

Board of Directors, 1979-81
 President, 1980-81
 Membership Committee, 1981-2 (chair)
 Athens Astronomical Association, 1977-83
 Dolphins Swim Team, Athens Recreation and Parks Department
 Swim Board of Governors, 1978-80
 Athens-Bulldog Swim Team, UGA
 Parents Boosters, 1978-82 (president, 1980-81)
 Clarke Central High School Orchestra Parents (president, 1980-81)
 Clarke Central High School Swim Team
 Parents Boosters Club, 1980-82 (president, 1980-81)
 Barrow Elementary School PTA Board, 1979-81
 Clarke County Schools PTA Council, 1979-81
 Radio talk Show guest, Columbia MO, 1980
 Athens Superior Court, Jury Duty, 1979; 1982.
 Athens Torch Club (Torch Clubs International)
 Member, 1981-91, 2002-present
 Invited address (9 December 1982): The computer revolution in the home and in
 the school
 Invited address (11 May 1989): The crisis in U.s. mathematics education:
 Perspectives on international comparisons
 Author of cover page feature articles for Classic Scene of the Sunday Athens Daily
 News/Banner Herald newspaper, 1981, 1982.
 Clarke County Superior Court Jury Duty, 1981, 1982, 1983
 Radio guest for UGA "University Bulletin Board" program, 1981
 General skills training program, Bell South employees, 1988
 Judge, Oconee County Schools annual science and mathematics fair, 1988, 1989,
 1992.
 Moxeys (GA) City Council, 1994-2000
 Proposal author for \$10,000 Community Center Improvement grant, Georgia
 Department of Community Affairs, 1995-97.
 Author of 7 original City Ordinances
 Workshop for Standing Committees, 3 October 1995
 Speaker, Moxeys Woman's Club, October 1995
 Representative to Oglethorpe County Comprehensive Planning Task Force,
 1994-95
 Task Force on Water System Improvements, 1996-2000.
 Guest, "The Dick Mendenhall Show," WGAU (Athens), 2 December 1996.
 Member of the Board of Directors, Association of the Villas at Five Points, Athens,
 GA, 2002-4.
 Editor, "Villa Living" Newsletter
 Elder & Member of the Session, Covenant Presbyterian Church, Athens, GA, 2003-5.
 Co-chair, Stewardship and Finance Ministry, Covenant Presbyterian Church, Athens,
 GA, 2003-5; member, 2003-present.
 Chair, Personnel Committee, Covenant Presbyterian Church, Athens, GA, 2003-5;
 member, 2003-present.

Search Committee, three faculty positions Department of Mathematics Education, UGA, 1993-95.

Participant, Faculty Academic Affairs Retreat, Unicoi, VPAA, UGA, 15-16 April 1994.

Speaker, Joseph R. Hooten, Jr. Awards Colloquium, 8 June 1994.

University Selection Committee for the Josiah T. Meigs Award for Excellence in Teaching, VPAA, UGA, 1993-96.

Planning Committee, Thirtieth Anniversary Reunion and Conference (20-21 November), Department of Mathematics Education, UGA, 1994.

Member, Middle School Advisory Council, College of Education, UGA, 1994-6.

Program Review Committee, Department of Mathematics Education, UGA, 1994-5.

Member, Early Childhood Program Team, Department of Mathematics Education, UGA, 1994-present.

Member, Middle School Program Team, Department of Mathematics Education, UGA, 1994-present.

Member, Fall Pre-session Planning Committee, Department of Mathematics Education, UGA, 1994-2000.

Faculty Advisor, Mathematics Education Student Association, Department of Mathematics Education, UGA, 1994-present.

Reviewer, Faculty Proposals for Innovative Instructional Projects, VPAA, UGA, 1995-97.

Luncheon Speaker, Project RADIATE National Invitational Research Workshop for Mathematics Teacher Educators (NSF supported), UGA, 28 July 1995 & 21 June 1996.

Member, NCATE Review, Department of Mathematics Education, UGA, 1995-6.

STE Representative, College of Education Council, Winter-Spring 1996.

Member & Chair, Joint MATH/EMAT Task Force, Department of Mathematics Education, UGA, 1996-2000.

Search Committees for faculty positions, Department of Mathematics Education, UGA, 1997-98 (chair), 1997-99, 2000-02, 2006-present.

Member, Planning Team, Keystone graduate degree programs for Mathematics Teaching Specialists for Elementary and Middle Grades teachers, 1998-2000.

Representative, Establishing the Institutional Partnership between Kongju National University, Korea, and UGA, 1999-2001.

Member, Middle School EMAT Program Team, 1986-present.

Member, Secondary EMAT Program Team, 2002-05.

Chair, Awards Committee, Mathematics Education, 2005-present.

Member, Awards Committee, College of Education, 2005-present.

COMMUNITY SERVICE

Speaker, Greater Bethel AME Church, 1971, 1981.

Clarke County Association for Talented and Gifted Children.
Advisory Committee, 1977

Instructor for six enrichment courses, 1977-81

Student Program Committee, 1978-80, (chair 1980)

Environmental Education Committee, College of Education, UGA, 1973-7.
 Ph.D. Program Planning Committee, Department of Mathematics Education, UGA, 1971-3, 1981-3.
 PLATO Computer Committee, UGA, 1974-6.
 Search Committee, Professor position, Department of Mathematics Education, UGA, 1974-5 (chair).
 Computer Utilization Committee, College of Education, UGA, 1974-6.
 Ad hoc Committee on Bylaws for a Faculty Senate, College of Education, UGA, 1976-7.
 Middle School Program Advisory Committee, College of Education, UGA, 1976-81.
 Middle School Mathematics Program Committee, Department of Mathematics Education, UGA, 1976-81 (chair).
 Subcommittee for NCATE Self-study, College of Education, UGA, 1977-8, 1984-5.
 Committee on Microcomputers, University System of Georgia, 1980-2.
 Faculty Senate Committee on Graduate Faculty Appointments/Re-appointments, College of Education, UGA, 1981-4.
 Senator, Faculty Senate, College of Education, UGA, 1981-4.
 Faculty Senate Ad hoc Committee on Computer Courses, College of Education, UGA, 1981-2.
 Policy Advisory Group for the Educational Research Laboratory, College of Education, UGA, 1981-4.
 Dean's Committee on Technology, College of Education, UGA, 1981-2; Working Group on Instructional Applications (chair).
 Dean's Ad hoc Committee to Deal with Events with Potential Impact on the College, College of Education, UGA, 1982-4.
 Microcomputer Subcommittee of the University Computer Advisory Committee, UGA, 1981-4.
 Committee for a Master's Degree in Computer-based Education, College of Education, UGA, 1982-5.
 Review Committee for Educational Psychology Graduate Programs, Graduate School, UGA, 1983-4.
 Planning Committee to Establish an Educational Technology Faculty, College of Education, UGA, 1984-5.
 Advisory Board for the Center for Educational Technology, College of Education, UGA, 1986-90.
 Selection Committee for the Joseph R. Hooten, Jr. Award for Excellence, Department of Mathematics Education, UGA, 1987-9, 1992, 1996, 2001, 2004.
 University Committee on Educational Programs for the SACS Self Study, UGA, 1988-9.
 Steering Committee for the School of Teacher Education Bylaws, College of Education, 1988-90.
 University Committee to Plan Honors Day, UGA, 1991-93.
 Keynote Speaker, College of Education Alumni Weekend, UGA, 17 April 1993.
 Internal Advisory Committee, Department of Mathematics Education, UGA, 1993-present.
 School of Teacher Education Advisory Council, UGA, 1993-present.

Mathematics), National Science Foundation Center for Learning and Teaching, November 2-4, 2003.

Invited Seminar and Colloquia Presentations

Niagara Falls University, 1969
Michigan State University, 1970, 1980
International Schools of the Hague, Netherlands, 1970
Arkansas State University, 1971
Indiana University, 1972
Columbia University, Teachers College, 1972, 1974
University of Minnesota, 1973
University of Georgia, 1973, 1975, 1976, 1978, 1979 (2), 1980, 1982 (2), 1983 (3), 1984 (2), 1985, 1988, 1991, 1993, 1995 (2).
Virginia State University, 1974
State University of New York, Oneonta, 1974
University of Oregon, 1974
University of Alberta, Canada, 1974
College of William and Mary, 1975
Purdue University, 1977, 1984
University of Kentucky, 1978
University of Missouri, Columbia, 1980
Department of Education, State of Georgia, 1981
North Carolina State University, 1983
Northern Rivers College of Advanced Education, Lismore, Australia, 1984 (3)
Western Australian Institute of Technology, Perth, Australia, 1984 (5)
Western Australian Department of Education, Perth, Australia, 1984
Churchlands College of Advanced Education, Perth, Australia, 1984
Centro de Investigacion en Matematicas, Guanajuato, Mexico, 1984
National Science Foundation, Washington, DC, 1984, 1986
Maryland Educational Television, Baltimore MD, 1984
University of Maryland, 1985
Purdue-Indiana University at Ft. Wayne, 1985
Georgia State University, 1986
San Jose State University, 1986
Ball State University, 1986
Macalester College, St. Paul, 1986
Colorado School of Mines, Golden CO, 1986
East Tennessee State University, 1987, 1988, 1989
Appalachian State University, 1989
University of Georgia, 1993, 1998, 2002
Kongju National University, Korea, 2000

University Service

Committee on Teaching the Disadvantaged, College of Education, UGA, 1969-70.
Computer Subcommittee of the Academic Affairs Committee, Teachers College, Columbia University, 1973-4.

International Conversations on Teacher Education in Mathematics (Pre-session to ICME-4), University of Georgia, 4-7 August 1980 (paper presented).

Fourth International Congress on Mathematical Education, Berkeley CA, 10-16 August 1980 (paper presented and published).

Conference on Mathematical Abilities, University of Georgia, 12-14 June 1980 (NSF sponsored).

Conference on the Impacts of the Microcomputer on Secondary School Mathematics Curricula, University of Maryland, 24-27 October 1982 (NSF sponsored).

Fifth International Congress on Mathematical Education, Adelaide, Australia, 24-30 August 1984 (two invited papers, three presentations, published in proceedings).

Conference on Proposal Preparation for Teacher Preparation and Enhancement Projects, Purdue/Indiana University at Ft. Wayne, October 1985 (NSF representative, keynote speaker).

Conference on Proposal Preparation for Teacher Preparation and Enhancement Projects, Ball State University, March 1986 (NSF representative, keynote speaker).

Mathematical Sciences Education Board Conference on Policy Implications from International Studies, National Academy of Sciences, Washington DC, 15-17 January 1987 (NSF sponsored).

National Science Foundation Teacher Preparation Conference, Washington DC, 6 March 1987 (NSF sponsored).

Conference on The Learning and Teaching of Algebra (NCTM Research Agenda Project), University of Georgia, 25-28 March 1987 (NSF supported).

Conference on the Epistemological Foundations of Mathematical Experience, University of Georgia, 26-28 February 1988 (invited paper).

Conference on the Revision of Introductory College Science Courses for Teacher Preparation and the Liberal Arts (Airlee VA), 4-9 June 1988 (NSF sponsored).

Sixth International Congress on Mathematical Education, Budapest, Hungary, 27 July -3 August 1988 (recipient of NSF travel award, invited paper presented and published).

Second Annual Conference for North Carolina Mathematics Educators, Charlotte NC, 31 May - 1 June 1989 (invited paper).

Conference on Exploring New Technologies for Reform in Teaching and Learning Multiplicative Structures, Pittsburgh PA, 3 September 1989 (NSF supported).

International Conference on Research on Fraction Learning, Athens GA, 29-31 January 1993 (NSF supported).

Conference on Joining Forces: Spreading Successful Strategies, Washington DC, National Science Foundation & Department of Education, 23-25 February 1995 (NSF supported).

First Annual Research Initiative Symposium, Vinton County OH, Project ACCLAIM (Appalachian Collaborative Center for Learning, Assessment, and Instruction in Mathematics), National Science Foundation Center for Learning and Teaching, November 3-6, 2002.

Invited to Second Annual Research Initiative Symposium, Project ACCLAIM (Appalachian Collaborative Center for Learning, Assessment, and Instruction in

Teaching Children Mathematics, Journal for Mathematical Behavior, Computing Teacher.
Advisory Board for the Research Initiative, Project ACCLAIM (Appalachian Collaborative Center for Learning, Assessment, and Instruction in Mathematics), National Science Foundation Center for Learning and Teaching, 2001-6.
Member, Editorial Panel & Distinguished Guest Editor, Journal of the Korean School Mathematics Society, 2002-present.
Workshop on Early Algebraic Readiness for 34 Grades K-4 teachers, Gwinnett County Public Schools, June 10-13 & 20, 2003.

Conference Participation

Conference on Computer-Assisted Instruction and Teaching of Mathematics, Pennsylvania State University, 24-26 September 1968 (NSF sponsored).
Conference on Piagetian Cognitive Development Research in Mathematical Education, Teachers College, Columbia University, 19-23 October 1970 (NSF sponsored).
Conference on Redesigning Teacher Education, Association of Organizations for Teacher Education, St. Louis, 10-11 May 1973 (NCTM representative).
Conference on Mathematics Resource Materials, Project for Mathematics Resource Materials, University of Oregon, 9-12 June 1974 (NSF sponsored; invited paper presented and published).
Teaching Strategies Research Workshop, Georgia Center for the Study of Learning and Teaching Mathematics, Athens, 16-19 February 1975 (NSF sponsored, co-PI).
Number and Measurement Learning Research Workshop, Georgia Center for the Study of Learning and Teaching Mathematics, Athens, 13-17 April 1975 (NSF sponsored, co-PI).
Space and Geometry Research Workshop, Georgia Center for the Study of Learning and Teaching Mathematics, Athens, 4-8 May 1975 (NSF sponsored, co-PI).
Models for Learning Mathematics Research Workshop, Georgia Center for the Study of Learning and Teaching Mathematics, Athens, 11-14 May 1975 (NSF sponsored, co-PI).
Problem Solving Research Workshop, Georgia Center for the Study of Learning and Teaching Mathematics, Athens, 16-19 February 1975 (NSF sponsored, organizer and director, invited paper presented and published).
Third International Congress on Mathematical Education, Karlsruhe, Federal Republic of Germany, 16-21 August 1976 (organized and conducted 3 sessions, invited paper presented and published).
Science/Mathematics Peace Corps Conference, University of Maryland, 8-10 September 1977 (U.S. Peace Corps sponsored).
Conference of the Applied Problem Solving Group of the Georgia Center for the Study of Learning and Teaching Mathematics, Northwestern University, 5-7 January 1978 (NSF sponsored, invited paper presented).
Conference on the Use of the Computer in Secondary Schools, Western Carolina University, Raleigh, 21-23 April 1980, (NSF sponsored, invited paper presented and published).

Keynote Speaker, Nebraska Mathematics Scholars Institute (NSF supported), University of Nebraska-Lincoln, 1987-88.

Advisor, processing proposals for the Teacher Preparation Program, National Science Foundation, 1978-8.

Visiting Scholar, lectures and workshops at MATHCAPS Teacher Enhancement Project (NSF supported), East Tennessee State University, 1987-89.

Advisor, Elementary school mathematics textbook program planning, Houghton Mifflin Company (Boston), 1987.

Speaker, North Gwinnett High School Mathematics Club, Lawrenceville GA, 1988.

Speaker, George Walton Academy Mathematics Club, Monroe GA, 1989.

Reviewer, Research into Practice monographs project (NSF supported), National Council of Teachers of Mathematics, 1990.

Workshop on the interactions of school science and mathematics, Fayette County (GA) Schools, 1990.

External Program Review Committee, National Science Foundation, 11-12 June 1991.

Program Conceptualizer, high school mathematics textbooks, Holt, Rinehart & Winston, 1991-95.

Nationally selected author for writing published textbook from “Math A” project, California Department of Education, 1991-94.

Workshop Leader, State Conference for “Math A” Leaders, California Department of Education, 20-21 February 1992.

Workshop Leader for trainers of “Math A” staff development programs, California Department of Education, 20-21 May 1992.

“Math A” Workshops, San Diego Department of Education, 24-26 August 1992 & 5 November 1992.

Advisor, Georgia Initiative in Mathematics and Science (NSF supported), UGA, 1992-93.

Workshops on Investigations in Mathematics (Augusta, Atlanta), Glencoe Publishers, 11-12 May, 1993.

Workshop, Teaching Strategies for Investigating Mathematics in Middle School, Ellijay (GA) Schools, 1 June 1993.

Site Visitation & External Evaluator, Western Mathematics Scholars Program (NSF supported), University of Nebraska-Lincoln (Chadron), 18-20 July 1993.

Member, Instructional Systems Subcommittee, Governor’s Task Force on Educational Computing, Georgia Department of Education, 1993-94.

Speaker, Oglethorpe Elementary School, Oglethorpe County (GA) Schools, 7 March 1995.

Member, Mathematics Textbook Selection Committee, Oglethorpe Elementary School, Oglethorpe County (GA) Schools, 1995.

Speaker, Mu Alpha Theta Mathematics Club, Elbert County High School, 20 March 1995.

Speaker, Mathematics Awards Banquet, Cobb County (GA) Schools, 1 May 1995.

Referee, including: Journal for Research in Mathematics Education, Mathematics Teacher, Arithmetic Teacher, Mathematics Teaching in the Middle School,

Workshop on instructional computing, Computer Council, Northeast Georgia CESA, 1981.

Workshop on Mathematical Problem Solving, Fowler Drive Elementary School, Clarke County (GA) Schools, 1981.

Committee on Uses of Technology, Georgia Council of Teachers of Mathematics, 1981-3 (co-chair).

Field Editor, School Microcomputing Bulletin, 1981-3.

Workshop on instructional computing, Social Circle (GA) Schools, 1982.

Workshop on instructional computing, Curriculum Directors' Conference, Georgia Department of Education, 1982.

Speaker, Faculty conference on computers in the classroom, Bethlehem Elementary School, Barrow County (GA) Schools, 1983.

Workshop on instructional computing for administrators, Elbert County (GA) Schools, 1983.

Keynote Speaker, "New Trends in the Psychology of Mathematics Instruction" Institute, Fordham University, New York, 1983.

Workshops on mathematical problem solving and instructional computing, Glynn County (GA) Schools, 1983.

Workshop Leader, Instructional computer for state mathematics supervisory staff, North Carolina Department of Education, 1984.

Advisor, Instructional computing and mathematics education program development, Northern Rivers College of Advanced Education, Lismore, Australia, 1984.

Advisor, Instructional computing and mathematics education program development, Western Australian Institute of Technology, Perth, Australia, 1984.

Speaker, Instructional Computing (for curriculum staff), Western Australian Department of Education, Perth, Australia, 1984.

Speaker, Instructional Computer (for faculty and students), Churchlands College of Advanced Education, Perth, Australia, 1984.

Advisor to establish M.A. and Ph.D. programs of study in mathematics education, Centro de Investigacion en Matematicas, University of Guanajuato, Mexico, 1984.

Workshops on using computers in school mathematics, Norfolk (VA) Public Schools, 1984-5.

Advisor, Project for Middle School Mathematics Teacher Education, Southern Educational Communications Association, Columbia SC, 1984-6.

Advisor, planning for a state educational computing curriculum guide, Georgia Department of Education, 1985.

Advisor, development of an RFP, Division of Teacher Preparation and Enhancement, National Science Foundation, 1986-7.

Workshops on mathematical problem solving and program improvement, Millard Public Schools, Omaha, 1986-7.

Panel Chair & Proposal Reviewer, Teacher Enhancement Program, National Science Foundation, 1986, 1987.

External Reviewer and Advisor, continuation grant for the Mathematical Sciences Education Board of the National Academy of Sciences, National Science Foundation, 1987.

Advisor, Mathematics Program Improvement with Computers and Problem Solving Project, Coweta County (GA) Schools, 1976-80.

Workshop Leader, Ashburn GA Schools, 1977.

Advisor, Project for Mathematical Problem Solving in the Elementary School Classroom (NSF supported), University of Missouri, Columbia, 1977.

Advisor, Project on Using Calculators in Elementary School Mathematics (NSF supported), Purdue University, 1977.

Interviewer, Governor's Honors Program, Georgia Department of Education, 1977-81.

Advisor & Item Reviewer, Development of criterion-referenced tests for middle grades mathematics teachers, Georgia Department of Education, 1977-9.

Advisor & Workshop Leader, Mathematics Curriculum Planning and Improvement, Glynn County (GA) Schools, 1978.

Proposal Reviewer, Research in Science Education Program, National Science Foundation, 1978.

Workshop Leader, Institute on Mathematical Problem Solving (NSF supported), University of Kentucky, 1978.

Advisor, Item Writer & Reviewer, Development of the grade eight criterion-referenced mathematics test, Georgia Department of Education, 1978-80.

Workshop Leader, Using Computers in Instruction (for curriculum directors and principals), Houston County (GA) Schools, 1979.

Workshop Leader, Applied Problem Solving (for mathematics and science teachers), Newton County (GA) Schools, 1979.

Workshop Leader, Using Computers in Mathematics, Morgan County (GA) Schools, 1979-81.

Speaker, Atlanta Metro Mathematics Club, 1980.

Proposal Reviewer, Research in Science Education Program, National Science Foundation, 1980.

Workshop Leader, Computers in Mathematics (for curriculum directors and principals), Northeast Georgia CESA, 1980.

Workshop Leader, Instructional Computing (Athens, Macon, Rome), UGA Institute of Government & Georgia Department of Education, 1980.

Advisor, Computer Science Institute Project (NSF supported), Michigan State University, 1980.

Task Force for the Middle Grades Mathematics Curriculum Guide, Georgia Department of Education, 1980-1.

Speaker, Governor's Honors Program, Georgia Department of Education, 1980.

Advisor, Instructional Computing Task Force, Georgia Department of Education, 1980-3.

Workshop Leader, Computers in Mathematics Teaching, Clayton County (GA) Schools, 1981.

Workshop Leader, Computer Applications for Elementary Mathematics Teachers, Clarke County (GA) Schools, 1981.

Editorial Advisor, Special issue of Today's Education, National Education Association, 1981.

PROFESSIONAL SERVICE

Education Agencies or Organizations

- Teaching Protocols Project, Associated Colleges of the Midwest, 1965-6 (television teacher; video editor).
- Professional Standards Committee, Minnesota Council of Teachers of Mathematics, 1966-68, chair.
- Program Committee, Twentieth Annual Spring Conference of the Minnesota Council of Teachers of Mathematics, 1967-8, chair.
- University Vice-president to the Board of Directors, Minnesota Council of Teachers of Mathematics, 1966-68.
- Keynote, Conference on Instructional Computing (McDonnell Automation and Scott, Foresman and Co supported), St. Louis, 1969.
- Keynote, Conference on Computer-Assisted Problem Solving, Niagara Falls University, 1969.
- Computer Implementation Workshop Leader, Lee County (FL) Schools (Ft. Myers), 1970 & 1976.
- Advisor, Mathematics Around Us elementary school mathematics textbook development, Scott, Foresman and Company, 1970-1.
- Commission on Pre-service Education of Teachers of Mathematics, National Council of Teachers of Mathematics, 1970-3 (chair, 72-3).
- Steering Committee, American Educational Research Association, SIG/Research in Mathematics Education, 1971-2.
- Math/Methods Project (NSF supported), Indiana University, 1972.
- Advisor, Computer Implementation Project, Douglas County (GA) Schools, 1972-5.
- Ad hoc Committee to Study the Council's Effectiveness, Georgia Council of Teachers of Mathematics, 1973-4 (chair and report author).
- Unified Science and Mathematics in the Elementary School Project (NSF supported), Education Development Center (Boston), 1973-7 (Implementation leader).
- Advisor, Mathematics Program Improvement, Woodward Academy, Atlanta, 1974.
- Publications Committee, National Council of Teachers of Mathematics, 1973-6; Subcommittee on Yearbooks, Professional References, and Journals, 1974-6 (chair).
- Advisor, Computers in Collegiate Mathematics Project, Virginia State College, Petersburg, 1974.
- Advisor, Project on Problem-Solving Strategies and Applications of Mathematics in the Elementary School (NSF supported), Indiana University, 1974.
- National Advisory Board, Project for Resource Materials for Middle School Mathematics, University of Oregon (NSF supported), 1974-6.
- Advisor and Item Writer, National Assessment of Educational Progress, Denver, 1974-7.
- Contributing Editor, Journal of Mathematical Behavior, 1974-88.
- Program Committee for the 1976 Annual Meeting, National Council of Teachers of Mathematics, 1975-6.
- External Reviewer for Standard 23, Georgia Department of Education, 1976-7.

National Council of Teachers of Mathematics Columbus Meeting, 10-12 March 1993: Project LITMUS: Using technology to stimulate reform of mathematics teaching.

California Mathematics Council--Southern Section 34th Annual Fall Conference (Palm Springs), 4-6 November 1993: Investigating mathematics: An interactive approach.

California Mathematics Council--Southern Section 34th Annual Fall Conference (Palm Springs), 4-6 November 1993: Mathematical investigation: Teaching strategies for "Math A" teachers.

Georgia Council of Supervisors of Mathematics Annual Meeting (Savannah), 3 February 1994: Reform of mathematics teaching.

Georgia Council of Teachers of Mathematics Rock Eagle Mathematics Conference, 20-22 October 1994: Why do we teach school mathematics? (General Session).

Georgia Educational Technology Conference (Columbus), 19 April 1995: Project LITMUS: Goals and activities for mathematics teaching with technology tools.

Southern Regional Educational Board's National "High Schools that Work" Conference (Atlanta), 13 July 1995: Investigating mathematics: Strategies for reforming mathematics teaching.

International Conference on Technology in Mathematics Teaching (Edinburgh, Scotland), 4-7 September 1995: Project LITMUS: Using computing technologies to stimulate improvements in school mathematics teaching.

Georgia Independent Schools Association Annual Conference (Athens), 4 November 1996: Constructive approaches to teaching mathematics.

Ohio University Conference on Teacher Enhancement Projects (Athens OH), 13-14 March 1998: Helping mathematics teachers: Perspectives on professional growth through teacher enhancement projects (keynote address).

Minnesota Council of Teachers of Mathematics Spring Conference (Brainerd MN), 23-25 April 1998: Reflections on computers in school mathematics: CAMP +30.

National Council of Teachers of Mathematics Research Pre-session (San Francisco CA), 20 April 1999: Perspectives, issues, and strategies for research in system-wide teacher enhancement projects (organizer for "Toward Research and Theory in System-wide Teacher Enhancement Projects: Perspectives, Issues, and Strategies for Investigations in Reform Partnerships" Work Session).

Ninth International Congress on Mathematical Education (Tokyo, Japan), 31 July - 6 August 2000: Factors for Affecting Reforms of Mathematics Teaching Practices in U.S. Schools.

Second Annual Meeting of the Korean School Mathematics Society (Kongju National University Korea), 7-9 August 2000: Perspectives on the field of mathematics education: Toward global development and reconstruction. (keynote address).

First Annual Research Initiative Symposium (ACCLAIM, Ohio University), 3-6 November 2002: "Up the back holler, down the dusty road, cross the windy prairie": Issues, perspectives and strategies for research in the crisis of improving mathematical education of rural youth.

National Council of Teachers of Mathematics Research Pre-session (San Antonio TX), 7-9 April 2003: Issues, perspectives and strategies for research in the crisis of improving mathematical education of rural youth.

Southeast Regional Mathematics and Science Conference (Bristol VA), 29-30 April 1988: Conceptual development of fractions and decimals.

Sixth International Congress on Mathematical Education (Budapest, Hungary), 27 July -3 August 1988: Preparing early childhood teachers for constructive mathematical environments.

Twenty-fifth Virginia Annual State Mathematics Conference (Williamsburg), 21-22 October 1988: School mathematical experience: Then, now, and maybe (keynote address).

Twenty-fifth Virginia Annual State Mathematics Conference (Williamsburg), 21-22 October 1988: Techniques for recognizing misconceptions in mathematics.

National Council of Teachers of Mathematics Omaha Meeting, 16-18 March 1989: Possibly potent pedagogical perspectives: Ideas from research on mathematics learning and teaching.

National Council of Teachers of Mathematics Omaha Meeting, 16-18 March 1989: Mathematical experience: Does it happen in school mathematics?

Georgia Association of Teacher Educators Annual Meeting (Macon), 12 October 1989: NCTM Standards for Curriculum and Evaluation in School Mathematics: An overview with implications for teacher education.

Georgia Council of Teachers of Mathematics Rock Eagle Mathematics Conference, 19-21 October 1989: Interactions of science and mathematics.

North Carolina Council of teachers of Mathematics Western Regional Conference (Charlotte), 1-2 March 1990: The NCTM Standards should be implemented in the schools (pro in a public debate).

North Carolina Council of teachers of Mathematics Western Regional Conference (Charlotte), 1-2 March 1990: Exploring problematic situations: Themes from the NCTM Standards.

Third Annual International Conference on Technology in Collegiate Mathematics (Columbus OH), 10 November 1990: Examples of technology applications from Project LITMUS.

Georgia Council of Teachers of Mathematics Rock Eagle Mathematics Conference, 17-19 October 1991: Project LITMUS: A model for teacher enhancement in Georgia.

National Council of Teachers of Mathematics Albuquerque Meeting, 7-9 November 1991: Interactions of science and mathematics.

Fourth Annual International Conference on Technology in Collegiate Mathematics (Portland OR), 15-17 November 1991: An overview of Project LITMUS: Examples of technology in the classroom.

Seventh International Congress on Mathematical Education (Quebec, Canada), 16-23 August 1992: Project LITMUS--A teacher education model for comprehensive implementations of computing technologies in K-12 mathematics for two rural Georgia school systems.

Georgia Council of Teachers of Mathematics Rock Eagle Mathematics Conference, 15-17 October 1991: Continuing activities of Project LITMUS.

California Mathematics Council--Southern Section 33rd Annual Fall Conference (Palm Springs), 6-8 November 1992: Goals and strategies for "Math A" teachers.

Fifth International Congress on Mathematical Education (Adelaide, Australia), 24-30 August 1984: Developing didactical knowledge for instructional computing in school mathematics.

Fifth International Congress on Mathematical Education (Adelaide, Australia), 24-30 August 1984: Constructing intuitions of algebra in elementary school mathematics.

Fifth International Congress on Mathematical Education (Adelaide, Australia), 24-30 August 1984: Preparing teachers for instructional computing in school mathematics.

Georgia Council of Teachers of Mathematics Rock Eagle Mathematics Conference, 18-20 October 1984: Constructing ideas about fractions and decimals.

National Council of Teachers of Mathematics Annual Meeting (San Antonio), 17-21 April 1985: Theoretical perspectives for algorithmics and student programming in school mathematics (research symposium organizer, chair, speaker).

World Conference on Computers in Education (Norfolk), 29 July - 2 August 1985: Toward comprehensive instructional computing in mathematical education.

Nebraska Association for the Gifted (Kearney), 6-7 March 1986: Educating the gifted in mathematics: Perspectives, priorities and problems (keynote address).

Nebraska Association for the Gifted (Kearney), 6-7 March 1986: Constructing problematic approaches in your teaching of mathematics.

Nebraska Association for the Gifted (Kearney), 6-7 March 1986: The teacher and the computer: Toward comprehensive instructional computing for gifted students.

National Council of Teachers of Mathematics Annual Meeting (Washington, DC), 2-5 April 1986: Constructing concepts of variable: In search of 'x.'

Indiana Association for Curriculum Development (Indianapolis), 19 April 1986: Why teach problem solving? (plenary address)

Colorado Alliance for Science and Mathematics (Golden), June 1986: Teaching for mathematical problem solving.

Colorado Alliance for Science and Mathematics (Golden), June 1986: Leadership strategies for improving your mathematics education program.

Mathematical Association of America Annual Meeting (San Antonio), 21-24 January 1987: Possible roles of mathematicians in pre-college mathematics education.

National Council of Teachers of Mathematics Annual Meeting (Anaheim), April 1987: The learning and teaching of mathematical problem solving.

National Council of Teachers of Mathematics Annual Meeting (Anaheim), April 1987: Research in mathematics education at the National Science Foundation (symposium organizer).

Southwest Virginia Council of Teachers of Mathematics & Upper East Tennessee Council of Teachers of Mathematics Fall Conference (Emory VA), 26 September 1987: Constructing fractions and decimals in middle grades mathematics.

National Council of Teachers of Mathematics Annual Meeting (Chicago), 6-9 April 1988: Investment opportunities for the National Science Foundation in mathematics education.

Southeast Regional Mathematics and Science Conference (Bristol VA), 29-30 April 1988: Problematic approaches to teaching mathematics.

Executive Council for Mathematics of The University System of Georgia Annual Meeting (Georgia College), 2 March 1981: Instructional computing in undergraduate mathematics and mathematics teacher education.

National Council of Teachers of Mathematics Research Pre-session (St. Louis), 21 April 1981: Invention in mathematics learning.

National Council of Teachers of Mathematics Annual Meeting (St. Louis), 22-25 April 1981: Computers in learning and teaching of mathematics.

National Council of Teachers of Mathematics Lexington Meeting, 24-26 September 1981: Implications of computers for the learning of mathematics.

Alabama Council of Teachers of Mathematics District IV Math-o-rama, 19 October 1981: Microcomputers and mathematics learning: Uses and abuses.

Georgia Council of Teachers of Mathematics Rock Eagle Mathematics Conference, 29-31 October 1981: Computers in the classroom: Get your “hands on” one!

National Council of Teachers of Mathematics Minneapolis/St. Paul Meeting, 12-14 November 1981: Roles and impacts of computer programming in school mathematics.

National Council of Teachers of Mathematics Atlanta Meeting, 4-6 March 1982: What? A computer in my classroom?

National Council of Teachers of Mathematics Atlanta Meeting, 4-6 March 1982: Hmmm, what’s the difference? (a live demonstration lesson).

Georgia Department of Education State Conference of Curriculum Directors, 5 April 1982: Trends in school mathematics curricula.

Georgia Department of Education State Conference of Curriculum Directors, 5 April 1982: Curricular impacts of instructional computing.

National Council of Teachers of Mathematics Annual Meeting (Toronto), 14-17 April 1982: Integrating computer programming into mathematics learning.

Commission Internationale pour l’Etude et l’Amélioration de l’Enseignement des Mathématiques XXXIV International Meeting (Orleans, France), 31 July - 6 August 1982: Toward comprehensive instructional computing in mathematics (keynote plenary address).

International Group for the Psychology of Mathematics Education (North American Chapter) Annual Meeting, 23-25 October 1982: Instructional computing in learning and teaching mathematics (plenary address).

Michigan Council of Teachers of Mathematics Annual Meeting (Flint), October 1983: The teacher and the computer: Toward comprehensive instructional computing (keynote address).

Michigan Council of Teachers of Mathematics Annual Meeting (Flint), October 1983: Mathematical problem solving and computer applications.

National Association for Gifted Children Annual Meeting (Philadelphia), November 1993: Mathematical education for the gifted in an informational society: Radical reconstruction or the tyranny of tradition? (keynote address)

National Council of Teachers of Mathematics Annual Meeting (San Francisco), 24-28 April 1984: Concepts of fractions and decimals: A prototype of comprehensive instructional computing.

National Council of Teachers of Mathematics Norfolk Meeting, 4-6 November 1976:
Teaching mathematics for and via problem solving.

National Council of Teachers of Mathematics Annual Meeting (Cincinnati), 20-23
April 1977: Some recent developments for problem-solving emphases in
elementary mathematics instruction.

National Council of Teachers of Mathematics Winston-Salem Meeting, 3-5
November 1977: Applications of the Soviet-inspired “teaching experiment.”

National Council of Teachers of Mathematics Winston-Salem Meeting, 3-5
November 1977: Teaching about problem solving.

Georgia Council of Teachers of Mathematics District Meeting (Gainesville), 17
February 1978: Constructing problem-solving competence in mathematics.

National Council of Teachers of Mathematics Annual Meeting (San Diego), 15-18
April 1978: Prospects and issues in employing “teaching experiments” in
American mathematical education research.

National Council of Teachers of Mathematics Annual Meeting (San Diego), 15-18
April 1978: Children’s constructions of computational algorithms.

Association for Educational Data Systems Annual Meeting (Atlanta), May 1978:
Multi-usage approaches to computer-extended instruction.

National Council of Teachers of Mathematics Richmond Meeting, 2-4 November
1978: A potpourri of problems.

National Council of Teachers of Mathematics Richmond Meeting, 2-4 November
1978: Developing teaching competence for instructing mathematical problem
solving.

Georgia Council of Teachers of Mathematics District Meeting (Statesboro), 17
February 1979: Applications of computing to mathematics education.

American Educational Research Association Annual Meeting (San Francisco), 8-12
April 1979: Mathematical abilities (symposium co-organizer and chair).

National Council of Teachers of Mathematics Annual Meeting (Boston), 18-21 April
1979: Clinical approaches to research on mathematical abilities.

Georgia Council of Teachers of Mathematics District Meeting (Cornelia), 16
February 1980: Using computers in middle school mathematics.

National Council of Supervisors of Mathematics Annual Meeting (Seattle), 14-16
April 1980: Computers in the schools--the supervisor’s view.

National Council of Supervisors of Mathematics Annual Meeting (Seattle), 14-16
April 1980: Introduction to microcomputers in mathematics instruction.

National Council of Teachers of Mathematics Annual Meeting (Seattle), 16-19 April
1980: Computers in mathematics instruction.

Fourth International Congress on Mathematical Education (Berkeley CA), 10-16
August 1980: Computers in mathematics teacher education.

National Council of Teachers of Mathematics Marquette Meeting, 25-27 September
1980: Implications of computers for the learning of mathematics.

National Council of Teachers of Mathematics Orlando Meeting, 15-18 October 1980:
Multi-usage approaches to computer-extended instruction.

Association of American Schools in South America Annual Meeting (Atlanta), 12
February 1981: The role and future of microcomputers in instruction.

American Educational Research Association Annual Meeting (New York), 3-6 February 1971: Computers in mathematical instruction (research symposium organizer, chair, presenter).

National Council of Teachers of Mathematics Annual Meeting (Anaheim CA), 15-17 April 1971: Computer-extended problem solving and enquiry -- A review and critique of research.

National Council of Teachers of Mathematics Ft. Lauderdale Meeting, 14-16 October 1971: Involving your indifferents and inactives: Intuition, inquiry, induction.

Arkansas State University Mathematics Education Conference, 16 October 1971: Some calculus of finite differences and heuristics.

National Council of Teachers of Mathematics Birmingham Meeting, 28-30 October 1971: Tables, graphs, rules --- A problem-solving approach to functions with low achievers.

Georgia Council of Teachers of Mathematics Rock Eagle Mathematics Conference, 20-21 October 1971: An institute approach to mathematics program improvement.

National Council of Teachers of Mathematics Charleston Meeting, 5-7 April 1973: Computer applications to mathematics instruction.

National Council of Teachers of Mathematics Annual Meeting (Houston), 25-28 April 1973: Past, present and proposed activities of the NCTM Commission on Pre-service Education of Teachers of Mathematics.

Peninsula Council of Teachers of Mathematics (charter meeting, College of William and Mary), 14 May 1973: Conceptions of an effective professional organization for mathematics educators (keynote address).

National Council of Teachers of Mathematics Atlanta Meeting, 25-27 October 1973: A basic BASIC scene, or "Everything you've ever wanted to know about computers but were afraid to ask."

Association of Teachers of Mathematics of New England Annual Meeting (Boston), 13 February 1974: The energy crisis in mathematical education -- trends, issues, prospects (keynote address).

National Council of Teachers of Mathematics Minneapolis Meeting, 18-20 October 1974: Getting it all together -- with computers.

American Educational Research Association Annual Meeting (Washington DC), 30 March-3 April 1975: General heuristics in the instruction of mathematical problem solving.

Georgia Council of Teachers of Mathematics Rock Eagle Mathematics Conference, 30 October-1 November 1975: Heuristic ploys: Teaching for and about problem solving.

California Mathematics Council--Southern Section Annual Conference (Anaheim): 7-9 November 1975: "Getting it together" via multi-usage CEI.

Third International Congress on Mathematical Education (Karlsruhe, Federal Republic of Germany), 16-21 August 1976: The Problem Solving Project of the Georgia Center for the Study of Learning and Teaching Mathematics.

Georgia Council of Teachers of Mathematics Rock Eagle Mathematics Conference, 28-30 October 1976: Teaching about problem solving? Of course, but WHEN?

- Program (April 2000 - August 2001) grant: \$58,950. [Project Director, co-Principal Investigator]
- Business-To-Teaching: Georgia Academy for Mid-Career Change. U.S. Department of Education & Georgia Board of Regents (July 2000 – May 2001) grant: \$57,000. [Project Coordinator, Mathematics Education]
- Getting Ready for Algebra: Helping Grades 5-8 Teachers Develop Students' Algebraic Thinking. Eisenhower Higher Education Program (March 2002 - August 2003) grant: \$42,228. [Project Director & PI]
- Early Algebraic Readiness in Upper Grades Mathematics: Helping Gwinnett and Walton Counties Grades 5-6 Teachers Develop Older Children's Algebraic Thinking. Improving Teacher Quality Program (March 2003 - August 2004) grant: \$44,883. [Project Director & PI]
- Early Algebraic Readiness in Elementary Mathematics: Helping Newton County Grades K-6 Teachers Develop Children's Algebraic Thinking. Improving Teacher Quality Program (March 2004 - July 2005) grant: \$33,648. [Project Director & PI]
- Building Up Their Math: Helping Grades K-5 Teachers Develop Young Children's Mathematical Thinking. Improving Teacher Quality Program (March 2005 - July 2006) grant: \$45,609. [Project Director & PI]
- Building Up Mathematics: Helping Grades 3-5 Teachers & Academic Coaches in Hall County Elementary Schools to Develop Children's Mathematical Thinking (May 2007 – June 2008) grant: \$52,997. [Project Director & PI]
- Teaching the GPS Math 1: Helping Grade 9 Teachers Achieve Excellence in Hall County and Statewide (pending May 2008 – July 2009) grant request: \$110,753. [Project Director & PI]
- Building Up Mathematics: Helping Grades K-5 Teachers in Oglethorpe County Elementary Schools to Develop Children's Mathematical Thinking within the Georgia Performance Standards (pending May 2008 – July 2009) grant request: \$59,476. [Project Director & PI]

PAPERS AND PRESENTATIONS

- National Council of Teachers of Mathematics Annual Meeting (Philadelphia), 19-21 April 1968: Report of investigations with computing of the Computer-Assisted Mathematics Project, University of Minnesota High School.
- National Council of Teachers of Mathematics Annual Meeting (Minneapolis), 24-26 April 1969: Computers in mathematics instruction: A review of research.
- Georgia Council of Teachers of Mathematics Rock Eagle Mathematics Conference, 14 November 1969: Using the computer laboratory to study continued fractions.
- National Council of Teachers of Mathematics Annual Meeting (Washington DC), 1-4 April 1970: Patterns for professional progress (Report of the Commission on Pre-service Mathematics Teacher Preparation).
- Florida Council of Teachers of Mathematics Annual Meeting (Miami), 24 April 1970: Guidelines and procedures for implementing a computer-extended laboratory for school mathematics (luncheon speaker).
- National Council of Teachers of Mathematics Atlanta Meeting, 19-21 November 1970: The computer laboratory: Some “do’s and don’ts.”

Georgia Center for the Study of Learning and Teaching Mathematics. National Science Foundation (1976-1980) research grant: \$75,110. [proposal coauthor, co-Principal Investigator, Director of the Problem Solving Project]

Mathematical Abilities Project. National Science Foundation (1977-80) research grant: \$133,500. [co-Principal Investigator]

Computers and Mathematical Problem Solving. Eisenhower Higher Education Program (1988-89) grant: \$16,000. [Project Director]

Interactions of Science and Mathematics: A Leadership Workshop for Middle and High School Mathematics Teachers. Eisenhower Higher Education Program (1989-90) grant: \$16,000. [Project Director]

Video Demonstrations of Interactions of Science and Mathematics for Mathematics Teachers and Teacher Educators. Eisenhower Higher Education Program (1989-90) grant: \$52,794. [Project Director]

An Investigation of the Beliefs, Values, and Perceptions of Science and Mathematics Teachers Related to Instructional Applications of Computing Technologies. Eisenhower Higher Education Program (1989-90) grant: \$131,057. [Project Director, co-Principal Investigator]

Leadership Infusion of Technology in Mathematics and Its Uses in Society (Project LITMUS). National Science Foundation (May 1990 - August 1997) Teacher Enhancement grant: \$1,836,780. [project initiator, proposal author, Project Director, co-Principal Investigator]

InGEAR: Integrating Gender Equity and Reform. National Science Foundation (1995-1998) subcontract (from Georgia Institute of Technology): \$157,000. [Site Director, co-Principal Investigator, 1995-96]

The Math Forum: Teachers Mentoring Teachers via the Internet. National Science Foundation (January 1997 - present) subcontract (from Swarthmore College): \$65,600 [co-Principal Investigator]

Partnerships and Reform in Mathematics Education: A Pre-service Mathematics Teacher Education Model (Project PRIME). Eisenhower Higher Education Program (April 1998 - September 1999) grant: \$32,153. [co-Principal Investigator]

Project Keystone: Planning Innovative M.Ed. Programs for Early Childhood and Middle Grades Mathematics Teaching Specialists. Eisenhower Higher Education Program (July 1999 - August 2001) grant: \$91,697. [Project Director, co-Principal Investigator]

Project Millennium Math: NCTM Standards 2000 at Oglethorpe Avenue Elementary School. Eisenhower Higher Education Program (April 1999 - July 2000) grant: \$30,476. [Project Director]

Project Keystone-in-Rockdale: Preparing Early Childhood and Middle School Mathematics Teaching Specialists. Eisenhower Higher Education Program (May 2000 - May 2003) grant \$223,860. [Project Director]

Millennium Math 2001: Continued Teacher Enhancement at Oglethorpe Avenue Elementary School. Eisenhower Higher Education Program (July 2000 - August 2001) grant: \$38,500. [pending]

Keystone Science: Collaborative Planning M.Ed. Programs for Early Childhood and Middle Grades Science Teaching Specialists. Eisenhower Higher Education

- (1978). Comprehensive implementation of the computer in mathematics instruction. In J. Eisele (Ed.), Proceedings of the annual meeting of the Association for Educational Data Systems. New York: AEDS, pp. 412-4.
- (1980). Multi-usage approaches to computer-extended instruction. In J. Manock & C. Martin (Eds.), The use of the computer in secondary schools. Cullowhee NC: Western Carolina University, pp. 75-86.
- (1982). Instructional computing in learning and teaching mathematics. In S. Wagner (Ed.), Proceedings of the fourth annual meeting of the North American chapter of the International Group for the Psychology of Mathematics Education: Addendum. Athens GA: the authors, pp. 10-31.
- (1983). Toward comprehensive instructional computing in mathematics. In A. Rouchier (Ed.), Proceedings of the XXXIVth Commission Internationale pour l'Etude et l'Amelioration de l'Enseignement des Mathematiques. Orleans, France: IREM, pp. 78-92.
- (1985). Preparing teachers for instructional computing in school mathematics. In G. Jones (Ed.), Proceedings of the theme group on preservice teacher education. Adelaide, Australia: Fifth International Congress on Mathematical Education.
- (1985). Theoretical perspectives for algorithmics and student programming in school mathematics. In L. Hatfield & K. Prichard (Eds.), Student programming and algorithmics in mathematics learning and teaching. Athens GA: The University of Georgia.
- (1991). Preparing early childhood teachers for constructive mathematical environments. Paper from International Congress on Mathematical Education (Budapest, Hungary, August 1990) reprinted in Discipline Review of Teacher Education in Mathematics and Science (Vol 3). Canberra AUS: Australian Government Publishing Service, pp. 166-172.
- (1997). Final report for Project LITMUS (submitted to the National Science Foundation). Athens GA: The University of Georgia.
- (2000). Helping mathematics teachers: Perspectives on professional growth through teacher enhancement projects. In J. Schultz (Ed.), Proceedings of the "Moving on Mathematically" teacher education conference. Athens OH: Ohio University.

GRANTS AND CONTRACTS

- Computer Assisted Mathematics Program---Research and Development in Using Student Programming to Learn and Teach School Mathematics. General Electric Foundation (1964-68) grant: \$10,000. [research fellow]
- Cooperative College-School Mathematics Institute for Houston County, Georgia. National Science Foundation (March 1969 - December 1970) inservice teacher education grant: \$56,783. [Project Director]
- General Heuristics in the Instruction of Mathematical Problem Solving. National Institute of Education (1973-75) Field Initiated Studies grant: \$11,493. [proposal author, Project Director and Principal Investigator]
- Project for the Mathematical Development of Children. National Science Foundation (1974-77) research subcontracts (from Florida State University): \$72,520 & \$115,000. [co-Principal Investigator]

- (1984). Toward comprehensive instructional computing in mathematics. In V. Hansen & M. Zweng (Eds.), Computers in mathematics education (Yearbook). Reston VA: National Council of Teachers of Mathematics, pp. 1-9.
- (1989). The Budapest Congress: A personal reflection. In T. Cooney (Ed.), American perspectives on the Sixth International Congress on Mathematical Education. Reston VA: National Council of Teachers of Mathematics.
- (1990). Preparing early childhood teachers for constructive mathematical environments. In L. Steffe & T. Wood (Eds.), Transforming children's mathematical education: International perspectives. Hillsdale NJ: Lawrence Erlbaum Associates, Publishers, pp. 407-14.
- (1991). Enhancing school mathematical experience through constructive computing activity. In L. Steffe (Ed.), Epistemological foundations of mathematical experience. New York: Springer-Verlag, pp. 238-59.
- (1991). Computers in mathematics education. In T. Husen & T. Postlethwaite (Eds.), The international encyclopedia of education (Supplementary Volume 2). Oxford ENG: Pergamon Press. (coauthor).
- (1994). Investigating mathematics: An interactive approach. Columbus OH: Glencoe Publishing Co., 351 pp.
- (1997). HRW algebra. Austin TX: Holt, Rinehart & Winston. (program conceptualizer).
- (1997). HRW geometry. Austin TX: Holt, Rinehart & Winston. (program conceptualizer & contributing author).
- (1997). HRW advanced algebra. Austin TX: Holt, Rinehart & Winston. (program conceptualizer).
- (2001). On becoming a constructivist mathematics teacher. In F. Stephenson (Ed.) Extraordinary Teachers: The Essence of Excellent Teaching. Kansas City MO: Andrews McMeel Publishing.

Monographs and Technical Reports

- (1972). A secondary methods course emphasizing competencies in teacher behavior. In J. Higgins (Ed.), Promising practices in mathematics teacher education. Columbus OH: ERIC Center for Science, Mathematics and Environmental Education, pp. 29-32.
- (1973). Computer-extended problem solving and enquiry. Columbus OH: ERIC Center for Science, Mathematics and Environmental Education, 35 pp.
- (1974). Developing teacher competencies for evaluating mathematics learning. In A. Hoffer (Ed.), NSF conference on mathematical resource materials. Eugene OR: University of Oregon, pp. 56-68.
- (1974). Attitudes toward mathematics: A comparison of opinions from SSMCIS and accelerated non-SSMCIS students (SSMCIS Evaluation Technical Report No. 12). New York: Columbia University, Secondary School Mathematics Curriculum Improvement Study, 33 pp. (co-author).
- (1975). Brief report of student opinion survey results from SSMCIS and non-SSMCIS classes---1972-3 (SSMCIS Evaluation Technical Report No. 13). New York: Columbia University, Secondary School Mathematics Curriculum Improvement Study, 5 pp. (co-author).

(in preparation). "Where do primes live?" Explorations with sieves. *Mathematics Teaching in the Middle School*.

Books & Chapters

- (1965). Plane geometry. Minneapolis: University of Minnesota General Extension Division, 153 pp.
- (1968). Computer assisted mathematics program: First course. Glenview IL: Scott, Foresman and Company, 278 pp. (principal co-author)
- (1969). Computer assisted mathematics program: First course teacher's commentary. Glenview IL: Scott, Foresman and Company, 242 pp. (principal co-author).
- (1969). Computer assisted mathematics program: Second course. Glenview IL: Scott, Foresman and Company, 246 pp. (co-author).
- (1969). Computer assisted mathematics program: Second course teacher's commentary. Glenview IL: Scott, Foresman and Company, 174 pp. (co-author).
- (1969). Computer assisted mathematics program: Algebra. Glenview IL: Scott, Foresman and Company, 174 pp. (co-author)
- (1969). Computer assisted mathematics program: Algebra teacher's commentary. Glenview IL: Scott, Foresman and Company, 154 pp. (co-author)
- (1969). Computer assisted mathematics program: Intermediate mathematics. Glenview IL: Scott, Foresman and Company, 198 pp. (co-author).
- (1969). Computer assisted mathematics program: Intermediate mathematics teacher's commentary. Glenview IL: Scott, Foresman and Company, 216 pp. (co-author).
- (1969). Computers in mathematics instruction. In J. Wilson & L. Carry (Eds.), Reviews of recent research in mathematics education (Volume XIX, Studies in Mathematics). Stanford CA: Stanford University, School Mathematics Study Group, pp. 129-152.
- (1970). Computer assisted mathematics program: Geometry. Glenview IL: Scott, Foresman and Company, 206 pp. (co-author).
- (1970). Computer assisted mathematics program: Geometry teacher's commentary. Glenview IL: Scott, Foresman and Company, 216 pp. (co-author).
- (1978). Heuristical emphases in the instruction of mathematical problem solving: Rationales and research. In L. Hatfield & D. Bradbard (Eds.), Mathematical problem solving. Columbus OH: ERIC Center for Science, Mathematics, and Environmental Education, pp. 21-42.
- (1978). Research on mathematical problem solving: An overview. In L. Hatfield & D. Bradbard (Eds.), Mathematical problem solving. Columbus OH: ERIC Center for Science, Mathematics, and Environmental Education, pp. 1-5.
- (1979). Forward: The study of problem-solving processes in mathematical education. In G. Goldin & C. McClintock (Eds.), Task variables in mathematical problem solving. Columbus OH: ERIC Center for Science, Mathematics, and Environmental Education, pp. xi-xiii.
- (1981). A case and techniques for computers: Using computers in middle school mathematics. In J. Thomas (Ed.), Microcomputers in the schools, Phoenix AZ: The Oryz Press, pp. 64-7.

- (1982). Instructional computing in mathematics teacher education. *Journal of Research and Development in Education*, (Summer), 30-44.
- (1982). The multi-usage approach. *School Microcomputing Bulletin*, (August 15th), 27-8.
- (1983). Teaching mathematics with microcomputers: Junior high school. *Arithmetic Teacher*, 30 (6), 44-5, 68-9.
- (1983). Instructional computing and the learning of mathematics. *The Virginia Mathematics Teacher*, (Winter), 18-24.
- (1985). Psychological perspectives for instructional computing in mathematics. *Education and Urban Society*, 17 (4), 463-74.
- (1992). Explorations with chance. *Mathematics Teacher*, 84 (4), 281-6.
- (1998). Reflections on computers in school mathematics: CAMP +30. *Sociedad "Puig Adam" de Profesores de Matematicas* (Boletin No. 50), 16-33. [abstract in Zentralblatt fuer Didaktik der Mathematik, 30(4) 1998, #0687, Section U70]
- (2000). Perspectives on the field of mathematics education: Toward global development and reconstruction. *Proceedings of the Korean School Mathematics Society*, 3, 1-8.
- (2004). Up the back holler, down the dusty road, cross the windy prairie: Issues, perspectives and strategies for research in the crisis of improving mathematical education of rural youth. *Proceedings of the First Annual Research Initiative Symposium* (ACCLAIM, Ohio University), 3-6 November 2002.
- (ready to be submitted) Fold, plot, simulate, do algebra: Using technology to help students understand the parabola. *Mathematics Teaching in the Middle School*.
- (in preparation). Children's constructions of computational algorithms: Learning from children's inventions. *Teaching Children Mathematics*.
- (in preparation). How much can you see? Investigations with a view tube. *Journal of the Korean School Mathematics Society*.
- (in preparation). Making sense of variables: Using technology to help middle school students understand algebraic variation. *Mathematics Teaching in the Middle School*.
- (in preparation). Stimulating systemic school mathematics reform: Factors in helping mathematics teachers change their teaching practices. *Journal of Mathematics Teacher Education*.
- (in preparation) Feelings about math: The emotional dimension of mathematical experiences. *Mathematics Thinking and Learning*.
- (in preparation). "How big is your state?" Using Monte Carlo spreadsheets. *Journal of Statistical Education*.
- (in preparation). How to solve it: Mathematical problem solving, revisited.
- (in preparation). When children invent computation: Learning from children's constructions. *Teaching Children Mathematics*.
- (in preparation). "Guess my rule?" Constructing algebraic strategies for finding the rule. *Mathematics Teacher*.
- (in preparation). "Number cousins" Exploring relationships among numbers. *Teaching Children Mathematics*.
- (in preparation). "Where to build it?" Simple computer modeling activities. *Journal of the Korean School Mathematics Society*.

PROFESSIONAL SOCIETIES

National Council of Teachers of Mathematics
International Group for the Psychology of Mathematics Education
North American Group for the Psychology of Mathematics Education
Special Interest Group for Research in Mathematics Education of AERA
Georgia Council of Teachers of Mathematics

HONORS AND AWARDS

Josephine L. Merrium Scholar, Univ. of Minnesota	1958-59
General Motors Scholar, Univ. of Minnesota	1959-60
Research Associate, General Electric Foundation	1965-67
Fellow, National Science Foundation, Western Michigan Univ.	1964-66
Superior Teaching Award, College of Education The Univ. of Georgia Honors Day	1982
College of Education Nominee, Josiah T. Meigs Award	1983
Superior Achievement Employee Award, National Science Foundation	1986
Josiah T. Meigs Award for Excellence in Teaching, The Univ. of Georgia	1990
Fellow, The University of Georgia Teaching Academy	2000-present

PUBLICATIONS

Articles

- (1968). Computer mediated mathematics--a ripple or a wave? *MCTM Newsletter*, pp. 8-9.
- (1969). Patterns for professional progress. *Mathematics Teacher*, 63 (7), 497-503 (principal co-author).
- (1970). An institute approach to mathematics program improvement. *GCTM Newsletter*.
- (1971). The forum: Some pros and cons of performance contracting in mathematics -- con. *Mathematics Teacher*, 65 (7), 485 et seq (co-author).
- (1972). Computer-assisted problem solving in school mathematics. *Journal for Research in Mathematics Education*, 3 (2), 99-112 (co-author).
- (1973). The Guidelines for the preparation of teachers of mathematics. *Mathematics Teacher*, 67 (9), 756-8 (co-author).
- (1973). The Guidelines for the preparation of teachers of mathematics. *Arithmetic Teacher*, 20 (9), 701-3 (co-author).
- (1974). A new approach to the Council's yearbooks. *Mathematics Teacher*, 68 (8), 611-3.
- (1974). A new approach to the Council's yearbooks. *Arithmetic Teacher*, 21 (9), 620-1.
- (1979). A case and techniques for computers: Using computers in middle school mathematics. *Arithmetic Teacher*, 26 (6), 53-5.
- (1979). Teaching and learning mathematical problem solving. *The Virginia Mathematics Teacher*, (February), 9-14.

VITA

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EDUCATION

Univ. of Minnesota	B.S. Mathematics	1962
Western Michigan Univ.	M.A. Mathematics	1966
Univ. of Minnesota	Ph.D. Mathematics Education	1969

(Doctoral dissertation -- Computer-assisted mathematics: An investigation of the computer used as a tool to learn mathematics)

PROFESSIONAL EXPERIENCE

University of Minnesota, Dept of Astronomy Richfield, Minnesota	Research Assistant	1958-62
Senior High School	Mathematics Teacher	1962-63
Univ. of Minnesota High School	Instructor	1963-66
University of Minnesota College of Education	Instructor	1966-68
The Univ. of Georgia College of Education	Assistant Professor of Mathematics Education	1968-72
International Schools of the Hague, Netherlands	Visiting Professor	1970
The Univ. of Georgia College of Education	Associate Professor of Mathematics Education	1972-83
Columbia University Teachers College	Visiting Associate Professor of Mathematical Education	1973-74
The Univ. of Georgia	Graduate Faculty	1976-present
University of Missouri, Columbia	Visiting Associate Professor	1980
The Univ. of Georgia	Professor	1983-present
Western Australian Institute of Technology, Perth	Faculty Fellow	1984
National Science Foundation	Program Director	1985
National Science Foundation	Deputy Division Director	1986
East Tennessee State Univ.	Visiting Professor (summers)	1987, '88, '89
The Univ. of Georgia	Head, Department of Mathematics Education	1993-2000
Josiah T. Meigs Distinguished Teaching Professor	Professor of Mathematics Education	2004-present