# Genevieve Davis, Ph.D

Associate Professor
TLC
gdavis@kent.edu

## Education

**Ph.D., Curriculum & Instruction** **1983**

University of Connecticut

*Areas of concentration:*
*Mathematics Education and Special Education*
*Dissertation Title: Hemispheric Laterality, Gender, and Verbal and Visuospatial Processing Proficiency as Predictors of Mathematical Ability in Young Children*

**M.A., Mathematics Education /Special Education** **1974**

University of Connecticut

*University of Connecticut*
*Areas of concentration:*
*Mathematics Education /Special Education*
*Child Development/Family Relations*

**B.A., Education and Mathematics**

Bethany College, Bethany, West Virginia

## Other Professional Experience

**International Baccalaureate Organization: Workshop Leader, Consultant, Site Visitor** **6/2009 - present**

**Ohio Board of Regents Grant** **02/2007 - 06/2008**

*Co-PI with Dr. Judith Melillo [$113,000] Akron Mathematics Academy Grades 3-8 Mathematics*

**Mathematics and Science Partnership Project [MSP]** **02/2006 - 06/2009**

*Co-PI with Dr. Trish Koontz [$750,000] Ohio Department of Education Ohio Mathematics Academy Program Grades 3-6 Mathematics*

**10/2003 - 10/2003**

*National Council of Teachers of Matheamtics Invited delegate to St. Petersburg, Russia*

**11/2000 - 11/2000**

*National Council of Teachers of Mathematics*
*Invited delegate to South Africa (Cape Town and Johannesburg)*

**06/1999 - 07/1999**

*National Council of Teachers of Mathematics*
*Invited delegate to China (Beijing, Nanjing, Xi'an and Shanghai)*

**01/1993 - 04/1994**

*Consultant and Writer*
*International Schools Curriculum Project (ISCP)*
*Mathematics, Pre-K - Grade 6 Geneva, Switzerland and Amsterdam, the Netherlands*

**08/1993 - 06/1994**

*Mathematics Consultant PK-Grade 6; 6th grade teacher, International School of Amsterdam, the Netherlands*

**08/1992 - 08/1998**

*Elected Member, Ohio Council of Teachers of Mathematics and The Ohio Department of Education Standards Task Force - Mathematics Assessment*

**08/1989 - present**

*KSU Faculty, Mathematics Education*
*(Except 1993-1994) Kent Sate University*
*Teaching, Leadership and Curriculum Studies*
*Program Area: Mathematics Education*

## Publications

James, J. & Davis, G. (in press). Striving for International-Mindedness in Teacher Education: One Program's Journey. *Ohio Social Studies Journal.* 2010

Publication: *Journal Articles, Refereed*

Davis, G. & Keller, D. (2009). *Science and Mathematics in a Child's World*. Columbus, Ohio: Prentice Hall. 374 pages. 2009

Publication: *Books Authored*

Davis, G. and Tu, T. (2008). Mathematics and Science in the Early Years: International Perspectives and Theoretical Views in Grotewell, P.G. & Burton, Y.R. Early Childhood Education: Issues and Developments, pp. 23-45. 2008

Publication: *Book Chapters*

2006-2008 Math Science Partnership [MSP], Ohio Mathematics Academy Program [OMAP] Curriculum Development -- Curriculum has been developed with Dr. Trish Koontz 50/50. The curricular modules: 2008 MSP OMAP Data Analysis, Measurement, Geometry and Processes, Grades 3-6, Revised 2007 MSP OMAP Data Analysis, Measurement, Geometry and Processes, Grades 3-6 2007 MSP OMAP Number, Algebra Probability and Processes, Grades 3-6 Revised 2006 MSP OMAP Number, Algebra Probability and Processes, Grades 3-6 Module 2008

Publication: *Curriculum*

Davis, G. & Koontz, T. (August 2008) Math Science Partnership Program Federal report. A two year comparison of Analyzing Student and Teacher Data to Inform Professional Development Practice: Ohio Mathematics Academy Program SUM- PLUS. 46 pages plus appendices 2008

Publication: *Monographs*

Koontz, T. & Davis, G. (August 2007) Math Science Partnership Program Federal report. Designing and Implementing an Effective Professional Development Program : Ohio Mathematics Academy Program SUM- PLUS [Students Understanding Mathematics – Planning, Learning, Understanding and Success 42 pages plus appendices. 2008

Publication: *Monographs*

Davis, G. & Melillo, J. Akron Mathematics Academy -OBR Grant - The Professional Development of Teachers Grades 3-6 Enhancing Mathematical Content Knowledge. 2008

Publication: *Monographs*

2005-2006 NEOCEx High School and College Geometry Curriculum: Polygons, Platonic Solids, Surface Area, Geometric Dissections I and II, and Angle Trisection. 2006

Publication: *Curriculum*

Davis, G. & Hyun, E. (2005).A study of kindergartners' spatial representation in a mapping project.*Mathematics Education Research Journal, pp. 73-100.* 2005

Publication: *Journal Articles, Refereed*

Hyun,E. & Davis, G. (2005). Study of kindergartners\' converstiaons of computer-based technology use.*Early Childhood Research Quarterly. pp.118-135* 2005

Publication: *Journal Articles, Refereed*

Davis, G. (2003) Section contributor. Proceedings of the Professional Activities of the Mathematics Education Delegation to St. Petersburg, Russia. 2003

Publication: *Conference Proceedings*

Davis, G. (2001) Section contributor. Proceedings of the Professional Activities of the Mathematics Education Delegation to the Republic of South Africa.Second Grade Mathematics at Mickelfield Primary School - Cape Town, South Africa. 2001

Publication: *Conference Proceedings*

Davis, G. (2000) Experiencing the vision: Seeing mathematics differently (Bowling Green State University and Hancock County). Ohio Board of Regents, Dwight D. Eisenhower Professional Development Program. Project evaluation report. (28 pages) 2000

Publication: *Monographs*

Davis, G. (1999) Section contributor. Proceedings of the Professional Activities of the Mathematics Education Delegation to the People\\\'s Republic of China.Elementary Mathematics Teacher Education at Kent State University 1999

Publication: *Conference Proceedings*

Davis, G. (1999) Experiencing the vision: Seeing mathematics differently (Bowling Green State University and Wood County). Ohio Board of Regents, Dwight D. Eisenhower Professional Development Program. Project evaluation report. (25 pages) 1999

Publication: *Monographs*

Davis, G. (1998). Section Contributor, Mathematics, pre-kindergarten - Grade Six. International Schools Curriculum Project (ISCP) - International Baccalaureate Primary Years Programme (Invited and refereed) 1998

Publication: *Curriculum*

Davis, G. (1997). Exploring concepts of personal time with young children. Ohio Journal of School Mathematics. (Refereed) 1997

Publication: *Journal Articles, Refereed*

Davis, G. & T. Koontz (1997). Section contributors. Model Mathematics Assessments. Ohio Council of Teachers of Mathematics Standards Task Force and the Ohio Department of Education Division of Curriculum, Instruction, and Professional Development. (Invited and refereed) 1996

Publication: *Curriculum*

Davis, G. & Ambrose, R. (1996). Discovering time and calendar concepts with young children. Journal of the Ohio Elementary Kindergarten Nursery Educators. Vol. 15, pp.12-15. (Refereed). 1996

Publication: *Journal Articles, Refereed*

Davis, G. (1996). Exploring geometric concepts with young children. Ohio Journal of School Mathematics. No.32, pp. 22-24. (Refereed). 1996

Publication: *Journal Articles, Refereed*

Contributor/Writer: International Schools Curriculum Project: Curriculum and Mathematics [Amsterdam and Geneva]. Adopted by International Baccalaureate [IB] Organization as IB Primary Years Program Mathematics -ages 3-12. 1994

Publication: *Creative Activity*

## Presentations

Davis, G., Mitroff, A. & Brent, R. Developing meaning for linear measurement. Ohio Council of Teachers of Mathematics, Akron, Ohio. 2010

Type: *State Refereed*

Davis, G. Algebraic foundations for number in the early years. National Council of Teachers of Mathematics Regional Conference. Boston, Massachusetts. 2009

Type: *Regional Refereed*

Davis, G. & Barbour, N. Preparing early childhood teachers to work in a global society. Paper presented at the European Early Childhood Education Research Association Annual Conference. Strasbourg, France 2009

Type: *International Refereed*

Davis, G., Koontz, T. & Koebley, S. Analyzing learning from OMAP assessments. Ohio Council of Teachers of Mathematics, Cincinnati, Ohio. 2009

Type: *State Refereed*

Arhar, J; Koontz, T.; Davis, G; & Beal, J. (June, 2008). Critical need for mathematics professional development. American Association of College Teacher Educators (AACTE) a Day on the Hill. Washington D.C. 2008

Type: *National Refereed*

Davis, G & Koontz, T. Geometry and Spatial thinking: Using Processes to Improve Mathematical Content Knowledge. International Congress for Constructivist Mathematics Learning Istanbul, Turkey. 2008

Type: *International Invited*

Koontz, T. & Davis, G. Engaging Students in Geometric Reasoning and Spatial thinking. Kent State Koleji, Istanbul, Turkey. 2008

Type: *International Invited*

Davis, G & Koontz, T. The Role of Strategies and Representation in Problem Solving. Kent State Koleji, Istanbul, Turkey. 2008

Type: *International Invited*

Koontz, T. & Davis, G. Mathematical Thinking. International Congress for Constructivist Mathematics Learning, Istanbul, Turkey. 2008

Type: *International Invited*

Davis, G. Algebraic ideas in primary school mathematics. NCTM Regional Conference, Cleveland, Ohio. 2008

Type: *Regional Refereed*

Davis, G. Algbraic thinking in young children. National Council of Teachers of Mathematics. Atlanta, Georgia. 2007

Type: *National Refereed*

Davis, G. Theoretical foundations of algebraic thought in young children. National Council of Teachers of Mathematics Regional Conference. Richmond, Virginia. 2007

Type: *Regional Refereed*

Koontz, T. & Davis, G. Math Science Partnership Program Lessons Learned from the Ohio Mathematics Academy Program SUM- PLUS [Students Understanding Mathematics – Planning, Learning, Understanding and Success Ohio Department of Education, Columbus, Ohio 2007

Type: *State Invited*

Davis, G. & Melillo, J. Professional Development ~Akron Mathematics Academy. OCTM Columbus, Contributing teachers: Kim Buehler and Charlene Tabata. 2007

Type: *State Refereed*

Davis, G. Foundations for algebraic thinking in [young children. Ohio Council of Teachers of Mathematics. Toledo, Ohio. 2006

Type: *State Refereed*

Davis, G. & Koontz, T. Math Science Partnership Program – Planning and Implementation of Ohio Mathematics Academy Program SUM- PLUS [Students Understanding Mathematics – Planning, Learning, Understanding and Success Ohio Department of Education, Columbus, Ohio 2006

Type: *State Invited*

Davis, G., Burroughs, C. Neuzil, J. Christensen, J. NEOCEx: An exploration in two- and three dimensional geometry. Kent State University NEOCEx 1st Mathematics Science Symposium, OBR 2006

Type: *Local Invited*

Davis, G. A theroetical perspective on \'practicing the facts\'. Ohio Council of Teachers of Mathematics. Dayton, Ohio. 2005

Type: *State Refereed*

Davis, G. Algebraic thinking in young children. National Council of Teachers of Mathematics Western Regional Conference. Denver, Colorado. 2005

Type: *Regional Refereed*

Davis, G. Constructivist approaches to primary mathematics: Building Meaning for Number. Cleveland Heights/University Heights Staff Development Day, Cleveland Heights, Ohio. 2005

Type: *Local Invited*

Davis, G. Constructivist approaches for developing concepts for multiplicative thinking. Cleveland Heights/University Heights Staff Development Day, Cleveland Heights, Ohio. 2005

Type: *Local Invited*

Stoll, J. & Davis, G. Exploring patterns with two to five year olds. Ohio Council of Teachers of Mathematics. Akron, Ohio. 2004

Type: *State Refereed*

Davis. G. Mathematics education teacher preparation. Hertzen State Pedagogocal University, St. Petersburg, Russia. 2003

Type: *International Refereed*

Davis. G. Kindergartners' spatial representation in a year long mapping project. European Council of International Schools (ECIS). Amsterdam, the Netherlands 2003

Type: *International Refereed*

Davis, G. & Nadler, M. Mathematics education in the Republic of South Africa. Association of Childhood Education International. San Diego, California. 2002

Type: *International Refereed*

Davis, G. and J. Melillo Explorations with geometry and measurement for middle school. National Council of Teachers of Mathematics Regional Conference. Columbus, Ohio. 2001

Type: *Regional Refereed*

Davis,G. and N. Condit. NCTM Standards based Kindergarten experiences. National Council of Teachers of Mathematics Regional Conference. Columbus, Ohio. 2001

Type: *Regional Refereed*

Davis, G. and C. Steiner. Challenge and motivate your middle school math students. National Council of Teachers of Mathematics Regional Conference. Columbus, Ohio. 2001

Type: *Regional Refereed*

Davis, G. Exploring measurement with young children. Ohio Council of Tachers of Mathematics Annual Conference. Toledo, Ohio. 2000

Type: *State Refereed*

Davis, G. Exploring geometric concepts with young children. National Council of Teachers of Mathematics Eastern Regional Conference. Pittsburgh, Pennsylvania. 1999

Type: *State Refereed*

Davis, G. A Model for Preservice Teacher Mathematics Education. Nanjing University, Nanjing, China. 1999

Type: *State Refereed*

Davis, G. Philosophical and psychological aspects of assessment, curriculum and teaching; and Mathematics as content and process inquiry: implications for assessment. International School of Amsterdam, International Schools Curriculum Project. Amsterdam,the Netherlands. (Invited) 1998

Type: *International Refereed*

Davis, G. Developing concepts for number and number relationships with young children. Association for Childhood Education International. Portland, Oregon. 1997

Type: *International Refereed*

Davis, G. Proficiency testing: implications for teaching young children. National Council of Teachers of Mathematics Eastern Regional Conference. Cleveland, Ohio. 1997

Type: *Regional Refereed*

Davis, G. Teaching and learning at an international school "Educational for international understanding." Association for Childhood Education International. Minneapolis, Minnesota. 1996

Type: *International Refereed*

Davis, G. The role of drill and practice: Some perspectives from research. Ohio Council of Teachers of Mathematics. 1996

Type: *State Refereed*

## Service

**Reviewer, International Baccalaureate Organization** **2009 - 2010**

*Volunteer, International Baccalaureate Primary Years Programme Authorization and Evaluation. Haden, Idaho December 2009; Indianapolis, Indiana February 2010; Miami, Florida April 2010; Greece, New York May 2010.*

Type: *International*

**Faculty Advisory Committee** **2008 - 2009**

*Faculty Advisory Committee 1992-93; 1996-97; 2000-01; 2001-02; 2003-04 elected.*

Type: *Department*

**Member, Professional Standards Committee** **2008 - 2009**

*Review and make recommendation aobut KSU professional standards.*

Type: *University*

**Member, International Baccalaureate Initiative** **2008 - 2009**

Type: *Department*

**Judge, Research and Graduate Studies** **2007 - 2007**

*Reviewer, Research Incentive Grant Proposals (2007)*

Type: *University*

**Consulting, NcNair Scholars' Program** **2006 - 2006**

*McNair Scholars' Mentor (summer 2006) Mentored an undergraduate student - grant work and research in Mathematics Education*

Type: *University*

**Member, Citation and Recognition Committee** **2005 - 2011**

*Advisory to the President for honorary awards and degrees conferred at commencements.*

Type: *University*

**Representative, KSU Alumni** **2004 - 2005**

*New Student Orientation – parents and students (2004; 2005)*

Type: *University*

**Coordinate, Honors College** **2003 - 2004**

*Honors College Advising – Individual Honors Thesis advisor: Fall 2003 (2 students); Fall 2004 (1 student)*

Type: *University*

**Curriculum Committee** **2002 - 2009**

*Curricular review and decisions for Teaching, Leadership and Curriculum Studies Department.*

Type: *Department*

**Dissertation Awards Committee** **1999 - 2000**

*Review and evaluation of dissertations - to determine award status.*

Type: *College*

**member, Elementary Program Area: Kotis, Van Campen, and Mancuso Scholarship review** **1998 - 2001**

Type: *Department*

**member, Undergraduate Appeals, Professional Standards and Admission Committee** **1998 - 1999**

*Undergraduate Appeals, Professional Standards and Admission Committee (1998-1999)*

Type: *College*

**Undergraduate Council** **1998 - 2001**

*Undergraduate review of programs and currricular matters for the college.*

Type: *College*

**Summit County Technology Committee** **1996 - 1996**

*Summit County Technology Committee (Spring, 1996 - Fall 1996)*

Type: *College*

**College Advisory Council** **1996 - 1997**

Type: *College*

**member, Student Center Advisory Board** **1996 - 1997**

Type: *University*

**member, Registration Advisory Committee** **1996 - 1997**

Type: *University*

**member, Foundations Subcommittee,** **1995 - 1997**

*Middle Childhood Education Cohort (1995-1997)*

Type: *Department*

**member, Student Center Advisory Board** **1992 - 1994**

*Student Center Advisory Board (19921994)*

Type: *University*

## Grants

**Co PI, Akron Mathematics Academy** **2007 - 2008**

*Mathematics Education Professional Development - Grades 3-8*

Collaboration with: Genevieve Davis Judith Melillo

Awarded: $113,000.00

Ohio Board of Regents - Training

**Co PI, Mathematics & Science Partnership Program [MSP] Ohio Mathematics Academy Program [OMAP] Grant** **2006 - 2009**

*Mathematics Education Professional Development Grades 3-6*

Collaboration with: Genevieve Davis Trish Koontz

Awarded: $750,000.00

Ohio Department of Education - Training