

PUBLICATIONS

- Ronau, R. N., Rakes, C. R., Niess, M., Wagener, L., Pugalee, D., Browning, C., Driskell, S., and Mathews, S. (In Press). New directions in the research of technology-enhanced education. In Yamamoto, J. (Ed.), *Technology Leadership in Teacher Education: Integrated Solutions and Experiences*, Information Science Publishing (an imprint of IGI Global) (pp.), Hershey, PA.
- Ronau, R. N., Taylor, P. M., Dougherty, B. J., Pyper, J., Wagener, L. L., and Rakes, C. R. *A Comprehensive Framework for Teacher Knowledge: A Lens for Examining Research*. Submitted to the the Journal of Teacher Education.
- Saderholm, J. C., Ronau, R. N., Brown, E. T., & Collins G. (in press). *Validation of the Diagnostic Teacher Assessment of Mathematics and Science (DTAMS) instrument*. School Science and Mathematics Journal.
- Niess, M. L., Ronau, R. N., Driskell, S. O., Kosheleva, O., Pugalee, D., Weinhold, M. W. Technological Pedagogical Content Knowledge (TPCK): Preparation of Mathematics Teachers for 21st Century Teaching and Learning. In F. Arbaugh & P. M. Taylor (Eds.), *Inquiry into Mathematics Teacher Education*. Association of Mathematics Teacher Educators (AMTE) Monograph Series, 5 (143-156). January 2009.
- Ronau, R. N., Niess, M. L., Browning, C., Pugalee, D., Driskell, S. O., & Harrington, R. (2008). *Framing the research on digital technologies and student learning in mathematics*. In L. Bell, L. Schrum, & A. D. Thompson (Eds.), *Framing research on technology and student learning in the content areas: Implications for educators* (pp. 13-31). Charlotte, NC: Information Age Publishing.
- Niess, M.L., Ronau, R.N., Shafer, K. G., Driskell, S. O., Harper, S. R., Johnston, C., Browning, C., Özgün-Koca, S. Asli, Kersaint, G. (in press). Mathematics Teacher TPACK Standards and Development Model, *CITE (Math) (Special) 9:1*.
- Brown, S.L., & Ronau, R. (2006). *Effects of single gender mathematics and science classes on students' and teachers' attitudes in an urban public high school*. Manuscript submitted for publication.
- Taylor, P. M., and Ronau, R. N. (2006). *Syllabus Study: A Structured Look at Mathematics Methods Courses*. Connections. Association of Mathematics Teacher Educators: 16(1), 12-15.

- Winter, P.A., Ronau, R.N., & Munoz, A.M. (2004) *Evaluating Urban Teacher Recruitment Programs: An Application of Private Sector Recruitment Theories*. Journal of School Leadership, January 2004, Vol. 14, No.1.
- Munoz, A.M., Winter, P.A. & Ronau, R.N. (2003). *Focusing on the Job Applicant Perspective to Enhance Teacher Recruitment Programs in Urban School Districts*. American School Board Journal. October 2003, Vol. 190, No.10.
- Ronau R. & Karp, K. (2001). *Power over Trash: Integrating Mathematics, Science, and Children's Literature*. Mathematics Teaching in the Middle School, 7(1) 26-31.
- Ronau, R. (1999). *Math Wars and Myths that Perpetuate Them*. The Kentucky Journal for Teachers of Mathematics. Spring, 1999. 1-14.
- Ronau, R., Ryan, S. & Stroble, B. (1999). *Searching the Web: New Tools—New Dilemmas*. The Internet and Higher Education. 4(1), 253-262.
- Ronau, R. & Stroble, B. (1999). *Student Teacher Electronic Network: Expenditure or Investment?* Journal of Technology and Teacher Education (JTATE). (electronic journal). 7(1), 33-56.
<http://www.mmdaccess.com/users/aace/pubs/jtate/index.html>
- Karp, K. & Ronau R. (1997). *Birthdays and the Binary System: A Magical Mixture*. Mathematics Teaching in the Middle School. 3(1), 6-12.
- Ronau, R. (1994). *Secondary Mathematics Education in Kentucky*. Kentucky Teacher.
- Ronau, R. (1993). *Excellence and Equity in Mathematics: Not a Zero-Sum Relationship*. Equity & Excellence in Education, 26(1), 48-50.
- Fischetti, J. & Ronau, R. (1994). *Cooperative learning to promote racial harmony*. In Rutstein, N. (ed.) (forthcoming, 1994), Creating racial harmony in the classroom. Springfield, MA: Whitcomb Publishing.
- Ronau, R. (1990). *Litter Alert*. In K. Lind (Ed.), Water, Stones, & Fossil Bones: Earth Science Activities for Elementary and Middle Grades Sourcebook No. 6. (p. 120-22) Washington, D.C.: Council for Elementary Science International and the National Science Teachers Association.
- Ronau, R. & Gilbert, R. (1988). *Functions and Relations in Nature*. School Science and Mathematics, 88(7), 573-580.
- Ronau, R. (1988). *Number Sense*. The Mathematics Teacher, 81(6), 437-440.
- Ronau, R. & Battista, M. (1988). *Microcomputers Versus Paper-and-Pencil Testing of Student Errors in Ratio and Proportion*. Journal of Computers in Mathematics and Science Teaching, VII(3), 33-38.
- Ronau, R. (1988). *Why Research?* Greater Louisville Council of Teachers of Mathematics Newsletter, 3(2), 7-8.

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Ronau, R. (1986). *Sorting and Classifying*. Greater Louisville Council of Teachers of Mathematics Newsletter, 2(1), 4-5.

Ronau, R. (1986). *Mathematics Diagnosis with the Microcomputer: Tapping a Wealth of Potential*. The Mathematics Teacher, 79(3), 205-208.

GRANTS

UPMAST – Urban University Planning Partnership in Mathematics and Science Teaching. (2002-2005). United States Department of Education. \$1,500,000 – Co-Principal Investigator.

LA-SMARTER – Louisville Area Science and Mathematics Alliance for Recruitment and Teacher Education Reform. (2002-2005). National Science Foundation. \$849,968 – Principal Investigator.

2003 Teacher Academies – Statistics of Algebra, Kentucky Department of Education (2003-2004), \$57,865 – Principal Investigator

2002 Teacher Academies – Integrated Science and Mathematics High School Academy, Kentucky Department of Education, \$50,000 – Principal Investigator.

Mathematics and Science Teacher Development. (2000). CPE. Kentucky Council on Postsecondary Education. \$48,693 – Principal Investigator

Technology Alliance T-Cubed Project. (1999). Texas Instruments. \$5000 with \$7,500 matching funds from JCPS, OVEC, and the Archdiocese of Louisville. Principle Investigator.

Park City/IAS Geometry Program. (1997-1999). National Science Foundation. \$18,000. Co-Director.

PRISM: Secondary Mathematics Initiative. (1995-1997). NSF Systemic Program Initiatives & MOA with Kentucky Department of Education. \$569,000. Principle Investigator.

Technology Alliance. (1995-1996). The Council on Higher Education Academic Alliance Grant. \$2,500. Principle Investigator.

PRISM: Secondary Mathematics Initiative. (1994-1995). NSF Systemic Program Initiatives & MOA with Kentucky Department of Education. \$600,000. Principle Investigator.

Park City/IAS Geometry Program. (1994-1995). National Science Foundation. \$20,844. Co-Director.

Technology Alliance: Linking Mathematics and Science through Technology. (1994-1996). Kentucky Council on Higher Education Dwight D. Eisenhower Grant. \$36,500. Principle Investigator.

Technology Alliance. (1994-1995). The Council on Higher Education Academic Alliance Grant. \$2,000. Principle Investigator.

LATTICE: Teacher Networking. Kentucky Council of Higher Education. (1993-1995). \$8,654. Principle Investigator.

PRISM: Secondary Mathematics Initiative. (1993-1994). NSF Systemic Program Initiatives & MOA with Kentucky Department of Education. \$321,745. Principle Investigator.

LATTICE: Algebra Institute. (1993-1994). Kentucky Council on Higher Education Dwight D. Eisenhower Grant. \$12,000. Principle Investigator.

PRISM: Secondary Mathematics Initiative. (1992-1993). NSF Systemic Program Initiatives & MOA with Kentucky Department of Education. \$63,482. Principle Investigator.

LATTICE: Algebra Institute (1992-1993). Kentucky Council on Higher Education Dwight D. Eisenhower Grant. \$39,171. Principle Investigator.

Technology Alliance. (1991-1992). The Council on Higher Education Academic Alliance Grant. \$1,000. Principle Investigator.

LATTICE: An Algebra Project (1990-1992). Kentucky Council on Higher Education Dwight D. Eisenhower Grant. \$30,300. Principle Investigator.

Teaching K-4 Mathematics in Kentucky. (1990-1991). National Science Foundation Teacher Enhancement Grant. \$75,641 (part of \$945,000 state-wide effort). Principle Investigator.

Technology Alliance. (1990-1991). The Council on Higher Education Academic Alliance Grant. \$1,100. Principle Investigator.

Technology in the Classroom Support Group. (1989-1990). The Council on Higher Education Academic Alliance Grant. \$1,200. Principle Investigator.

Technology in the Classroom Support Group. (1988-1989). The Council on Higher Education Academic Alliance Grant. \$1,352. Principle Investigator.

Middle School General Mathematics Project. (1987-1988). Kentucky Council on Higher Education Dwight D. Eisenhower Grant. \$20,000. Co-Director.

Total External Funds at University of Louisville: \$ 2,712,168

Total Matching Funds \$ 7,500

Total External Funds at University of Louisville: \$ 2,719,668

Internal Funding:

Geometry. (1994-1995). University Instructional Development Minigrant. \$750. Co-Director

Technology Alliance: Linking Mathematics and Science with Technology. (1994-1995). Jefferson County Public Schools/University of Louisville Coordinating Committee Grant. \$4,005. Co-Director

Algebra Project. (1989-1990). University of Louisville Faculty Research Grant. \$11,959.

Mentor Initiatives for Middle School Algebra Teachers. (1990-1991). Jefferson County Public Schools/University of Louisville Coordinating Committee Grant. \$3,100. Principle Investigator.

LATTICE: An Algebra Project (1989-1990). Jefferson County Public Schools/University of Louisville Coordinating Committee Grant. \$3,790. Co-Director.

The Effects of the Geometric Supposer on Students' Levels of Geometric Development. (1988- 1989).
University of Louisville Faculty Research Grant. \$1,070. Principle Investigator.

Implementation of Computers Across the Mathematics Curriculum. (1988-1989). Jefferson County
Public Schools/ University of Louisville Coordinating Committee Grant. \$1,200.

Total Internal Funds: **\$ 25,874**

Other External Funding:

Effects of Passive Smoking on the Mathematics Achievement of Children. National Cancer Institute.
(1985-1986). \$5,000.

Computer Assisted Mathematics Learning Center. (1981-1982). Elementary and Secondary Education
Act Title IV-C Grant. \$5,000.

Total Other External Funds: **\$ 10,000**

PEER REVIEWED PRESENTATIONS AND PAPERS

Characteristics of Mathematics Professional Development That Advance Teachers' Content Knowledge.
Presentation given at the Annual Meeting and Exposition of the National Council of Teachers of
Mathematics, April 9-12, 2008, with E. Todd Brown, Salt Lake City, UT.

Developing a Research Framework for Mathematics Methods Courses.
Conference half-day pre-session given at the Presentation given at the Association of
Mathematics Teacher Educators (AMTE) Twelfth Annual Meeting, January 24-26, 2008, Tulsa,
OK., Robert with Mark Taylor, University of Tennessee.

Preparing Teachers with Mathematics TPCK (Technological Pedagogical Content Knowledge).
Conference half-day workshop given at the Presentation given at the Association of
Mathematics Teacher Educators (AMTE) Twelfth Annual Meeting, January 24-26, 2008, Tulsa,
OK., with Maggie Niess, Suzanne Harper, Christine Browning, Alfinio Flores, Olga Kosheleva,
Kathy Shafer, David Pugalee, & Shannon Driskell.

*The Pedagogical Preparation of K-12 Mathematics Teachers: A Working Group on Methods Courses and
Related Work*
Conference session given at the Association of Mathematics Teacher Educators (AMTE)
Twelfth Annual Meeting, January 24-26, 2008, Tulsa, OK., with Gail Burrill, Jennifer Hegeman,
Mary Lou Witherspoon.

The Pedagogical Preparation of K-12 Mathematics Teachers.
A Discussion Group on Methods Courses and Related Work (Three 90 Min Sessions) at the 29th
Annual Conference for the North American Chapter of the International Group for the
Psychology of Mathematics Education (PMENA). October 25-28, 2007. Lake Tahoe, NV. With P.
Mark Taylor.

Elementary School Teachers' Mathematics Knowledge: Preliminary Results.

Presentation given at the Annual Meeting and Exposition of the National Council of Teachers of Mathematics, March 21-24, 2007, with Todd Brown and Chuck Thompson , Atlanta, GA.

Preparing Teachers to Teach Mathematics with Technology

Conference half-day workshop given at the Association of Mathematics Teacher Educators (AMTE) Eleventh Annual Meeting, January 25-27, 2007, Irvine, CA, with Maggie Niess, Marcia Weinhold, Óscar Chávez, Christine Browning, Suzanne Harper, Shannon Driskell, David Pugalee, Joe Garofalo,

Analysis of Mathematics Methods Courses.

Conference half-day pre-session given at the Presentation given at the Association of Mathematics Teacher Educators (AMTE) Eleventh Annual Meeting, January 25-27, 2007, Irvine, CA, Robert N. Ronau, University of Louisville, Mark Taylor, University of Tennessee.

The Pedagogical Preparation of Prospective Secondary Mathematics Teachers.

Presentation given at the Association of Mathematics Teacher Educators (AMTE) Eleventh Annual Meeting, January 25-27, 2007, Irvine, CA, Lew Romagnano, The Metropolitan State College of Denver, Gail Burrill, Michigan State University, Henry Kepner, University of Wisconsin-Milwaukee, Robert N. Ronau, University of Louisville, Mark Taylor, University of Tennessee.

An Analysis of Middle School Teachers' Knowledge of Mathematics.

Presentation given at the Association of Mathematics Teacher Educators (AMTE) Eleventh Annual Meeting, January 25-27, 2007, Irvine, CA, E. Todd Brown, Robert N. Ronau, Karen Karp, William Bush, Charles Thompson, Maggie McGatha, University of Louisville.

What We Know about Middle School Teachers' Knowledge of Mathematics.

Presentation given at the Annual Meeting and Exposition of the National Council of Teachers of Mathematics, April 26-29, 2006, William S. Bush, Robert N. Ronau, Vivian Moody, Maggie McGatha, St. Louis, MO.

Attitudes and Learning Scales of Urban Public High-School Students With Regard to Single-Gender Integrated Science and Mathematics Class Experiences

Presentation given at the 2006 Annual Conference of the American Educational Research Association, April 7-11, 2006, San Francisco, CA, Robert N. Ronau,

Syllabus Study: A Structured Look at Mathematics Methods Courses

Presentation given at the 2006 American Association of Colleges for Teacher Education (AACTE) 58th Annual Meeting and Exhibits, January 29 – February 1, 2006, San Diego, CA, P. Mark Taylor, University of Tennessee, Robert N. Ronau, University of Louisville.

Mathematics Task as a Vehicle to Help Teachers Become Reflective Practitioners

Presentation given at the Association of Mathematics Teacher Educators (AMTE) Tenth Annual Meeting, January 26-28, 2006, Tampa, FL, Gail Burrill, Michigan State University, Robert N. Ronau, University of Louisville,

A Framework for Examining Mathematics Methods Courses discussing Appropriate Preparations for Prospective Mathematics Teachers.

Presentation given at the Association of Mathematics Teacher Educators (AMTE) Tenth Annual Meeting, January 26-28, 2006, Tampa, FL Robert N. Ronau, University of Louisville, Mark Taylor, University of Tennessee

Common Features and Uncommon Elements of Mathematics Methods Courses. Presentation given at the Association of Mathematics Teacher Educators (AMTE) Ninth Annual Conference Dallas, TX - January 27 - 30, 2005, Mark Taylor, University of Tennessee, Robert N Ronau, University of Louisville

Single Sex Education and Self-Efficacy in an Urban Middle School. Presentation given at the 2004 Annual Conference of the American Educational Research Association presented by Amanda Davis April 2004. San Diego CA

Connecting Advanced Topics to School Classrooms. Presentation given at the Teacher Prep PI Conference March 2004 Washington DC

Diagnostic Teacher Assessments for Middle Grades Mathematics Teachers. The Association of Mathematics Teacher Educators (AMTE) Eighth Annual Conference San Diego, CA - January 23 - 24, 2004, William S. Bush, Karen Karp, Maggie McGatha, Robert Ronau, Charles Thompson

Learning From Each Other: Syllabus Exchange.The Association of Mathematics Teacher Educators (AMTE) Eighth Annual Conference San Diego, CA - January 23 - 24, 2004, Mark Taylor, University of Tennessee, Robert N Ronau, University of Louisville

Building a Unit-Based Research Office: Getting Started and Development of Services. Presentation given at the Annual Conference of the Society for Research Administrators. October 2003. Pittsburgh, PA.

Avoiding Pitfalls on the Proposal Submission Road. Poster Presentation given at the Annual Conference for the Society of Research Administrators. October 2003. Pittsburgh, PA.

The Van Hiele Model For Geometric Thought & Dynamic Geometry Connections. Presentation given at Western Cape, South Africa.

Scaling Up: Comprehensive Pre-Award Training and Services for Faculty and Staff at the Unit Level. Presentation given at the Annual Conference of the Society for Research Administrators. October 2002. Orlando, FL

Data Representation and Statistical Analysis with the TI-83 Plus for Advanced Users. Presentation accepted for the Annual Conference of the National Council of Teachers of Mathematics. April 2002, Las Vegas, Nevada.

Building Bridges to Connect High School and College Mathematics--Improving the Transitions for Students. Presentation accepted for the Annual Conference of the National Council of Supervisors of Mathematics. April 2002, Las Vegas, Nevada.

Paving the Way in a New Environment Proposal Development Supports for Staff and Graduate Students. Presentation given at the Annual Conference of the Society for Research Administrators. October 2001. Vancouver, BC

Statistics and the TI-83: Tools for the Mathematics Classroom. Presentation given at the Western Regional Conference of the National Council of Teachers of Mathematics. July 1999. Honolulu, HI.

Investigation of the Changing Beliefs of six Preservice Mathematics Teachers. Presentation given at the Annual Conference of the National Council of Supervisors of Mathematics. (planned with Sheryle Nussbaum). April 1999, San Francisco, CA..

Teacher-Directed Technology Institutes and Algebra Workshops: Networking Leadership that Makes a Difference. Presentation given at the Annual Conference of the National Council of Teachers of Mathematics. (with Jane Jones). April 1999, San Francisco, CA..

Lessons and Activities Connecting Topics in Secondary Mathematics through Transformations. Presentation given at the Central Regional Conference of the National Council of Teachers of Mathematics. January 1998. St. Louis, MO.

Connecting Algebra and Geometry through Transformations on the TI-83. Presentation given at the Annual Conference of the National Council of Teachers of Mathematics. April, 1997, Minneapolis, MN.

Flips, Slides and Turns: Transformational Geometry on the TI-82. Presentation given at the Annual Conference of the National Council of Teachers of Mathematics. April 1996. San Diego, CA.

Cooperative Learning in the Algebra Class--Student Centered Classrooms. Presentation given at the Northeastern Regional Conference of the National Council of Teachers of Mathematics. December 1995. Philadelphia, PA.

Ideas and Activities for a Student-Centered Classroom. Presentation given at the Southern Regional Conference of the National Council of Teachers of Mathematics. October 1995. Knoxville, TN.

- Exploring Topics in Algebra and Geometry with the TI-82--for Advanced Users.** Presentation given at the Central Regional Conference of the National Council of Teachers of Mathematics. March 1995. Chicago, IL.
- Cooperative Learning Strategies for Algebra: Linking Instruction and Assessment.** Presentation given at the Eastern Regional Conference of the National Council of Teachers of Mathematics. November 1994. Charleston, WV.
- Exploring Algebra Topics Using Advanced Techniques on the TI-81.** Presentation given at the Annual Conference of the National Council of Teachers of Mathematics. April 1994. Indianapolis, Indiana.
- Using Portfolio Assessment in the High School Classroom.** Presentation given at the Annual Conference of LIMACON, Long Island Mathematics Association Conference. March 1994. State University of New York at Old Westbury.
- Prism Regional Caucus.** Presentation given at the Annual Meeting of the Northern Kentucky Council of Teachers of Mathematics. November 1993. Ft. Thomas, KY.
- Using Mathematics and Science to Explore Environmental Issues in the Intermediate Grades.** Presentation given at the Regional Meeting of the National Science Teachers Association. November 1993. Louisville, KY.
- Revising 9-12 Mathematics in Kentucky by Prism: Ideas, Examples, Inquiry, and Discussion.** Presentation given at the Central Regional Conference of the National Council of Teachers of Mathematics. November 1993. Paducah, KY.
- Prism Regional Caucus.** Presentation given at the Western Kentucky Council of Teachers of Mathematics. November 1993. Beaver Dam, KY.
- Prism Regional Caucus.** Presentation given at the Greater Louisville Council of Teachers of Mathematics Fall Conference. October 1993. Louisville, KY.
- Prism Regional Caucus.** Presentation given at the Central Kentucky Council Teachers of Mathematics. October 1993. Corbin, KY.
- Secondary Mathematics: What is it? What Should it be? How do we get there?** Presentation at the Kentucky Council of Teachers of Mathematics Annual Conference. September 1993. Lexington, KY.
- Prism Regional Caucus.** Two presentations given at the Kentucky Council of Teachers of Mathematics Annual Conference. September 1993. Lexington, KY.
- Using Graphing Calculators in Secondary Mathematics: Advanced.** Presentation given at the Northeast Regional Conference of the National Council of Teachers of Mathematics. May 1993. New York, NY.
- Cooperative Learning in Algebra: Lesson and Assessment Ideas from LATTICE.** Presentation given at the Annual Conference of the National Council of Teachers of Mathematics. April 1993. Seattle, WA.

I Am In a Different Place: Cooperative Learning in a Teacher Education Program. Presentation given at the Annual Conference of the National Council of Supervisors of Mathematics. March 1993. Seattle, WA.

Cooperative Learning Strategies for Algebra: Ideas from LATTICE. Presentation given at the Eastern Regional Conference of the National Council of Teachers of Mathematics. September 1992. Columbus, OH.

Finding Patterns, Relations, Functions, and Fun in Primary School Mathematics. Presentation given at the Annual Conference of the National Council of Teachers of Mathematics. April 1992. Nashville, TN.

Using Graphing Calculators in Algebra-Advanced. Presentation given at the Northeast Regional Conference of the National Council of Teachers of Mathematics. December 1991. Long Island, NY.

Cooperative Learning in Algebra and Geometry: A Model for the Secondary Mathematics Classroom. Presentation given at the Southeast Regional Conference of the National Council of Teachers of Mathematics. November 1991. San Juan, Puerto Rico.

Cooperative Learning Strategies for Algebra: Lessons and Results, Presentation given at the Annual Conference of the National Council of Teachers of Mathematics. April 1991. New Orleans, LA.

Three Perspectives on Implementing the Standards: The Greater Louisville Algebra Project. Presentation given at the Annual Conference of the National Council of Supervisors of Mathematics, April 1991. New Orleans, LA.

What Does Superman Eat for Breakfast? A Model to Investigate Concepts in Physics. Presentation given at the Southeast Regional Conference of the National Council of Teachers of Mathematics. November 1990. Memphis, TN

Mathematics Around the House. Presentation given at the Southeast Regional Conference of the National Council of Teachers of Mathematics. November 1990. Memphis, TN.

Cooperative Learning: How to Begin, How to Make it Work, and How to Keep it Going. Presentation given at the Annual Conference of the School Science and Mathematics Association. October 1990. Cincinnati, OH.

Graphic Programs for Secondary Mathematics. Presentation given at the Canadian Regional Conference of the National Council of Teachers of Mathematics. May 1990, Hamilton, Ontario.

Cooperative Learning in Secondary Mathematics: Ideas and Strategies. Presentation given at the Annual Conference of the National Council of Teachers of Mathematics. April 1990. Salt Lake City, UT.

Cooperative Learning Strategies for Mathematics Classes. Presentation given at the Annual Conference of the Ohio Council of Teachers of Mathematics. March 1990. Zanesville, OH.

Group Activities and Writing Strategies for Algebra Classes: Putting it all Together. Presentation given at the Southeast Regional Conference of the National Council of Teachers of Mathematics. March 1990. Chattanooga, TN.

Introduction to Graphing Calculators. Presentation given at the Annual Conference of the Kentucky Council of Teachers of Mathematics. March 1990. Covington, KY.

Advanced Uses of Graphing Calculators. Presentation given at the Annual Conference of the Kentucky Council of Teachers of Mathematics. March 1990. Covington, KY.

How to Implement Cooperative Learning. Presentation given at the Annual Meeting of the Kentucky Council of Teachers of Mathematics. October 1989. Louisville, KY.

Writing Strategies for Algebra. Presentation given at the Annual Meeting of the Kentucky Council of Teachers of Mathematics. October 1989. Louisville, KY.

Graphing Software for the Mathematics Classroom. Presentation given at the Annual Conference of the Ohio Council of Teachers of Mathematics. April 1989. Toledo, OH.

The Physics of Supernormal Activities or What Does Superman Eat for Breakfast? Presentation given at the Annual Conference for Kentucky Association for Progress in Science. October 1989. Louisville, KY.

Number Sense. Presentation given at the Annual Conference of the School Science and Mathematics Association, October 1989. Des Moines, IA.

About a Trillion. Presentation given at the Annual Conference for Kentucky Association for Progress in Science. October 1988. Louisville, KY.

The Physics of Supernormal Activities: OR What does Superman Eat for Breakfast? Presentation given at the Annual Conference of the School Science and Mathematics Association, December 1988. Austin, TX.

Cooperative Learning: Effective Strategies for Teaching Mathematics in the Intermediate Grades. Presentation given at the Annual Conference of the National Council of Teachers of Mathematics. April 1988. Chicago, IL.

Graphing Software. Presentation given at the Annual Conference of the Ohio Council of Teachers of Mathematics. March 1988. Youngstown, OH.

The Physics of Supernormal Activities, or What Does Superman Eat for Breakfast? Presentation given at the Annual Rural and Small Schools Conference. October 1987. Manhattan, KS.

Investigating Functions in Nature. Presentation given at the Annual Conference for Kentucky Association for Progress in Science. October 1987. Owensboro, KY.

Exploring Functions with Microcomputers. Presentation given at the Annual Conference of the School Science and Mathematics Association. November 1986. Lexington, KY.

Numberness in Elementary and Middle School: How Many Ants Fill a Bathtub? Presentation given at the Central Regional Conference of the National Council of Teachers of Mathematics. October 1986. South Bend, IN.

Functions and Computers. Presentation given at the Annual Conference of the National Council of Teachers of Mathematics. April 1986. Washington, D.C.

Developing Functions with Microcomputers. Presentation given at the Annual Conference of the Ohio Council of Teachers of Mathematics. March 1986. Akron, OH.

INVITED PRESENTATIONS

Building Connections through Discrete Mathematics. Presentation given at the Annual Conference of the Hawaii State Council of Teachers of Mathematics. January 1994. Oahu, Hawaii.

Middle School & Secondary Mathematics: Components for Change. Presentation given at the Annual Conference of the National Council of Teachers of Mathematics. January 1994. Oahu, Hawaii.

The PRISM Initiatives, Secondary and Undergraduate: Bridging the Great Divide. Keynote presentation given at the Eastern Kentucky Council of Teachers of Mathematics Annual Spring Conference. March 1994. Prestonsburg, KY.

Mathematics & Science Education in Kentucky: Grades 9 - 14. Keynote Presentation given at the Annual Meeting of the Northern Kentucky Academic Alliance. November 1993. Ft. Thomas, KY.

Number Sense for All Ages. Keynote Speaker: Greater Louisville Council of Teachers of Mathematics Conference. January 1987. Louisville, KY.

Developing Functions with Computers. Presentation given at the Sixth Annual Computer Fair of the Educational Computer Consortium of Ohio. October 1986. Cleveland, OH.

WORKSHOPS AND CONSULTING ACTIVITIES

Region 8 Network. Overall Advisor and Presenter for The National Faculty, Prestonsburg, KY. July 13-25, 1999.

Region 8 Network. Technology Advisor and Presenter for The National Faculty, Prestonsburg, KY. January, 22 1999.

Region 8 Network. Technology Advisor and Presenter for The National Faculty, Berea, KY July 26-31, 1998.

SCIMATCH. Ohio Valley Educational Cooperative Goals Systemic Initiatives Grant (Ken Jones, Principle Investigator). Secondary Mathematics Consultant. (1995-1997).

IMPACT. Ohio Valley Educational Cooperative GOALS 2000: Educate America Act Grant (Ken Jones, Principle Investigator). Secondary Mathematics Consultant. (1994-1996). LaGrange, KY.

Directions and Strategies for the Mathematics Classroom Workshops developed for and conducted at Shelby County Schools and Sidney City Schools. August 1994 and May 1995. Sidney, OH.

Trinity High School Mathematics Inservice: Portfolio Assessment and Instructional Alignment with the NCTM Standards. August 1993. Trinity High School. Louisville, KY.

Portfolio Assessment Workshop. Presentation given at the OVEC Inservice. July 1993. Oldham County High School. LaGrange, KY.

Cooperative Learning Activities for Secondary Mathematics. Bullitt County Inservice Workshop. March 1993. Bullitt County Central High School, Bullitt County, KY.

Cooperative Learning for Secondary Mathematics Classrooms: Ideas and Strategies. Workshops given at Fayette County Public Schools. February 11 and 25 1992. Lexington, KY.

Cooperative Learning K-4. Presentation given at the Kentucky Mathematics Specialist Program. June 1990 Lexington, KY.

Cooperative Learning in Mathematics. Presentation given at the Jefferson County Mathematics Task Force. February 1990. Bardstown, KY.

Teaching Algebra with Models. Presentation given at the Jefferson County Mathematics Task Force. February 1990. Bardstown, KY.

Secondary Mathematics Curriculum Change and the NCTM Curriculum and Evaluation Standards. Presentation and worksession for Oldham County School District Mathematics Curriculum Committee. Spring 1988, LaGrange, Kentucky.

Finite Mathematics. Workshop for Fort Knox and Hardin County Schools. August and November 1988. Fort Knox, Kentucky.

OTHER RESEARCH AND EVALUATION EXPERIENCE

Article Reviewer for the journals:

Arithmetic Teacher (1987-1996)

Teaching Children Mathematics (19xx-present)

The Mathematics Teacher (1987-present)

School Science, and Mathematics. (1987-present)

Developer of the Kentucky New Teacher Standards Mathematics Tasks: FIRST Project. Kentucky State Department of Education. (1994-1996). Frankfort, KY.

Member of the Kentucky High School Portfolio Benchmark Committee. Advanced Systems. (1990-1996). Louisville, KY.

Cognitive Instruction in Mathematics and Science for Second Language Learners. New York State Dwight D. Eisenhower Grant. Adelphi University. Cooperative Learning & Mathematics Consultant, May, July, 1991.

National Science Teachers Association Mathematics Consultant for manuscripts in Water, Stones, & Fossil Bones: Earth Science Activities for Elementary and Middle Grades Sourcebook No. 6. Lind, K. (Ed.) Washington, D.C.: Council for Elementary Science International and the National Science Teachers Association. 1990-1991.

Outdoor Mathematics. Grant Workshop Technology Consultant. *Florida International University* (R. Gilbert, Principle Investigator). August, 1991.

Improvement of Elementary School Mathematics Instruction: A Joint Training Model for Inservice and Preservice Teachers. Florida Department of Education Grant. Cooperative Learning Consultant. Florida International University (R. Gilbert, Principle Investigator). November 1990

McConnell Clark/JCPS High 5 Project. Consultant University of Louisville,. 1990-1992.

Founding Member of the Council of Higher Education Cooperative Learning Alliance. 1989-1992

HONORS AND AWARDS

Eastern Kentucky Council of Teachers of Mathematics: **Outstanding Service Award**. 1999.

Greater Louisville Council of Teachers of Mathematics: **“Educator of the Year: University Level”**, 1998.

Kentucky Council of Teachers of Mathematics: **“1993 MESA Award (Mathematics Educator Service and Achievement)”**

Greater Louisville Council of Teachers of Mathematics: **“Educator of the Year: University Level”**, 1993.

University Fellowship. Kent State University. 1984

Grand Prize Winner of **Challenge** (a computer educational game contest). 1984

Teaching Fellowship. Kent State University. 1983

Kappa Delta Pi- Education Honorary. 1984-present

UNIVERSITY COURSES TAUGHT

Contemporary Issues in Secondary Mathematics
Pre-Student Teaching
Using Technology to Teach Mathematics
Fractals for the Classroom
Student Teaching
Introduction to Studies in Education
Secondary Education Methods
Instructional Media
Computers in the Mathematics Classroom
School Algebra
School Geometry
Secondary Mathematics Methods
Middle School Mathematics Methods
Elementary Mathematics Methods
Mathematics for Elementary School Teachers
Seminar for Mathematics and Science Student Teachers
Introduction to Microcomputers for Educators
Microcomputers for Educators II
Introduction to BASIC
Microcomputers for Vocational Educators

Pascal for Educators
Data Structures in Pascal

PROFESSIONAL ORGANIZATIONS

Association of Mathematics Teacher Educators (1995-present)

Member of Technology Committee (2006-present)

Greater Canton Council of Teachers

Newsletter Editor (1979-1982)

Greater Louisville Council of Teachers

President (1993-1994)

Board of Directors (1988-present)

Editorial Staff of the GLCTM Newsletter (1988-1990)

Judge: Math Fair (1988-1997)

Chair: Excellence in the Teaching of Mathematics Award
Committee (1987-1989)

Kentucky Association of College Mathematics Educators

Kentucky K-4 Mathematics Specialists Program

Regional director (1990-1992)

Steering Committee (1989-1993)

Kentucky Council of Teachers of Mathematics

Board of Directors (1988-1990), (1994-present)

Co-Director of Math Bowl (1988-1990)

Judge and Quizmaster of the Math Bowl 1988-present

LATTICE:

Founder 1988

Co-director (1988-present)

National Council of Teachers of Mathematics

Database Committee, (1998-present)

Program Chairperson, Central Regional Conference, 1998

Joint NSTA/NCTM Science/Mathematics Task Force.

Program Chairperson, Central Regional Conference, 1991

Manuscript Reviewer, Arithmetic Teacher, (1987-present)

Manuscript Reviewer, The Mathematics Teacher, (1986-present)

National Council of Supervisors of Mathematics

State Representative to the Board of Directors (1990-present)

Phi Delta Kappa – member (1984-present)

PRISM: Secondary Mathematics Initiative Director (1990-1997)

Original Developer (1989-1991)

School Science and Mathematics Association

Program Committee (1997-present)

Manuscript Reviewer (1987-present)

Technology Alliance

Founder 1987

Co-director (1987-present)

COMMITTEE MEMBERSHIPS

State Education Department

Member of Kentucky State Systemic Initiative Proposal Team, Secondary Mathematics Initiative Director (1990-1997).
Mathematics Task Force. (Developed State Mathematics Core Concepts for Mathematics).
Chair: State Mathematics Textbook Selection Committee (1990)
Computer Proficiency Examination Committee (1988-89)
Presidential Awards for Excellence in Mathematics Teaching Award Selection Committee (1988)
Steering Committee for NSF Teacher Enhancement Program for Teaching K-4 Mathematics (1989-1994)
Mathematics Coalition (1889-1995)

College Committees

Diversity Committee (1995-1998)
Chair (1996-1997)
Strategic Planning Committee (1994-1995)
Curriculum Committee (1988-present)
Chair:(1989-90)
Education Computer Advisory Committee (1987-89)
Middle School Coordinating Committee (1989-present)
Instructional Systems Technology Committee (1989-present)
Experimental Teacher Education Committee (1989-1990)
Education Technology Review Committee (1991-present)
Doctoral Admissions Standards Committee (1989-1991)

University Committees

University Diversity Committee (1996-1998)
University Grievance Committee (1998-present)
Academic Advisory Technology Committee (1999)