mathematics Textbook, An Author's Perspective,” Invited speaker, Publishers' College, Pacific Grove, CA, July 13, 1987
- “Standing on the Shoulders of Giants,” Invited speaker at the 67th Annual Meeting of the National Council of Teachers of Mathematics, Orlando, FL, April 13, 1989
- “Techniques for Graphing Trigonometric Functions,” Invited address, California Mathematics Council State Conference, Sacramento, CA, March 25, 1976; Invited address, national conference of the Mathematical Association of Two-Year Colleges, Houston, TX, Oct. 11, 1978
- “Uncovering Mathematics: Motivational Ideas for Today's Students,” Invited speaker, National Conference of the National Council of Teachers of Mathematics, Chicago, IL., April 8, 1988

FOREIGN PROFESSIONAL PRESENTATIONS AND INVITED ADDRESSES

- “Mathematical Reasoning,” In-service training, *Universadía Interamericana De Pr Decanato De Estudios Programa De Education General Departamento De Matematica Y Cinecias Fisicas Recinto De San German*, August 10-11, 1987
- “Motivation in Beginning Algebra,” In-service training, University of Puerto Rico, Rio Piedras Campus, March 14, 1984
- “Motivating Mathematics for Unmotivated Students,” Invited speaker to the International Congress on Mathematical Education, Budapest, Hungary, July 27-Aug. 3, 1988
- “Presidential Report,” Opening Session, American Mathematical Association of Two-Year Colleges, Calgary, Canada, October 18, 1988

- “Problem Solving and the Graphing Calculator,” In-service training, *Universidad Interamericana de Puerto Rico*, Metropolitan campus, August 10-11, 1992, San Germán campus, August 12-13, 1992
- “Teaching Liberal Arts Mathematics,” In-service training, *Universadia Interamericana De Pr Decanato De Estudios Programa De Education General Departamento De Mathematica Y Cinecias Fisicas Recinto De San German*, August 10-11, 1987

STATE ADDRESSES

- “Affiliation with AMATYC,” Invited speaker, New York State Mathematical Association of Two-Year Colleges, April 25, 1987
- “Challenge for the 90s,” **Keynote speaker** for the California Mathematics Council of Community Colleges - South, Costa Mesa, CA, March 10, 1989
- “Calculus,” ArizMATYC meeting, February 26, 1999
- “Fifty Mathematics Projects for College Students,” Invited speaker, California Mathematics Council of Community Colleges, Monterey, CA, Dec. 3, 1981
- “From Heartbeats to Bees,” Invited speaker, Illinois Mathematical Association, Allerton, IL, April, 22, 1983; Invited speaker, California Mathematics Council, Southern Section, Nov. 23, 1985
- “Historical Quest – Don't Throw Out the Baby with the Bathwater,” Invited speaker, Michigan Mathematical Association of Two-Year Colleges, October 18, 1997
- “Increasing Mathematical Insight,” Invited address, Alabama College Association, Birmingham, Alabama, November 22, 1988
- “The Joy of Mathematics,” Invited address, Alabama Junior, Community, and Technical Colleges Professional Development Conference, Mobile, AL, April 3, 1986
- “Ma, I'd Rather Do It Myself,” Invited address, California Mathematics Council, Asilomar, CA, Dec. 7, 1974
- “Mathematical Adventures,” **Banquet speaker**, Virginia Mathematical Association of Two-Year Colleges, Virginia Beach, VA, April 21, 1989
- “Mathematical Gems,” **Banquet speaker**, Michigan Mathematical Association of Two-Year Colleges, Kalamazoo, MI, October 17, 1997
- “Mathematical Insights,” **Luncheon speaker**, Minnesota Mathematical Association of Two-Year Colleges, Brainerd, MN, May 5, 1990
- “Mathematical Motivation,” **Conference luncheon speaker**, organizational meeting of The Oregon State Mathematical Association for Two-Year Colleges, May 9, 1987
- “Perspectives: Implementation of the TASP Program,” Panel member, Texas Junior College Teachers Association and Texas Junior College Association, February 17, 1989
- “A Pocketful of Problems,” Invited Speaker, 36th Annual Convention of The Texas Junior College Association, Feb. 25, 1983
- “Problem Solving,” Invited speaker, California Mathematics Council, Southern Section, Nov. 22, 1985
- “Writing a Mathematics Textbook,” **Dinner speaker**, The 36th Annual Meeting of The Pennsylvania Council of Teachers of Mathematics, March 20, 1987

REGIONAL ADDRESSES

- “Five Good Problems,” In-service training, Hillsborough Community College, Tampa, FL, March 14, 1984
- “Graphing Trigonometric Functions and Other Tricks of the Trade,” In-service training, Casper College, WY, April 23, 1981
- “Math Anxiety,” In-service training, Mirimac Community College, St. Louis, MO, Feb. 24, 1987
- “Mathematics and the Layman,” Presentation, Association of Retired Persons, Santa Rosa, CA, May 10, 1983
- “Mathematics: Its Power and Utility,” In-service training for Math A, San Mateo Union High School, June 17, 1988.
- “Motivation in College Algebra,” In-service training, Hillsborough Community College, Tampa, FL, Feb. 20, 1987
- “Some Good Problems,” In-service training, Broward Community College, Davie, FL, Feb. 20, 1987; In-service training, Miami Dade-North Campus, Miami, FL, Feb. 21, 1987; also at the Spring Conference of the California Mathematics Council, San Mateo, CA, March 7, 1987

rev 11/19/21

Karl J. Smith received his B.A. and M.A. degrees in mathematics from UCLA. In 1968, he moved to northern California to teach mathematics at Santa Rosa Junior College, where he taught until his retirement in 1993. Along the way, he served as department chair, and he received a Ph.D. in 1979 in mathematics education at Southeastern University. A past president of the American Mathematical Association of Two-Year Colleges, Professor Smith is active nationally in mathematics education. He was the founding editor of the Western AMATYC News, a chairperson of the Committee on Mathematics Excellence, and an NSF grant reviewer. In 1979 he received an Outstanding Young Men of America Award, in 1980 an Outstanding Educator Award, and in 1989 an Outstanding Teacher Award. Professor Smith is the author of over 65 successful textbooks. Over two million students have learned mathematics from his textbooks.