

# CURRICULUM VITAE

ALFINIO FLORES

## Education

- 1982 - 1985 The Ohio State University, Ph. D. Mathematics Education  
1976 - 1978 UNAM National University of Mexico, M. Sc. Mathematics  
1972 - 1976 UNAM National University of Mexico, B. Sc. Mathematics

**Fields of interest:** Mathematics Education, computers and calculators in mathematics teaching and learning, curricular development, pre- and in-service preparation of teachers of mathematics.

## Work experience

- 2020 – present Mathematics Faculty, Chandler-Gilbert Community College  
2020 – present Hollowell Professor Emeritus of Mathematics Education, Univ. of Delaware  
2007 – 2019 Hollowell Professor of Mathematics Education, University of Delaware  
2008 – present Professor Emeritus of Mathematics Education, Arizona State University  
1998 – 2007 Professor of Mathematics Education, Arizona State University  
1992 – 1998 Associate Professor Mathematics Education, Arizona State University  
1989 – 1992 Associate Professor, Department of Mathematics, San Diego State University  
1984 – 1989 Associate Researcher, Centro de Investigación en Matemáticas  
1984 – 1989 Mathematics Instructor, U. of Guanajuato  
1982 – 1984 Teaching Associate, Ohio State University  
1980 – 1982 Técnico Académico, Centro de Investigación en Matemáticas  
1980 – 1982 Mathematics Instructor, University of Guanajuato  
1978 – 1980 Curriculum Development (Mathematics), Ministry of Education of Mexico  
1977 – 1980 Mathematics Instructor, National University of Mexico  
1975 – 1976 Teaching Assistant, National University of Mexico

## DIRECTED PROJECTS (Principal Investigator listed first)

- Flores, A., Park, J. & Shipman, H. (2015-2017). *Integrated Science and Mathematics Education: A Model Course for Pre-Service Teachers*. National Science Foundation (no-cost extension) (TUES Award number 1140702)
- Bernhardt, S., Flores, A., Shipman, H. (2012-2015). *Integrated Science and Mathematics Education: A Model Course for Pre-Service Teachers*. National Science Foundation (\$198,996) (TUES Award number 1140702)
- Pollock, L., Harvey, T. Mouza, C. Flores, A. (2012-2015) *CS 10K: Developing and supporting computer science teachers via strategic partnering*. National Science Foundation (\$853,814) (Award number 1240905)
- Berk, D., Hiebert, J., & Flores, A. (2009-2014). *A Longitudinal Study of the Effects of K-8 Mathematics Teacher Preparation on Teacher Knowledge, Teaching Practices, and Student Learning*. National Science Foundation (\$2,000,000) (Award number 0909661)

- Rossi, L., Flores, A., Daley, B. (2009). *An exploratory study of value added to students' quantitative literacy at the University of Delaware*. University of Delaware (\$12,000)
- Scantlebury, K, Flores, A., & Vukelich, C. (2008-2013). *Science and Mathematics Academy for Recruiting Teachers*. (Total \$ 1,454, 623, US Department of Education \$947,104 and University of Delaware \$507,519)
- Flores, A. (2004). *Glendale math leaders*. Improving Teacher Quality competition, Arizona Board of Regents (\$59 999).
- Budan, K. & Flores, A. (2004) *Glendale Math Science Partnership*. Mathematics and Science Partnership programs, Arizona Department of Education (\$136 879).
- Carlson, M., Thompson, P., Flores, A. et al. (2004-2006). *Developing a professional learning community model for secondary precalculus teachers: A model for teacher professional growth*. Funded by National Science Foundation (\$1,725, 560). 0353470
- Middleton, J., Atkinson, R., Baek, J., Flores, A., Carlson, M., Millsap, R., Thompson, M. (2004-2007). *A Longitudinal Study of the Development of Rational Number Knowledge in the Middle Grades*. National Science Foundation (\$1,740,195). 0337795
- Dorn, R., & Flores, A. (2002). *AzGeoMath* (Integration of Geography and Mathematics). Funded by National Geographic Society Education Foundation (\$87 625).  
<http://alliance.la.asu.edu/geomath/general.html>
- Coleman, K., Califano, L., Flores, A., and Middleton. (1999-2004). *TREASUREmath: Teaching Reflectively: Extending and Sustaining use of Reforms in Mathematics Classrooms*. Funded by National Science Foundation (\$1,561,500). #9817737, 9911849
- Flores, A. & Bitter, G. (1994). *Preparing teachers for leadership in technology*. Funded by Arizona Board of Regents - Eisenhower Mathematics & Science Education Act (\$50,000) and Arizona State University (\$50,000). Integration of the use of technology in science and mathematics methods courses at ASU. <http://129.219.116.32/guidehome.html>
- Flores, A. (1988-1989). *Master's Programme in mathematics education*. Funded by the International Centre for Theoretical Physics, UNESCO. (\$2,000).
- Flores, A. (1987). *Manipulative materials for the teaching of mathematics: 15 laboratory activities for grades 7-9*. Funded by the State Department of Education of Guanajuato.
- Flores, A. (1987). *Computer laboratories for the teaching of mathematics*. Funded by the State Department of Education of Guanajuato. (\$2,000,000 pesos)
- Flores, A. (1987). *Integrating the computer in elementary school mathematics: 90 programs and activities*. Funded by Instituto Cervantes, S.L.P (\$2,520,000 pesos)
- Flores, A. (1986). *Mathematics laboratory and the computer in the teaching of junior high school mathematics*. Funded by the State Department of Education of Guanajuato. Secretaría de Educación, Cultura y Recreación, Estado de Guanajuato. (\$ 3,000,000 pesos)
- Flores, A. (1986). *Programas de matemáticas y física para MicroSep*. Subsecretaría de Planeación, SEP – Instituto Latinoamericano de Comunicación Educativa. (\$6,400,000 pesos)
- Shumway R. J. & Flores, A. (1985). *Conference -Workshop: Mathematical Concept Learning through Computer Programming*. Ohio State University and Centro de Investigación en

Matemáticas.

Flores, A. (1985 -1986). *Mathematics laboratory: 40 activities for high school*. Funded by the Ministry of Education of Mexico. Consejo del Sistema Nacional de Educación Tecnológica, Subsecretaría de Educación Tecnológica. (\$7,544,378 pesos)

### Proposal submitted

Roh, K. H., Zandieh, M. & Flores, A. *i<sup>4</sup>-Geometry: Internet-based, Interactive, Guided Inquiry Geometry Materials and Instructor Guides*. The focus of this project is on fostering college students' ability to conjecture and generalize in the realm of rigid transformations. We plan to develop interactive, internet-based GeoGebra materials, guided inquiry activities, protocols for students sharing their thinking, and instructor support materials (Proposal 2110501 submitted November 25, 2020 to NSF-IUSE)

### ARTICLES (peer reviewed journals)

Flores Peñafiel, A. (2019). Las voces y los ecos. *Realidad y reflexión*, 50, 13-18.

<https://www.lamjol.info/index.php/RyR/article/view/8998>

Flores, A. (2019). Investing under uncertainty: Mathematical models and computer simulations. *Colorado Mathematics Teacher*. <https://www.cctmath.org/cmt/2019/2/21/investing-under-uncertainty-mathematical-models-and-computer-simulations>

Edwards, J. & Flores, A. (2018). Four Corners in learning mathematics with technology. *Ohio Journal of School Mathematics*, 78, 45-51.

Flores, A. & Park, J. (2018). Soap films and GeoGebra in the study of Fermat and Steiner points. *International Journal of Mathematical Education in Science and Technology*, 49(4), 554-570. DOI:10.1080/0020739X.2017.1387944

Flores, A. (2017). Hinged tilings. *North American GeoGebra Journal*, 6(1), 1-11.

Sigler, A., Stupel, M. & Flores, A. (2017). Relations among five radii of circles in a triangle, its sides and other segments. *International Journal of Mathematical Education in Science and Technology*, 48(5), 782-793.

Park, J., DiNapoli, J. E., Mixell, R. A. & Flores, A. (2017). Use of words and visuals in modeling context of annual plant. *International Journal of Mathematical Education in Science and Technology*, 48(5), 682-701.

Segal, R., Stupel, M., Flores, A. (2016). Examples of multiple proofs in geometry: Part 1 tasks and hints. *Ohio Journal of School Mathematics*, 74, 35-43.

Flores, A. (2016). Venus synodic period and ancient Mayan calendars. *Journal of Mathematics and Culture*, 10(1), 1-20.

<https://journalofmathematicsandculture.files.wordpress.com/2016/07/venus-synodic-period-jmc-final-10-1.pdf>

Flores, A., Phelps, C. M., & Jansen, A. (2016). Reflections on transformative experiences with mathematical inquiry: The case of Christine. *PRIMUS Special Issue on Teaching Inquiry*,

27(1), 47-57. <http://www.tandfonline.com/doi/abs/10.1080/10511970.2016.1172689>

- Stupel, M., Segal, R. & Flores, A. (2016). Hidden properties of the equilateral triangle. *North American GeoGebra Journal*, 5(1), 28-39.
- Flores, A. & Park, J. (2016). Students' guided re-invention of definition of limit of sequence with interactive technology. *Contemporary Issues in Technology and Teacher Education*, 16(2), 110-126. Association for the Advancement of Computing in Education (AACE). Available <http://www.citejournal.org/volume-16/issue-2-16/mathematics/students-guided-reinvention-of-definition-of-limit-of-a-sequence-with-interactive-technology/>
- Flores, A., Yanik, H. B. (2016). Geometric translations: An interactive approach based on students' concept images. *North American GeoGebra Journal*, 5(1), 1-19.
- Park, J., Flores, A., & Hohensee, C. (2016). Fractions as numbers and extensions of the number system: Developing activities based on research. *Ohio Journal of School Mathematics*, 73, 13-21.
- Flores, A. (2015). The voices and the echoes. *For the Learning of Mathematics*, 35(3), 23-25.
- Flores, A. (2015). Minimizing the sum of the squares of the distances to the vertices of a triangle. *The Centroid*, 41(1), 7-11.
- Flores, A. (2015). Sums of squares of diagonals and sides of regular polygons. *Colorado Mathematics Teacher*, Winter 2015, 17-21.
- Flores, A. (2015). Exploring cyclic quadrilaterals with perpendicular diagonals. *North American GeoGebra Journal*, 4(1), 1-8.
- Flores Peñafiel, A. (2014). Enfoque conceptual del cálculo en la formación de docentes: Ejemplos con uso de tecnología interactiva. *El Cálculo y su Enseñanza*, 5, 1-26.
- Flores, A. (2015). Students exploring analogues of the Pythagorean theorem and the triangle inequality in four dimensions. *Mathematics in School*, 44(3), 3-6.
- Park, J. & Flores, A. (2015). Fermat's point from five perspectives. *International Journal of Mathematical Education in Science and Technology*, 46(3), 425-441.
- Flores, A., Bernhardt, S., Shipman, H. (2015). Rowing competitions and perspective. *International Journal of Mathematical Education in Science and Technology*, 46(2), 284-319.
- Soto-Johnson, H. & Flores Peñafiel, A. (2014). Las Chicas de Matemáticas 2014. *Eureka*, 33, 13-23.
- Flores, A., Park, J. and Sherman, M. (2014). Derivatives at several points: An important step between derivative at a point and derivative function. *Ohio Journal of School Mathematics*, 70, 34-39.
- Flores, A. (2014). The Babylonian method for square root: Why is it so efficient? *Mathematics Teacher*, 108(3), 230-235.
- Flores Peñafiel, A. (2014). División de fracciones como comparación multiplicativa a partir de los métodos de los alumnos. *Educación Matemática*, 25 años (March), 271-288.

- Rothery, T. G., and Flores Peñafiel, A. (2014). Orden y distancia de fracciones y decimales en la recta numérica: El caso de Abigaíl. *Avances de Investigación en Educación Matemática*, 5(May), 73-90.
- Flores, A. (2014). Who is in the lead? *Mathematics Teacher*, 108(1), 18-22.
- Flores Peñafiel, A., Park, J. & Sherman, M. (2014). Derivadas en varios puntos: Un paso importante entre la enseñanza de los conceptos de *derivada en un punto* y de *función derivada*. *Eureka*, 31(April), 40-56.
- Flores, A. and Priewe, M. (2013). Orange you glad I did say “fraction division”? *Mathematics Teaching in the Middle School*, 19(5), 288-293.
- Flores, A. (2013). Visualizing the states. *The Centroid*, 39(2), 6-9.
- Flores Peñafiel, A. (2013). La suma de números cuadrados a partir de la suma de números triangulares: Una demostración visual. *Eureka*, 29, 7-11.
- Flores, A. and Braker, J. (2013). Developing the art of seeing the easy when solving problems. *Mathematics Enthusiast Journal*, 10(1 & 2), 365-378.
- Flores, A. and Kimpton, K. E. (2012). Multicultural and gender equity issues in a history of mathematics course. *Journal of Mathematics Education at Teachers College*, 3(2), 37-42.
- Flores, A. and Cauto, K. M. (2012). Empirical approaches to the birthday problem. *Mathematics Teacher*, 106(2), 134-137. (Published also in *Ohio Journal of School Mathematics*, 60, 19-23, and in *Virginia Mathematics Teacher*, 37(1), 37-39)
- Yun, J. O. and Flores, A. (2012). Algebra from chips & chopsticks, *Teaching Mathematics in the Middle School*, 17(6), 324-331.
- Hammons, A. N., Flores, A., Pelesko, J. A., and Biehl, L. C. (2012). The “Bubble Board” and curve fitting. *Ohio Journal of School Mathematics*, No. 66, 9-16.
- Flores, A. (2011). The means as weighted averages. *Teaching Mathematics and its Applications*, 30(3), 147-150.
- Flores, A. (2011). Experiments on the surface area of the sphere. *Teaching Mathematics in the Middle School*, 17(4), 203-205.
- Huntley, M. A. and Flores, A. (2011). Student made games to learn the history of mathematics. *PRIMUS*, 21(6), 1-10.
- Huntley, M. A. and Flores, A. (2010). A history of mathematics course to develop prospective secondary mathematics teachers’ knowledge for teaching. *PRIMUS*, 20(7), 603-616.
- Gallegos, I. and Flores, A. (2010). Using student-made games to learn mathematics. *PRIMUS*, 20(5), 405-417.
- Biondi, K. and Flores, A. (2010). Advice for new student teachers from beginning teachers. *Ohio Journal of School Mathematics*, No. 61, 4-6.
- Yun, J. O. and Flores, A. (2009). Chips, chopsticks, and polygonal numbers to foster algebraic thinking. *Illinois Mathematics Teacher*, Fall 2009, 1-5.
- Yanik, H. B. and Flores, A. (2009). Understanding rigid geometric transformations: Jeff’s learning path for translation. *Journal of Mathematical Behavior*, 28(1), 41-57.

- Flores Peñafiel, A. (2009). Las medias como promedios ponderados. *Miscelánea Matemática*, No. 48, 1-6.
- Flores, A. (2008). The mean as the balance point: Thought experiments with measuring sticks. *International Journal of Mathematical Education in Science and Technology*, 39(6), 741-748.
- Flores Peñafiel, A. and Yun, J. O. (2008). El teorema de Pitágoras con frijoles de goma. *Educación Matemática*, 20(1), 103-113.
- Flores, A. and Gustafson, E. (2008). Left and right with a graphing calculator. *Ohio Journal of School Mathematics*, No. 58, 21-24
- Flores, A. (2008). Subtraction of positive and negative numbers: The difference and completion approaches with chips. *Mathematics Teaching in the Middle School*, 14(1), 21-23. (Published also in *Ohio Journal of School Mathematics*, No. 53, 3-7, and *Virginia Mathematics Teacher*, 33(1), 36-39)
- Yun, J. O. and Flores, A. (2008). The Pythagorean theorem with jelly beans. *Mathematics Teaching in the Middle School*, 14(4), 202-207. (An earlier version was published in *Texas Mathematics Teacher*, 55(1), 13-17.)
- Yanik, H. B., Holding, B. & Flores, A. (2008). Teaching the concept of unit in measurement interpretation of rational numbers. *Elementary Education Online*, 7(3), 693-705. Available <http://ilkogretim-online.org.tr/vol7say3/v7s3m12.pdf>
- Flores, A. (2008). Explorations with 142857: Connecting the elementary with the advanced. *Mathematics Teacher*, 101(6), 18-21. (Also published in *New Jersey Mathematics Teacher*, 63(1), 13-15.)
- Flores, A. (2007). The finger and the moon. *Mathematics Teaching in the Middle School*, 13(3), 132-133.
- Yun, J. O. and Flores, A. (2007). Jelly beans and hair bands: Areas of triangles with the same base and same height. *Ohio Journal of School Mathematics*, No. 56, 33-37.
- Flores, A. (2007). Examining disparities in mathematics education: Achievement gap or opportunity gap? *The High School Journal*, 91(1), 29-42.
- Flores, A. (2007). Algebra for a princess. *The Centroid*, 33(1), 5- 8.
- Meavilla, V. and Flores, A. (2007). History of mathematics and problem solving: A teaching suggestion. *International Journal of Mathematical Education in Science and Technology*, 38(2), 253-259.
- Flores, L. and Flores, A. (2006) Calculus, paper, scissors. *PRIMUS*, 16(4), 358-362.
- Flores Peñafiel, A. (2006) Extensiones del teorema de Viviani para polígonos regulares. *Eureka*, 21, 76-83.
- Flores, A., Samson, J., Yanik, B. H. (2006). Quotient and measurement interpretations of rational numbers. *Teaching Children Mathematics*, 13(1), 34-39.
- Flores, A. (2006). Hinged geometry. *ON-Math Online Journal for School Mathematics*, 4(1) [http://my.nctm.org/eresources/view\\_article.asp?article\\_id=7117&page=1](http://my.nctm.org/eresources/view_article.asp?article_id=7117&page=1)

- Flores, A. (2006) How do students know what they learn in middle school mathematics is true? *School Science and Mathematics*, 106(3), 124-132.
- Meavilla Seguí, V. and Flores, A. (2006). The rule of false position and geometric problems. *Convergence*, 1. On line journal <http://mathdl.maa.org/convergence/1/>
- Flores, A., Turner, E. E., and Bachman, R. C. (2005). Posing problems to develop understanding: Two teachers make sense of division of fractions. *Teaching Children Mathematics*, 12, 117-121.
- Flores, A. (2005). ¿Cómo saben los alumnos que lo que aprenden en matemáticas es cierto? *Educación Matemática*, 17(3), 5-24.
- Flores, L. and Flores, A. (2005). Cálculo, papel, tijeras. *Eureka*, 20, 34-38.
- Flores Peñafiel, A. (2005). Conexiones entre matemáticas elementales y avanzadas: Exploraciones con 142857 para estudiantes y maestros. *Eureka*, 20, 39-44.
- Flores, A. and Klein, E. (2005). Connections between division and fractions in the third grade. *Teaching Children Mathematics*, 11(9), 452-457.
- Baek, J. M. and Flores, A. (2005). How does it feel? Teachers count on the alphabet instead of numbers. *Teaching Children Mathematics*, 12(2), 54-59. Published also in *Ohio Journal of School Mathematics*, 51, 50-53.
- Flores, A. and Brittain, C. M. (2004). Writing for an audience in a mathematics methods course. *Teaching Children Mathematics*, 10(9), 480-486.
- Flores, A. and Brittain, C. M. (2003). Writing to reflect in a mathematics methods course. *Teaching Children Mathematics*, 10, 112-118.
- Flores, A and Regis, T. (2003). How many times does a radius square fit into the circle? *Mathematics Teaching in the Middle School*, 8(7), 363-368.
- Flores, A. (2002). The kinematic method in geometry. *PRIMUS*, 12, 321-333.
- Flores, A. (2002). If pi were equal to 3.... *Ohio Journal of School Mathematics*, 46, 41-44.
- Flores, A. (2002) Interactive string parabolos. *ON-Math...Online Journal of School Mathematics*, available on line [http://my.nctm.org/eresources/journal\\_home.asp?journal\\_id=6](http://my.nctm.org/eresources/journal_home.asp?journal_id=6)
- Flores, A., Knaupp, J. E., Middleton, J. A., and Staley, F. (2002). Integration of technology, science, and mathematics in the middle grades: A teacher preparation program. *Contemporary Issues in Technology and Teacher Education*, [Online Serial] 2(1). Available: <http://www.citejournal.org/vol2/iss1/mathematics/article1.cfm>
- Flores, A. (2002). How do children know what they learn in mathematics is true? *Teaching Children Mathematics*, 8, 269-274.
- Flores, A. (2002). A rhythmic approach to geometry. *Mathematics Teaching in the Middle School*, 7, 378-383.
- Perkins, I. and Flores, A. (2002). Why don't teachers know all the ways? *Mathematics Teaching in the Middle School*, 7, 262-263.
- Flores, A. (2002). Learning and teaching mathematics with technology. *Teaching Children Mathematics*, 9, 308-310.

- Perkins, I. and Flores, A. (2002). Mathematical notations and procedures of recent immigrant students. *Mathematics Teaching in the Middle School*, 7, 346-351.
- Lappan, G. and Flores Peñafiel, A. (2002). Volúmenes de cilindros con la misma superficie lateral. *Eureka*, 18, 18 - 24.
- Flores, A. (2001). Make *Teaching Children Mathematics* Your Journal. *Teaching Children Mathematics*, 8, 1.
- Flores, A. and Perkins, I. (2001). Helping students jump from arithmetic to algebraic notation using geometric representations. *Ohio Journal of School Mathematics*, 44, 23 - 28.  
(Reprinted in *Iowa Council of Teachers of Mathematics Journal*, 29, 36-40, Spring 2002)
- Flores Peñafiel, A. (2001). El método cinemático en geometría, *Eureka*, 17, 5-14
- Flores, A. and Turner, E. (2001). Inclined planes and motion detectors: A study of acceleration. *School Science and Mathematics*, 101(3), 154-161.
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- Flores Peñafiel, A. (2000). Argumentos mecánicos en geometría. *Eureka*, 16(August), 22-30.
- Flores, A. (2000). The parabola as the envelope of a family of straight lines. *PRIMUS*, 10(3), 257-266.
- Flores, A. (2000) Mathematics of children, mathematics for children. *New England Mathematics Journal*, 32(2), 18-26.
- Flores Peñafiel, A. (2000). Uso de representaciones geométricas para facilitar la transición de la aritmética al álgebra. *Eureka*, 15, 16-21.
- Flores Peñafiel, A. (1999). Las representaciones geométricas como un medio para cerrar la brecha entre la aritmética y el álgebra. *Educación Matemática*, 11(3), 69-78.
- Flores Peñafiel, A., and Ramírez, N. G. (1999). Problemas a la carta. *Eureka*, No. 14, 14-24.
- Flores, A. (1999). Mechanical arguments in geometry. *PRIMUS*, 9(3), 241 - 250.
- Flores, A. (1999). The law of cosines: Connections for future teachers. *PRIMUS*, 9(2), 123-132.
- Flores Peñafiel, A. (1999). El área de la esfera: Un argumento heurístico. *Eureka*, No. 14, 53-55
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388-392.

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- Flores, A. (1995). Connections in proportional reasoning: Levers, arithmetic means, mixtures, batting averages, and speeds. *School Science and Mathematics*, 95, 423-430.
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- Flores Peñafiel, A., Philipp, R., Sowder, J. T., y Schappelle, B. (1994). La reflexión en la práctica de la enseñanza de las matemáticas: Cuatro maestros extraordinarios. *Educación Matemática*, 6(1), 32-45.
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- Flores, A., Pérez, R. I. (1993). Mathematics for gifted students in grades K- 3: Early intervention and identification of gifted potential. *SCOPE*, 92(3), 33-41.
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- 2, *Educación Matemática*, 4(2), 62-78.
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- Flores, A. (2012). Tracing the slopes of the tangent lines for sine function. <https://www.geogebra.org/m/e2eZZsTj>
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**Technical reports, Internal communications, etc.**

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- Flores, A. (1998). Electronic Technology and NCTM Standards: A synthesis of *Technology and Standards 2000* Conference, 20 p. <http://mathforum.org/technology/papers/papers/flores.html>
- Flores, A., Knaupp, J. E., Middleton, J. A., & Staley, F. (1995). Authentic integration of technology, science, and mathematics in the middle grades.

- Flores, A. (1995) Report of Site Visits to Puerto Rico Statewide Systemic Initiative. Presented to National Science Foundation Statewide Systemic Initiative Program.
- Flores, A. & McLeod, D. (1991) Calculus for middle school teachers: Math 121. In J. Sowder (Ed.) *Understanding as a basis for teaching: Mathematics and Science for prospective middle school teachers* (p. 8 - 14). ERIC ED 339 590
- Flores Peñafiel, A. La geometría y la solución de problemas. Comunicaciones del CIMAT, 1988, 13p.
- Flores Peñafiel, A. Maestría en Matemáticas - Educación Matemática. Comunicaciones del CIMAT, 1988, 70p.
- Flores Peñafiel, A. Especialidad en Enseñanza de las Matemáticas en el Tecnológico de León. En *Especialidad en Enseñanza de las Matemáticas Nivel Superior*. Programa Nacional de Formación y Actualización de Profesores de Matemáticas, 1988, p. 1-17.
- Flores Peñafiel, A. Bibliografía actualizada de matemáticas (licenciatura) Comunicaciones del CIMAT, 1988, 65p.
- Flores Peñafiel, A. La simetría en la ciencia y en el arte. Comunicaciones del CIMAT, 1988, 11p.
- Flores Peñafiel, A. Giving physical sense to the average. Comunicaciones del CIMAT, 1988. 4 p.
- Flores Peñafiel, A. Teoría y práctica en la formación de profesores de matemáticas. Centro de Investigación en Matemáticas, 1987.
- Flores Peñafiel, A.; Mirabal, F.; Martínez, A.; Lerma, J. Prácticas de matemáticas para primero de secundaria. Comunicaciones del CIMAT, 1987, 52p.
- Flores Peñafiel, A.; Mirabal, F.; Martínez, A.; Lerma, J. Prácticas de matemáticas para segundo de secundaria. Comunicaciones del CIMAT, 1987, 36p.
- Flores Peñafiel, A.; Mirabal, F.; Martínez, A.; Lerma, J. Prácticas de matemáticas para tercer año de secundaria. Comunicaciones del CIMAT, 1987, 64p.
- Flores Peñafiel, A.; García, E. Bibliografía de Matemáticas: Nivel Licenciatura. Comunicaciones del CIMAT, 1987, 120p.
- García, E.; Flores Peñafiel A. BIBLIO-TE-C Programa automatizado de bibliotecas. Comunicaciones del CIMAT, 1987, 43p.
- Domínguez, J.; Flores Peñafiel, A. Análisis estadístico de "El efecto de programar la computadora en el aprendizaje de conceptos de cálculo." Comunicaciones del CIMAT, 1987, 22p.
- Flores Peñafiel, A.; Mirabal, F. Prácticas de laboratorio: Números. Comunicaciones del CIMAT, 1986, 37p.
- Flores Peñafiel, A.; Mirabal, F. Prácticas de laboratorio: Probabilidad. Comunicaciones del CIMAT, 1986, 32p.
- Mirabal, F., Flores Peñafiel, A. Prácticas de laboratorio: Álgebra. Comunicaciones del CIMAT, 1986, 73p.
- Mirabal, F., Flores Peñafiel, A. Prácticas de laboratorio: Geometría. Comunicaciones del CIMAT, 1986, 73p.
- Flores Peñafiel, A. Representación de inclusión por diagramas de Venn. Guión para programa de computadora. Comunicaciones del CIMAT, 1986, 27p.
- Flores Peñafiel, A. Relación condicional o implicación. Guión para programa de computadora. [Conditional relation or implication. Script for a computer program]. Comunicaciones del CIMAT, 1986, 36p.
- Flores Peñafiel, A. Relación de equivalencia. Guión para programa de computadora.

- Comunicaciones del CIMAT, 1986, 32p.
- Flores Peñafiel, A.; Monroy, L. Potencia eléctrica. Guión para programa de computadora. Comunicaciones del CIMAT, 1986, 17p.
- Flores Peñafiel, A.; Monroy L. Corriente eléctrica. Guión para programa de computadora. Comunicaciones del CIMAT, 1986, 15p.
- Flores Peñafiel, A.; Monroy, L. Corriente directa y corriente alterna. Guión para programa de computadora [Direct current and alternate current. Script for a computer program]. Comunicaciones del CIMAT, 1986, 19p.
- Flores Peñafiel, A.; Monroy, L. Circuitos en serie y en paralelo. Guión para programa de computadora [Circuits in series and in parallel. Script for a computer program]. Comunicaciones del CIMAT, 1986, 51p.
- Flores Peñafiel, A. Laboratorios de matemáticas para nivel medio: Un curso para maestros en servicio. Centro de Investigación en Matemáticas, 1986.
- Flores Peñafiel, A. Taller de probabilidad. [Probability workshop]. Comunicaciones del CIMAT, 1985, 12p.
- Flores Peñafiel, A.; Mirabal, F. Taller de fracciones [Fraction workshop]. Comunicaciones del CIMAT, 1985, 27p.
- Shumway, R. J.; Flores Peñafiel, A. Initial Survey: Computer Programming Research (K-16) 1964-1985. Comunicaciones del CIMAT, 1985, 25p.
- Flores Peñafiel, A. Logarithms via non standard analysis. Comunicaciones del CIMAT, 1982, 12 p.
- Flores Peñafiel, A. Factorización: taller para 1o y 2o de secundaria. Comunicaciones del CIMAT, 1981, 18p.
- Flores Peñafiel, A.; Johnson, D. A. Bibliografía anotada de matemáticas y de educación matemática. Comunicaciones del CIMAT, 1981, 77p.
- Flores Peñafiel, A. ¿Qué es el análisis no estándar? Comunicaciones Internas, Facultad de Ciencias, 1980, 22p.

## CLASS-NOTES

- Flores, A. Math 349 *Introduction to linear algebra*. University of Delaware, 2013.
- Flores, A. Math 245 *Introduction to proof*. University of Delaware, 2012.
- Flores, A. *Math 380 Approaches to teaching mathematics*. University of Delaware, 2010.
- Flores, A. *Teaching mathematics in secondary school*. University of Delaware, 2008.
- Flores, A. *Teaching algebra in the middle grades*. Arizona State University, 2006.
- Flores, A. *Teaching geometry 5 – 8*. Arizona State University, 2005.
- Flores, A. *Teaching mathematics with technology*. Arizona State University, 2004.
- Flores, A. *Teaching mathematics in the middle grades 5-9*. Arizona State University, 2004.
- Flores, A. *ESL/BLE Methods of teaching mathematics*. Arizona State University, 2003.
- Flores, A. *Probabilidad experimental en el nivel medio*. Universidad Michoacana, 2001.
- Flores, A. *Teaching mathematics and science with technology*, Arizona State University, 2000.
- Flores, A. *Teaching geometry K - 8*. Arizona State University, 2000.

- Flores, A. *Integrated mathematics, science, and technology*. Arizona State University, 1998.
- Flores, A. *Estrategias para la enseñanza de las matemáticas*. Arizona State University, 1995. 236p.
- Flores, A. *Actividades y textos para la enseñanza de las matemáticas*. Arizona State University, 1994.
- Flores, A. *Teaching mathematics in the elementary school*. Arizona State University, 1993. 276 p.
- Flores, A. *Teaching strategies in mathematics*. Arizona State University, 1993.
- Flores, A. *Geometry in 7 - 14 Curriculum*. Vol.1 Instructional materials and ideas. San Diego State University, 1991. 118 p.
- Flores, A. & Sowder, L. *Basic Mathematical Concepts*. San Diego State University, 1992. 131p.
- Flores, A. *Algorithms in Elementary Mathematics (Logo)*. San Diego State University, 1990. 144 p.
- Flores, A. *Modern Elementary Mathematics 2 (Geometry)*. San Diego State University, 1990. 139 p.
- Flores Peñafiel, A. *Cómo plantear y resolver problemas: notas para un curso*. Comunicaciones del CIMAT, 1989, 64p.
- Flores Peñafiel, A. *Laboratorio de matemáticas: notas para un curso*. Comunicaciones del CIMAT, 1988, 38p.
- Flores Peñafiel, A. *Apuntes de mecánica*. Comunicaciones del CIMAT, 1987, 102p.
- Flores Peñafiel, A. *Introducción a la educación matemática*. Comunicaciones del CIMAT, 1986. 102p.

### **PROFESSIONAL PRESENTATIONS (Selection):**

2019

*Una base profesional de conocimiento a partir de la investigación y la práctica*. Congreso de Matemáticas, Universidad Francisco Gavidia, San Salvador, El Salvador (August)

El gusto de enseñar matemáticas. Mesa redonda. Congreso de Matemáticas, Universidad Francisco Gavidia (with Emerson Rolkouski and Jeser C. Candray)

2016

*Social Justice Panel Session: Juan's Math Story* (with J. Valadés, J. Aguirre, C. Lopez Leiva, E. Mosqueda, A. Sorto). TODOS 2016 Conference, Scottsdale, AZ (June).

2015

Measuring Pre-Service Teacher Learning when Mathematics is Learned Through Technology, Collaboration and Inquiry. 2015 SACNAS National Conference: The Diversity in STEM Conference (October).

2014

*Enfoque conceptual del cálculo en la formación de docentes: Ejemplos con uso de tecnología interactiva.* 7º Encuentro Internacional sobre la Enseñanza del Cálculo. Universidad Autónoma de Ciudad Juárez, Ciudad Juárez, México (September). Invited plenary address.

*Integrating Computers, Science, and Mathematics - A Course for Future Mathematics Teachers.* 6<sup>th</sup> International Conference on Computer Supported Education, Barcelona, Spain (April)

*Integrando ciencias, tecnología y matemáticas – Un curso para futuros profesores de matemáticas.* Departament de Didàctica de les Matemàtiques, University of Valencia, Spain (April)

*Secondary mathematics teachers under their own STEEM.* CREMSE Colloquium, San Diego State University (February)

2013

Active learning of mathematics for high school students: Collaborations of mathematicians and mathematics educators. In *Mathematics + Mathematics Education Research = A Partnership for a Better Education* (with C. Anhalt, M. Cordero-Epperson, R. Cortez, H. Soto-Johnson). SACNAS National Conference, San Antonio TX (October).

2012

*Building a professional knowledge base from research and practice: The impact of Judy Sowder.* Invited Speaker, San Diego State University (January).

2010

*Building a professional knowledge base from research and practice.* Invited keynote speaker. Mathematics Education Research in Texas (November).

*Achievement gap or opportunity gap? Changing the perspective about school performance in mathematics.* Invited major presentation, National Council of Supervisors of Mathematics Annual Conference, San Diego, CA (April).

2009

*Chips and chopsticks: Using geometrical representations to connect number and algebra.* Delaware Council of Teachers of Mathematics. Dover, DE (October).

*Math experiences for math educators: Exploring open mathematical spaces.* Research Pre-session National Council of Teachers of Mathematics. Washington, DC (April). (With Steele, Jansen, Newton, Wilkerson, Sword, Herbel-Eisenmann)

*Essential Understandings Book Series: Professional Development Tools for Engaging Teachers with Mathematics, Grades PreK–2.* National Council of Supervisors of Mathematics. Washington, DC (April). (With Barbara Dougherty)



2008

Plantear y replantear problemas para propiciar la investigación matemática independiente. Invited plenary conference. Universidad Autónoma de Hidalgo (December).

*Learning to see in mathematics*. Hollowell Inaugural Lecture. University of Delaware (October).

*Area formulas with hinged figures: Developing mathematical proficiency*. Key note address. School-Based Teacher Leaders SBTLFest Conference. Newark, DE (May).

2007

*Geometría con bisagras*. Paper presented at the 12a Conferencia Interamericana de Educación Matemática. Querétaro, Qro. México (July)

*Liderazgo en educación matemática en un sistema escolar descentralizado: El papel de NCTM*. Paper presented at the 12a Conferencia Interamericana de Educación Matemática. Querétaro, Qro. México (July)

*Understanding how students think about mathematics*. Invited presentation. Illinois Institute of Technology, Chicago, February.

*Understanding how young adolescents justify and prove in mathematics*. Invited presentation. The Ohio State University, February. University of Delaware, March. Ohio University, May.

*Helping teachers understand students' mathematical thinking*. Invited presentation. North Carolina State University, March.

*How can/should/will the new curriculum recommendations be used?* (panel with Broadway, Usiskin, Miller, Briars) K-12 Mathematics: What Should Students Learn and When Should They Learn It? Arlington, VA. (February)

2006

*High expectations and high support in mathematics for second language learners*. Mathematical Association of America. Preparing Mathematicians to Educate Teachers, Lincoln, NE (June).

*Using graphing calculators to teach middle school mathematics*. Mathematical Association of America. Preparing Mathematicians to Educate Teachers, Lincoln, NE (June).

2005

*La demostración en matemáticas: Perspectivas del matemático, el alumno, y el maestro*. Congreso de las Sociedad Matemática Mexicana, México, DF (October). Plenary address.

*La historia de las matemáticas como recurso didáctico: algunos ejemplos de la efectividad de la regla de una falsa posición para la resolución de problemas geométricos*. 5o Congresso Ibero-Americano de Educação Matematica, Porto, Portugal (July). With V. Meavilla Seguí

*What information is needed on institutional doctoral programs in mathematics education and how can we go about getting it?* Association of Mathematics Teacher Educators Annual Conference, Dallas TX (January). With R. Reys, S. Cooper, K. Karp, F. Lester, & D. Lambdin.

2004

*Mathematics for secondary teachers: Curriculum and assessment* (panel with Dwyer, Ipiña,

Kurtz, Metzler, Sanchez). Meeting 1000 American Mathematical Society. Albuquerque, NM (October).

2003

*Simulating Planet Orbits with a Dynamic Geometry Program*. School Science and Mathematics Association Annual Convention. Columbus, OH (October).

*SSMILes – School Science and Mathematics Integrated Lessons for Grades 4-9*. School Science and Mathematics Association Annual Convention. Columbus, OH (October). With A. L. White, J. Jansen, J. Whitmer

*Developing teachers' knowledge of mathematics*. Illinois Institute of Technology, Chicago, IL (January)

*Teachers knowledge of mathematics: Understanding of division of fractions*. University of Missouri. Columbia, MO (February)

2002

*The kinematic method in geometry*. Central Michigan University, Mt. Pleasant, MI (November)

*Mathematical notations and procedures of recent immigrant students*. University of Nebraska, Lincoln, NE (November)

*Forming a professional development network through writing and other means*. Arizona Association of Teachers of Mathematics, Phoenix, AZ (September)

2001

*Ejemplos del uso del método cinemático en geometría*. Conferencia Internacional sobre Uso de Tecnología en la Enseñanza de las Matemáticas. Universidad Michoacana y CINVESTAV, Morelia, México (January). Plenary session.

*Principles and Standards, Pre-K—5: A vision of school mathematics for 2000 and beyond*. NCTM Western Regional Conference, Yakima, WA (February)

*A closer look at Principles and Standards: Ideas into Actions*. National Council of Teachers of Mathematics Annual Meeting, Orlando FL (April). (With J. Joyner, A. Andrews, D. Clements, and C. Midgett.)

*Writing for NCTM Journals: Tips and discussion with editorial panel members*. National Council of Teachers of Mathematics Annual Meeting, Orlando FL (April). (With A. Reeves and S. Berger.)

Writing about research for a general practitioner audience. Research Pre-session National Council of Teachers of Mathematics Annual Meeting, Orlando FL (April). (With K. M. C. Ivey, D. R. Thompson, and R. M. Zbiek)

2000

*Geometric representations in the transition from arithmetic to algebra*. Paper presented at the Working Group Representations and Mathematics Visualization, Twenty-Second Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Tucson, AZ (October)

*Propuestas actuales sobre el currículum a nivel internacional.* Paper presented at 33 Congreso Nacional de la Sociedad Matemática Mexicana. Saltillo, Coahuila, México (October)

*Presente y futuro de la educación matemática.* Roundtable (with F. Hitt and F. Barrera). 33 Congreso Nacional de la Sociedad Matemática Mexicana. Saltillo, Coahuila, México (October)

*Learning to teach division of fractions meaningfully.* Paper presented at the Twenty-Second Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (with E. Turner). (October)

*Learning mathematics in two languages.* Paper presented as part of symposium *Latinos and mathematics: Issues of teaching and learning* (with S. Celedón Pattichis, L. Khisty, K. Chval.) Research pre-session. National Council of Teachers of Mathematics, Chicago (April)

*Principles and Standards Pre-K–2: A Mathematics Vision for 2000 and Beyond.* National Council of Teachers of Mathematics Annual Meeting, Chicago, IL (April).

*Principles and Standards: Algebra in Grades K–5? Why? What? How?* National Council of Teachers of Mathematics Annual Meeting, Chicago, IL (April) (with S. J. Russell)

*Mathematics for Bilingual Students.* Paper presented at Equity and Assessment for Elementary and Secondary Students in a Culturally Diverse World. Mesa, AZ (April)

1999

*La geometría de los números.* Paper presented at Compumat 99. Universidad Autónoma de Yucatán. Mérida, Yucatán, México.

*Constructing meaning in mathematics in two languages: A response to Celedón-Pattichis.* Hispanic Issues Forum. Albuquerque, NM (September).

*Standards 2000: What we learned during the year of dialogue and feedback.* National Council of Teachers of Mathematics Western Regional Conference, Phoenix (December).

1998

*Bridging the gap between arithmetic and algebra using geometric representations.* Climbing the equity summit: Ensuring success for every student. Phoenix, AZ.

*Authentic integration of technology in middle school mathematics and science.* National Council of Teachers of Mathematics Annual Meeting. Washington, DC, April. (With J. Middleton).

1997

*Velocities of variations.* Joint MAA-AMS meeting, Geometer' Sketchpad Users Group. San Diego, CA

*Learning mathematics in two languages.* Asilomar Mathematics Conference. Pacific Grove, CA.

*Sí se puede. It can be done: Quality mathematics in two languages.* NCTM Annual Meeting. Minneapolis, MN.

1996

*A science/mathematics classroom/laboratory for authentic integration of technology.* NSTA Western Area meeting, Phoenix, AZ (with F. Staley, J. Middleton, J. Knaupp)

Geometry connections for 4-6 students. Sixth Annual Glendale Bilingual/ESL Conference (March 9).

1995

*Sí se puede. It can be done. Quality mathematics in more than one language.* University of California - Irvine. (March).

1994

*Hands on geometry.* NCTM Regional meeting, Phoenix, AZ.

*Geometría a la mano.* Second Annual Secondary Bilingual and ESL Conference.

1993

*Teaching and learning with interactive multimedia: Lessons learned from a program of research and development.* American Educational Research Association. (With G. Bitter and M. Hatfield)

*Matemáticas a la mano/Handy Math.* Arizona Association of Teachers of Mathematics (September)

1992

*Exploration of iterative processes and functions with a graphing calculator.* 7th International Congress of Mathematical Education, Québec, Canada.

*Docentes de matemáticas reflexivos: Cuatro maestros extraordinarios.* Sexta Reunión Centroamericana y del Caribe sobre Formación de Profesores e Investigación en Matemática Educativa. Cuernavaca, Mor., July.

*Mathematics for Gifted Bilingual Students.* Multicultural Classrooms - A Constructivist Viewpoint. College of Education and CRMSE, SDSU (May). Invited presentation.

*Con las manos en las matemáticas* [Hands on mathematics]. Annual Meeting, Arizona Association of Bilingual Educators, Prescott (October).

1991

*Mathematics education in Mexico: An update.* National Council of Teachers of Mathematics Regional Meeting, Louisville, KY

1990

*Calculus for middle school teachers using computers and graphing calculators.* Third Annual Conference on Technology in Collegiate Mathematics. Ohio State University.

*Research on computational estimation: a perspective of 3 countries.* Research pre-session Annual Meeting National Council of Teachers of Mathematics (with R. Reys, B. Reys, and S. Yoshikawa).

1989

*The effect of computer programming on the learning of calculus.* National Council of Teachers of Mathematics Annual Meeting, Orlando, 1989.

*Estimación computacional en los alumnos de quinto de primaria y segundo de secundaria en*

*Guanajuato*. [Computational Estimation in fifth and eighth grade students in Guanajuato]. Primer Simposio Internacional sobre Investigación en Educación Matemática, Guanajuato (March).

1988

*Solución de problemas matemáticos*. [Solving of mathematical problems] 2o Congreso Estatal de Profesores de Matemáticas de Veracruz, Jalapa.

*La geometría y la solución de problemas*. Universidad Autónoma de Nuevo León.

*El meollo de las matemáticas*. [The core of mathematics] Primer Simposio Internacional en Educación Matemática (November).

1987

*Actualización por laboratorios*. [In-service courses with laboratories] 9o Congreso Asociación Nacional de Profesores de Matemáticas, Jalapa, Ver.

*El efecto de programar la computadora en el aprendizaje de las matemáticas* [Effect of computer programming in the learning of mathematics]. 1a Reunión Centroamericana y del Caribe sobre Formación de Profesores e Investigadores en Matemática Educativa. Mérida, Yuc.

1986

*Using computers to teach better mathematics*. National Council of Teachers of Mathematics Annual Meeting, Washington

*Las microcomputadoras en la enseñanza de las matemáticas*. Morelia. Mich.

*El laboratorio y la computadora en la enseñanza de las matemáticas: Un curso de actualización para profesores de matemáticas de secundaria*. Sociedad Matemática Mexicana, Guadalajara, Jal.

1985

*Teaching mathematics in Mexico and the U. S. - can we learn from each other?* National Council of Teachers of Mathematics Annual Meeting, San Antonio, Tex.

*Perspectives of Mathematics Education Research in Mexico*. Research pre-session, NCTM Annual Meeting, San Antonio, Tex.

*Uso de la computadora en la enseñanza de las matemáticas* [Use of the computer in the teaching of mathematics]. 4o Coloquio Departamento de Matemáticas CINVESTAV, Taxco, Gro.

*Cambios programáticos ante la influencia de las calculadoras y computadoras* (moderator). Guadalajara, Jal. Panel participants: German Bernacer, Octavio García, Peter Hilton, Walter Taylor, Carlos Velarde

1984

*Remaking the Curriculum*. 5th International Congress of Mathematics Education, Adelaide, Australia

*La microcomputadora en la enseñanza del cálculo*. Congreso Anual de la Sociedad Matemática

Mexicana, Mérida, Yuc. (November).

*Cambios en el currículum de matemáticas.* Seminario La Enseñanza de las Matemáticas en la Educación Básica Hoy. Universidad Pedagógica Nacional, Cuautla, Mor. (November)

*Pequeños programas, grandes ideas.* Simposio Internacional La Computación en la Educación Infantil, UNAM.

1978

*Matemáticas ¿Lenguaje de la naturaleza?* 5o Congreso Nacional de la Asociación Nacional de Profesores de Matemáticas. Toluca, México.

*Formas y transformaciones.* 5o Congreso Nacional de la Asociación Nacional de Profesores de Matemáticas. Toluca, México (with Carlos Bosch Giral).

1977

*Hasta infinito y más allá.* Escuela Preparatoria, Universidad de Yucatán, Mérida, México.

## **EDITORIAL EXPERIENCE**

Comité Científico para UFG Editores, miembro (2019-). Universidad Francisco Gavidia, El Salvador.

Editor, *TODOS Research Monograph* (2011- 2014)

Editorial Panel, *Teaching for Excellence and Equity in Mathematics* (2011- 2014)

Editorial Board, founding member (2011-2013), *Mathematics Teacher Educator*, joint publication NCTM and AMTE

Editorial Panel (2008), AMTE Monograph 6, *Scholarly practices and inquiry in the preparation of mathematics teachers.*

Editorial Board, *American Education Research Journal: Teaching, Learning, Human Development* (2004-2006)

Editorial Panel, NCTM 2006 Yearbook *Thinking and reasoning with data and chance* (2003-2006)

Editor, *Using Technology in Your Classroom* department, *ON-Math*, National Council of Teachers of Mathematics (2005-2007)

Editor, *Research, Reflection, Practice* department, *Teaching Children Mathematics*, NCTM (2004 – 2006)

Member, *Mathematics for All* Panel, Educational Materials Committee, National Council of Teachers of Mathematics (2005-2007)

Editorial Committee, *School Science and Mathematics* (2003 – 2006)

Chair, Editorial Panel, *Teaching Children Mathematics*, published by National Council of Teachers of Mathematics, 2000-2002; Member of Editorial Panel, 1999-2002.

Focus Issue Editor: *Learning and Teaching Mathematics with Technology. Teaching Children Mathematics*, 9 (February 2002 issue).

Member, Editorial Committee *Eureka*, published by Universidad Autónoma de Querétaro, 1998-present

Editorial Committee (founding member), *Educación Matemática* 1988 - 1989.

Member, International Committee of Collaborators, *Educación Matemática*, 1990 – present

**Referee:**

*Journal of Mathematical Behavior, Educational Studies in Mathematics, International Journal of Mathematical Education in Science and Technology, Mathematical Thinking and Learning, American Education Research Journal: Teaching, Learning, Human Development; Teaching Children Mathematics; School Science and Mathematics; Educación Matemática; PRIMUS: Problems, Resources, and Issues in Mathematics Undergraduate Studies; Mathematics Teacher; Journal for Research in Mathematics Education; Canadian Journal of Science Mathematics and Technology; Educational Policy; Eureka; Bilingual Research Journal; Papeles de Trabajo sobre Cultura, Educación y Desarrollo Humano (Working Papers on Culture, Education and Human Development)*

**TEACHING EXPERIENCE**

**Instructor of mathematics and mathematics education**

2007-present. University of Delaware

Math 540 College Geometry

Math 210 Discrete Mathematics 1

Math 267 Learning Mathematics with Technology

Math 279, 379 Problem solving strategies 1, 2

Math 518 Mathematical Models and Applications

Math 245 Introduction to Proof

Math 349 Elementary Linear Algebra

Math 308 Historical Development of Mathematical Concepts and Ideas

Math 380 Approaches to Teaching Mathematics

Math 567 Foundations of Mathematics: Inquiry and Problem Posing

Math 382 Student teaching seminar in secondary math

Math 366, 466 Independent study

1992 - 2007. Arizona State University:

Course on use of technology to teach integrated mathematics highlighted by National Educational Technology Standards [http://cnets.iste.org/teachers/t\\_scen-pro.html](http://cnets.iste.org/teachers/t_scen-pro.html)

Courses

SED 598 Teaching algebra in the middle grades

SED 547 Teaching mathematics in the middle grades (5-9)

SED 598 Mathematics methods for early adolescents

SED 560 Teaching mathematics with technology

BLE 480 ESL/BLE Mathematics methods

DCI 791 Research in Mathematics Education 1, 2

EED 594 Teaching geometry in the middle grades

EED 598 Teaching geometry K-8

SED 594 Integrated mathematics, science and technology  
SED/EED 598 Teaching mathematics in the middle grades  
EED 498 Child in the natural world  
EED 498 Teaching for the scholarly life  
BLE 402 Teaching strategies in mathematics (bilingual)  
BLE 598 Teaching mathematics to Spanish speakers  
EED 402 Teaching strategies in mathematics  
EED 380 Teaching mathematics in the elementary school  
EED/EMC 598 Technology in the teaching and learning of mathematics

2004 *Technology in Teacher Education and Diversity in Teacher Education*, Preparing Mathematicians to Educate Teachers, University of Nebraska.

2003 *Technology in Teacher Education, and Diversity in Teacher Education*, University of Nebraska.

*Geometry for Parents* (eight 2-hour sessions). Chandler High School

2000 *Math for Parents: Thinking Visually* course (nine 2-hour sessions). Sunnyside High School, Tucson.

Portland State University: *Mathematics with Sketchpad*.

1999 Universidad Autónoma de Yucatán: *Geometría dinámica*

1997 Portland State University: *Geometry with Sketchpad for High School Teachers*

1994 San Diego State University-Calexico, TE 625 *Instruction in mathematical problem solving*

1989 - 1992 San Diego State University, Department of Mathematics

Modern Elementary Mathematics 1, and 2 (Geometry),

Math 210 Structure and Concepts in Elementary Mathematics 1

Math 211 Structure and Concepts in Elementary Mathematics 2

Math Ed 606 Geometry in 7-14 Curriculum,

Math 302 Basic Mathematical Concepts,

Math 309 Algorithms in Elementary Mathematics (Logo),

Math 310B

Math 121 Calculus.

1984 - 1989 University of Guanajuato:

Research Seminar, Mathematics Education 1 (learning theories),

Mathematics Education 2 (Curriculum analysis),

Field experience (master's program),

Introduction to mathematics education,

Methods for the teaching of mathematics,

Content in mathematics curriculum,

Theories in mathematics education,

Mechanics,

History of mathematics,

Differential and integral calculus.

**Mathematics teacher** 1985. Bachillerato tecnológico (High School). Calculus.



**Teaching Associate** 1982 - 1984. Ohio State University. Supervision of student teachers at Columbus schools (elementary, middle, junior high, and high school). Shadow seminar (Modern algebra concepts in school mathematics). Mathematics methods course for elementary teachers

**Instructor of Mathematics**

1981-1982. University of Guanajuato.

Statistics,  
Differential equations,  
College Algebra.

1981-1982. Normal School of Guanajuato. Statistics.

1977-1979. National University of Mexico.

Set theory,  
Linear algebra,  
Non-standard analysis,  
Calculus  
Multivariate Calculus.

1977. University of Yucatán. Topology, Analysis

**Teaching Assistant** 1975-1976. National University of Mexico. Calculus

**Mentoring undergraduate research**

2013

Hannah Kretz (Conic sections with GeoGebra)  
Alexis Restrepo (attitudes of students in integrated course)  
David Larkin (Python tutorial for beginning programmers)  
Michelle Stafford (GeoGebra and special education students)  
Gwenvere Temte (Students in high school with challenging behavior in mathematics class)

2012

Hannah Kretz (High School algebra and geometry with GeoGebra)

2011

Travis Wharton (Learning with Geometer's Sketchpad and JavaSketchpad)  
Marie Quintano (Learning with GeoGebra and Graphing Calculator)  
Dana Corasaniti (Learning to see in mathematics)  
Amber Beaman (Use of fraction kits with upper elementary students, McNair Program)

2010

Biyi Pang (Learning with Geometer's Sketchpad and Cabri 3D)

**Workshops for students** 1976 - present. Kindergarten, Elementary (all grades), Middle School, Junior High, High School, and College.

2014

Geometry. Las Chicas de Matemáticas, University of Northern Colorado.

2013

Mathematics through paper folding. Math Club University of Delaware. (November).

The Pythagorean theorem and beyond. UD Math Circle (February).

What is inside the regular polyhedra? UD Math Circle (November).

**In-service courses for mathematics teachers, and professional development workshops (selection)**

2019

¿Cómo hacer investigación en educación matemática? Seminario para profesores que preparan maestros. (Universidad Francisco Gavidia, San Salvador)

Figuras geométricas en la transición de la aritmética al álgebra (Universidad Francisco Gavidia, San Salvador)

Viajes a los centros del triángulo: Exploraciones con GeoGebra (Universidad Francisco Gavidia, San Salvador)

2016

*Rational numbers and transition to algebra* (6th and 7th grade teachers), Sandhills Professional Development, North Carolina (July 18-21)

*Algebra and functions* (8th and 9th grade teachers), Sandhills Professional Development, North Carolina (June 27-30)

2014

*Numbers in context*. NCTM Interactive Institute. San Diego CA (July)

*Multiplication and division*. NCTM Interactive Institute, San Diego, CA (July)

2008

*Generating problems and conjectures from a given problem*. Powerful Pedagogical Practices, Dover, DE (October)

2005

*Geometry for teachers*. Two-week intensive summer course. Developed materials, taught, and coordinated 4 instructors. *Southwest Colorado Mathematics Initiative*

*Teaching geometry for gifted students*. Korean Math Teacher Training Program. January 11.

*Use of geometrical representations and patterns to facilitate the learning of algebra: Practical ideas from research*. Scottsdale Community College, February 5.

2004

Measurement (four sessions). Glendale Elementary School District, October 11-14.

Geometry for parents (two sessions). MAPPS Materials Dissemination Conference, October 30.

Teaching geometry grades 5 and 6. 15 sessions. Glendale Elementary School District. June.

2003

Classroom assessment in mathematics. 5 sessions for 32 teachers K-3, 5 sessions for 40 teachers 4-8. Glendale Elementary School District. August 2003 – January 2004.

Incorporating technology in the education of elementary teachers, Preparing Mathematicians to Educate Teachers Workshop, University of Nebraska.

Making diversity part of teacher education, Preparing Mathematicians to Educate Teachers Workshop, University of Nebraska.

2002

Algebra. TEAMS 2 Project. Course for 63 teacher leaders K-8. North Carolina. June 17-28.

2001

Probabilidad experimental en el nivel medio. Taller para maestros de nivel medio. Universidad Michoacana, Morelia, México (January).

1999

Copper King Elementary School, Pendergast School District. Five 2-hour workshops

1995

T-Teams Workshop *Teaching mathematics to bilingual students*. November.

Geometry, paper, and cardboard: Activities for elementary and middle grade teachers. Workshop, CED, April 22.

1993

Hands on mathematics (with Nora Ramirez). Inservice course for middle school and high school teachers (June 14-24, July 6-15, August 2-12). Project supported by South Mountain Community College, Comprehensive Regional Center for Minorities, and Arizona State University.

Higher order thinking skills in mathematics through hands on activities for K-6 bilingual students. One week inservice course for teachers of bilingual students Mesa Unified School District No 4 (June 7-11)

Hands on mathematics institute (with Nora Ramirez) (first year) session 1 (grades 4-6), session 2 (7 - 9), (2nd year) session 3 (4-6), session 4 (6 - 8).

Mathematics enhancement for Gila River Indian Community. Materials and activities for inservice teachers, and prospective mathematics teachers (Sept-Dec 1993).

Workshop for teachers K-1 and 2-4, Migrant Student Program, Peoria School District, Loma Alta School, April 23.

1991

Project EXCEL: A gifted and talented education bilingual project. Major speaker for teacher training component.

1989 Uso de la computadora en la enseñanza de las matemáticas. Universidad de Sonora.

1987 - 1989 In-service graduate courses in mathematics and mathematics teaching at the Instituto Tecnológico de León. (College)

1988 Resolución de problemas. Primer Simposio Internacional en Educación Matemática

1987 Coordination of courses in eight cities of the state of Guanajuato, 38 instructors, laboratory workshops, designed for 1543 teachers

1986 10-week course for 40 teachers (7-9 grades), laboratory and use of computers in the teaching of mathematics, State of Guanajuato

Short courses *Estimación* and *Solución de Problemas*, Universidad Pedagógica Nacional.

1976 - 1989 Workshops for mathematics teachers (elementary, middle, junior high, high school, normal, college) in 16 cities in 12 states in Mexico

### **Doctoral dissertations Chair**

Completed:

Heather Gallivan (2013) (Co-chaired with T. Bartell) *Prospective teachers' conceptions of and performace teaching mathematics to socio-culturally diverse students* (University of Delaware)

Susanna Molitoris-Miller (2013). *Pre-sevice teachers' abilities and learning processes involving the composition of definitions of quadrilaterals*. (University of Delaware)

Taffy McAneny (2013). *Teachers' voices: Experiencing work outside of professional development*. (University of Delaware)

Mary Knuck (2010). *Investigating questioning and interactions in the elementary mathematics classroom*. (Arizona State University)

Melina Day (2010). *Middle school mathematics students' justification schemes for dividing fractions*. (Arizona State University)

Wayne Porter (2008). *The role of AIMS-related factors in the relationship between teacher's professed and enacted beliefs about teaching mathematics*. (Arizona State University)

Everett Louis (2006). *Children's recognition and classification of three-dimensional geometric solids in play and other contexts*. (Arizona State University)

H. Bahadir Yanik (2006). *Prospective elementary teachers' growth in knowledge and understanding of rigid motion transformations*. (Arizona State University)

Sharon Whitehead (2006). *Poverty and factors leading to success in mathematics as told by AP Calculus students*. (Arizona State University)

Thomas G. Rothery (2006). *English as a second language students using technological tools and multiple representations to learn the real number line*. (Arizona State University)

James Vicich (2002). *Mathematical problem solving behaviors of college level developmental algebra students*. (Arizona State University)

Derar Serhan (2000). *The effect of using graphing calculators on students' concept images of derivative at a point*. (Arizona State University)

Jenyi Chao (1999). *Effects of structured teaching method on students' understanding of angle and rotation in Logo geometry*. (Arizona State University)

Abdar-Rahman Al-Mekhlafi (1999). *The effect of instructional media on learning second language teaching strategies by preservice teachers*. (Arizona State University)

Kwansik Rho (1999). *The multi-user object oriented environment and changes of university students' conceptions of function relation*. (Arizona State University)

Abbas Johari (1998). *Effects of Inductive Multimedia Programs Including Graph on Creation of Linear Function and Variable Conceptualization*. (Arizona State University)

Sunny Baker (1996). *A study of access and attitudes regarding computer-mediated communication among socioculturally diverse students*. (Arizona State University)

**Doctoral Dissertation Committee member (completed):**

Kristin McKenney (2020). *PSTs' Perseverance and Perceptions of Learning Mathematics Meaningfully: The Effects of a Content Course Intervention*. University of Delaware.

Siobahn Suppa (2018). *Supporting novice mathematics teacher educators to teach ambitiously via continuously improved curriculum materials* (empirical article). *The theory of improving teaching by improving written curriculum materials: Historical downfalls and revisions for potential success* (conceptual article). University of Delaware.

Joseph DiNapoli (2018). *Supporting Secondary Students' Perseverance for Solving Challenging Mathematics Tasks* (empirical article). *Distinguishing between grit, persistence, and perseverance for learning mathematics with understanding* (conceptual article). University of Delaware.

Alison Marzocchi (2015). *Investigating changes of underrepresented students' mathematics identities into their first year of college*. University of Delaware.

Marilyn LaCount (2014). *Searching for the Third R: An Exploration of the Mathematics Experiences of African Americans Born in, and Before 1933*. (Arizona State University)

Hugo Espinosa Pérez (2012). *Resolución de problemas de geometría mediante el uso de un software de geometría dinámico*. (CINVESTAV)

Seong Hee Kim (2012) *Student growth in elementary mathematics: A cross level investigation*. (Arizona State University)

Jathan Austin (2012). *On the alignment of pre-service teachers' personal mathematics teacher efficacy beliefs and mathematical knowledge for teaching*. (University of Delaware)

- Paula Guerra (2011). *Young successful Latinas in math in the United States*. (Arizona State University)
- Brian Bowen (2010). *Second-career mathematics teachers' knowledge of mathematical connections*. (University of Delaware)
- Corey Webel (2010). *Collective cognitive responsibility in the high school mathematics classroom*. (University of Delaware)
- Brandon Holding (2010). *Measurement in the service of math education research: the case of cognitively guided instruction*. (Arizona State University)
- Christine Phelps (2009). *Investigating the development of pre-service elementary teachers' mathematics self-efficacy beliefs and learning goals*. (University of Delaware)
- Irene Bloom (2008). *Promoting and characterizing the problem solving behaviors of prospective high school mathematics teachers*. (Arizona State University)
- April Strom (2008). *A case study of a secondary mathematics teacher's understanding of exponential function: An emerging theoretical framework*. (Arizona State University)
- Vicki Sealey (2008). *Calculus students' assimilation of the Riemann integral into a previously established limit structure*. (Arizona State University)
- Lynn Cozort (2007). *The cream of the crop: Narratives of East Indian engineering graduate students in a United States university*. (Arizona State University)
- Nicole Engelke Infante (2007). *Students' understanding of related rates problems in calculus*. (Arizona State University)
- Edward Coe (2007). *Modeling teachers' way of thinking about rate of change*. (Arizona State University)
- Marcela Castro (2005). *Peer interaction communication patterns in online asynchronous and synchronous course discussions*. (Arizona State University)
- Trey Cox (2005). *Secondary precalculus professional learning communities: a structure for teacher development*. (Arizona State University)
- Phil Clark (2005). *The emergence of a classroom community of practice in a mathematical structures course*. (Arizona State University)
- Scott Adamson (2005). *Student sense-making in an intermediate algebra classroom: investigating student understanding of slope*. (Arizona State University)
- Mark Burtch (2005). *Conjecturing as a classroom activity in differential equations*. (Arizona State University)
- Cumali Oksuz (2004). *Children's understanding of algebraic fractions as quotients*. (Arizona State University)
- Terri Kurz (2004). *Changes of two preservice teachers' conceptions of tool-based mathematics software*. (Arizona State University)
- Kate Mahoney (2003). *Linguistic influences on differential item functioning for second language learners on a standardized test*. (Arizona State University)

Sally Jacobs (2002). *Advanced Placement BC calculus students' ways of thinking about variable*. (Arizona State University)

Dean Kirkpatrick (2002). *Study of factors that impact technology integration into the high school math curriculum*. (Arizona State University)

Aisling Leavy (2001). *An investigation of elementary and middle school students' understanding of distribution*. (Arizona State University)

Teruni De Silva (2001). *Quotient construct, inscriptional practices and instructional design*. (Arizona State University)

Juan Manuel Estrada Medina (2000, CINVESTAV). *Procesos de diseño y reformulación de problemas o preguntas en el aprendizaje de las matemáticas en el nivel medio superior*.

Lisa Bote (2000). *A quest for voice: understanding the connections between beliefs and experiences in the design of a mathematics methods course*.

Zulbiye Toluk (1999). *Children's conceptualizations of the quotient subconstruct of rational numbers*. (Arizona State University)

Mary Jo Steig (1999). *Factors related to community college student choice between three college algebra learning environments*. (Arizona State University)

Sinan Olkun (1999). *Stimulating children's understanding of rectangular solids made of small cubes*. (Arizona State University)

Karen Koellner (1998). *Children's multiplicative schemes in the operator subconstruct of rational number*. (Arizona State University)

Glenn Smith (1998). *Computers, computer games, active control and spatial visualization strategy*. (Arizona State University)

Maurene Gerson (1996). *Leaving school as told by twelve hispanic dropouts: The emergence of a two-society theory*. (Arizona State University)

Barbara Clark (1995). *Understanding teaching: an interactive multimedia professional development observational tool for teachers*. (Arizona State University)

Norma Kastre (1995). *A comparison of computer assisted instruction and traditional practice for mastery of basic multiplication facts*. (Arizona State University)

### **Thesis advisor (Master's degree)**

M. F. Harbinson, 1992. *Fractal dimension in an advance-placement calculus classroom*. SDSU.

J. Mazarella, 1991. *Using calculators and computers to enhance understanding of concepts and procedures in calculus*. SDSU.

W. H. Speckman, 1990. *Effects of computer algebra on solving algebra word problems*. SDSU.

Rosa Amelia Rodríguez Luévanos. 1990. *El modelo de Van Hiele del desarrollo del pensamiento geométrico: una experiencia en la Universidad Autónoma de Nuevo León*. Maestría en Ciencias Especialidad en Matemática Educativa, CINVESTAV.

E. Galindo, 1988. *Un acercamiento a algunas ideas del cálculo diferencial empleando Logo y*

*programas para graficar. CINVESTAV.*

**Master thesis committee member**

Jeanette Cortés, 2001 (Universidad Autónoma de Baja California)

Patricia Dieck, 1997 (Arizona State University)

**Master degree advisor** (Arizona State University)

2007 Mike Johnson, Paula Guerra, Christina Garcia, Carrie Gibbons.

2006 Koyal Roy, Sonya Geisel, Heather Andrews. Co-chaired with K. Wellner: Tara McCaughney, Po-pé Enrique, Diane Spencer, Alfred Sembe, Aaron Molina, Sarah Kinner.

2005 Brent Bauman, Jonathan Kucick, Lisa Lewandowski, Angela Mazzola, Hsiu-Mei Lin, Anna Deken, Jennifer Printz, Shakeena Williams. Co-chaired with K. Wellner: Sarah Winzeler, Rachel Neuharth, Chris Lemke.

2004 Co-chaired with K. Wellner: Jacqui Ormston, Peggy Beasley, Jeanette Scott, Phi Nguyen, Mai Nguyen

2003 Wayne Porter

2001 Cindy Behnke, Kathy Hanson, Lauren Goodwin-Bell, Troy Regis, Christine Estrada, Mary Garcia

2000 C. Wetzel, H. Brezinsky, Joe De la Huerta, K. Edmonds, Sherry Niewold, T. Smith, W. Mitchell

1999 Angela Parker, D. Ungerman, Erin Turner, K. Powers, K. Dawson, Laura Gerstner, L. Wood, Sean Arteaga, S. Beams, S. Riley, T. Upchurch, Sandra Franco.

1998 C. Cannon, S. Cope, B. Durkin, N. Lorden, L. Morales, T. Myers, J. Day, K. Jones, T. Johnson, July Miwa.

1997 M. Starling, L. Gonzalez, M. Gillmore, Ana Medrano, G. Miller, M. Capriotti, M. Owara.

1996 D. Figueroa, Carmina Mendoza, A. Wallace, M. Whittiker, T. Livingston, R. Curtis, E. Funke, S. Headley, Josie Figueroa, G. Schappelle.

1995 Elizabeth B. Siemons

**Other theses advised**

José Contreras Francia. *Aplicaciones de geometría euclideana*. Universidad de Guanajuato, 1990.

Daniel Eudave Muñoz. *Las actitudes hacia las matemáticas de los maestros y alumnos de bachillerato*. Universidad Autónoma de Aguascalientes, 1989.

Angel Navarrete. *Teoría, algoritmos y programas para el cálculo de valores propios y vectores propios*. Universidad de Yucatán, 1987.

**SERVICE TO THE UNIVERSITY (selection)**

Chair, Panel for sixth year review, Department of Mathematical Sciences 2016-2018

Member, Secondary Mathematics Education Committee (Fall 2016 – 2018)

Member, Search Committee, Temporary Position

Member, Colloquium Committee, Department of Mathematical Sciences 2015 – 2106.

Member, Space Ad Hoc Committee Department of Mathematical Sciences 2015

University Council Teacher Education Diversity Committee. Representative for secondary teacher preparation programs, 2016 – 2018.

Member, Search Committee for the Chair of Department of Mathematical Sciences, 2011-2012.



Member, Ad Hoc Committee to study the honors program in the math department, 2011.  
 Secretary, Promotion and Tenure Committee, Department of Mathematical Sciences (five cases), 2009-2010  
 Chair, Search Committee, Secondary Mathematics Education, Department of Mathematical Sciences (2008-2009).  
 Director, Secondary Mathematics Education, Dept. of Mathematical Sciences (2007-2013).  
 Led the process for NCATE certification for the Secondary Mathematics Education Program (2007-2010). The program attained the highest level of National Recognized.  
 Member, Undergraduate Studies Committee, Department of Mathematical Sciences (2007-2013)  
 Advisor of 30 to 60 undergraduate students per year (2007 – 2012).  
 Chair, Search Committee, Mathematics Education, Curriculum and Instruction (2004-2005)  
 Chair, Search Committee, TEAMS coordinator, Curriculum & Instruction (2003)  
 Chair, Search Committee, Mathematics Education, Curriculum & Instruction (2000-2001).  
 Chair, Search Committee, Bilingual Education, Curriculum & Instruction (1996-1997)  
 Chair, Search Committee, Mathematics Education, Curriculum and Instruction (1993-1994)  
 Member, University Committee, Freshman STEM Improvement (2006 - 2007)  
 Member, College Personnel Committee (2001)  
 Member, University Promotion and Tenure Committee (2001 - 2004)  
 Executive Committee Interdisciplinary Ph. D. Program in Curriculum & Instruction, Mathematics Education Concentration (1998-2007)  
 Executive Committee, Interdisciplinary Ph. D. Program in Curriculum & Instruction, Elementary Education Concentration (1994 - 1998)  
 Member, Affirmative Action Committee, College of Education, 1998-1999  
 Member, Technology Advisory Committee, College of Education, 1998  
 Member, Undergraduate Research Committee, College of Education, 1998-1999  
 Mathematical Sciences Planning Committee, Arizona State University, 1994  
 Calculus Committee, Department of Mathematical Sciences, SDSU, 1990 - 1991

### **PROFESSIONAL CONSULTANT SERVICES (selection)**

Technical Advisory Committee. *Review of State Curricular Standards in Mathematics*, American Institutes for Research (2017-2018)

PME-NA 2016 Tucson, Strand leader: Geometry  
 Review Committee Department of Mathematics, University of Texas San Antonio (2013).  
 Advisory Panel (2012 - 2017) *Promoting Excellence in Arizona Middle School Mathematics: Increasing Student Achievement through Systemic Instructional Change*, funded by NSF.  
 Advisory Panel Chair (2010-2014) *Preservice Teachers' Knowledge for Teaching Algebra for Equity in the Middle Grades*, Texas A & M University, funded by NSF.  
 Advisory Panel (2010- 2014) *Teachers Empowered to Advance Change in Mathematics*, Michigan State University, funded by the National Science Foundation.  
 Advisory Panel. (2010 - 2012) Teacher Quality Partnership. Lehman College, City University of New York.  
 Validation Committee for the Common Core State Standards (2009-2010)  
 National Advisory Board (2008 - 2013) *NebraskaMATH*, University of Nebraska, funded by the National Science Foundation.  
 Advisory Board (2007) *Cyberchase*. PBS, Thirteen/WNET, New York  
 Advisory Board (2004-2006) *Southwest Colorado Mathematics Initiative*, funded by the

National Science Foundation.

National Advisory Board (2004-2008) *Math in the Middle Institute Partnership*, University of Nebraska, funded by the National Science Foundation.

Project Advisory Committee member, *Preparing, Inspiring and Connecting Students to College and Opportunity: Increasing the Quality and Intensity of Professional Development of Mathematics Teachers*, College Board, funded by National Science Foundation.

Advisory Board member, *ESIE: Using Student-Generated Strategies in Instructional Interactions to Build Multiplicative Structures in Urban Schools* (NSF funded project, 2002)

Advisory Board (2001-2004), *Teaching Excellence and Mathematics II* (NSF funded project to develop a cadre of 66 highly qualified elementary mathematics teachers across North Carolina) PME NA 22 Tucson, AZ Organizing Committee (2000)

External evaluator, Research and Innovation Support and Advancement, South Africa National Research Foundation (2017).

External evaluator, promotion to College Associate Professor: Shaanan Academic Religious Teachers' College, Haifa, Israel (2016), Tel Aviv University (2016).

Evaluator, Chair of graduate level research, Cornell University (2011)

Evaluator, Rated Researcher, South Africa National Research Foundation (2010)

External Assessor, promotion to Associate Professor, Universiti Sains Malaysia (2010)

External reviewer, Fonds Québécois de la Recherche sur la Société et la Culture, Québec, Programme Établissement de nouveaux professeurs-chercheurs (2007)

External reviewer, promotion to Professor: Oklahoma State University (2016), Ball State University (2016), University of Texas at Arlington (2016), Columbia University (2014), University of Missouri (2014), Virginia Commonwealth University (2014), Northern Colorado University (2013), North Carolina State University (2013), Bucknell University (2012), University of New Mexico (2012), University of Washington Tacoma (2012), Washington State University (2012), University of Illinois at Chicago (2010), University of New Mexico (2009), University of Louisville (2009), Arizona State University (2009), Temple University (2009), University of Southern Mississippi (2008), University of Central Florida (2008), University of Florida (2007), University of Nebraska (2006), University of North Carolina at Chapel Hill (2002), Utah State University (2000), The Ohio State University (1999).

External reviewer, tenure / promotion to Associate Professor: University of Texas Rio Grande Valley (2018), Michigan State University (2016), University of New England (2015), Pennsylvania State University (2014), East Carolina State University (2013), University of Arizona (2013), Rutgers University (2012), University of Texas at Arlington (2012), Georgia State University (2012), State University at Buffalo (2011), Florida International University (2011), Ohio University (2010), Brigham Young University (2010), Queens College CUNY (2010), Brooklyn College CUNY (2009), University of Kansas (2007), University of Arizona (2007), University of Memphis (2007), University of Maine (2006), University of New Mexico (2005), Utah State University (2000), University of Arizona (2000), University of New Mexico (1995).

External evaluator, promotion to Associate Professor (continuing track), University of Delaware (2017)

External reviewer, promotion to Senior Lecturer, Arizona State University (2008).

External reviewer, third year review, University of Arizona (2013).

Mathematics Education expert commentary for lessons in Math•ed•ology, funded by NSF (1999)

Referee for Division K, Section 5a of AERA meeting (1999)

Referee for Division C, Section 2 of AERA meeting (1997, 1996)  
Member, Mathematical Sciences Planning Committee (Arizona State University, 1995).  
Creating Equity and Access Committee, Arizona Department of Education (1994)  
Monitor, Puerto Rico Statewide Systemic Initiative (1993-1995)  
Planning Leadership Team for the Phoenix Urban Systemic Initiative (1993)  
Articulation of Mathematics Curriculum Continuum. Tempe Elementary School District. (June 2-3, 1993).  
Project Challenge: Remedial mathematics assessment and evaluation. Mathematics program for high school drop-outs. State of Arizona Department of Emergency and Military Affairs, 1993.  
Project First Steps: A gifted and talented early intervention project. "Patterns" Develop materials and presentation for inservice teachers. San Diego, CA (May, 1993)  
Project First Steps: A gifted and talented early intervention project. "Probability and creativity". San Diego, CA (Nov., 1992)  
Site visiting team NSF Statewide Systemic Initiative (Massachusetts 1992, Maine 1992, Virgin Islands, 1993)  
Reviewer and panelist. Statewide Systemic Initiatives Program. Washington, DC (Dec. 1992).  
Project EXCEL: A gifted and talented education bilingual project. Title 7 Federal Assistance Grant. Major speaker for teacher training component. Develop materials and make classroom presentations on problem solving and creative thinking skills in mathematics, focus on geometry. (Spring 1991)  
Project EXCEL: A gifted and talented education bilingual project. Title 7 Federal Assistance Grant. Develop materials and make classroom presentations, with focus on probability in the early grades. (February - March 1992)  
QUASAR Quantitative Understanding: Amplifying Student Achievement and Reasoning. Documenting activities at the Spurgeon Intermediate School in Santa Ana, CA. February 3-7, April 6-10 1992.

### **Other services to the profession**

Chair, Joint Task Force NCTM-AMTE for *Mathematics Teacher Educator* journal (2010-2011)  
Chair, Selection Committee, editor for *Mathematics Teacher Educator* (2010)  
Chair, Task Force AMTE on new journal (2009-2010)  
Member, Technology Committee, Association Mathematics Teachers Educators (2007- 2008)  
Member, Committee on George Pólya Awards, American Association of America (2004 - 2006)  
Member, Related Conferences Committee, Association Mathematics Teachers Educators (2001-2003)  
Board of Directors of SIG/RME, Steering Committee, AERA Special Interest Group Research in Mathematics Education 2001-2003

### **Professional Memberships**

Mathematical Association of America, TODOS Mathematics for All, Ohio Council of Teachers of Mathematics

### **Community service (selection)**

2019 Interviewed by Disruptiva Media. In ¿Por qué creemos que la matemática es aburrida?  
<https://www.youtube.com/watch?v=RgGF9Hp6AUE> August 29.  
2005 Interviewed by Prensa Hispana. In Librada Martínez: Matemáticas: El reto de los

- estudiantes hispanos. *Prensa Hispana*, April 13 2005, p. 1E.  
 Interviewed by The Arizona Republic, In Monica Mendoza: Schools + kids = math tests  
*Teachers find no magic equation for right textbook*. Feb 22.
- 2004 Math Parent Session (conducted in Spanish), Imes School, Glendale Elementary School District (February 12)
- 2003 Mathematics Workshop. Number tricks for gifted 4th and 5th grade students. Longview School, Osborn School District, Phoenix (January 10)  
 Fraction demonstration lesson. 5<sup>th</sup> grade, Glendale American School (October).  
 Live interview on KPHX 1480 on using computers in the preparation of teachers of mathematics (April 22)
- 2002 *So you want to be a math tutor?* Workshop for 20 tutors of underserved children on how to teach mathematics, for America Counts! Academic Community Engagement Services Arizona State University (September 5)
- 2001 Interviewed by *Prensa Hispana*. In Librada Martínez: Profesores de Arizona desestiman enseñanza de matemáticas por computadora.” *Prensa Hispana*, 19 de septiembre, p. 5B.
- 2000 Interviewed by Los Angeles Times. In Richard Lee Colvin: “Teachers Group Recommends Math Lessons in Preschool Education” 13 April

## **DISTINCTIONS**

- College of Arts and Science's Excellence in Advisement Award (2011)  
 Director of Publications, Association of Mathematics Teacher Educators (2009-2012)  
 Director, School Science and Mathematics Association (2007- 2010)  
 Member, U.S. National Commission for Math Instruction, National Research Council, Policy & Global Affairs Division, Board on International Scientific Organizations (BISO) (2005-2008).  
 Outstanding reviewer, *American Educational Research Journal: Teaching, Learning and Human Development* (2005)  
 Biography included in *Latinos and Mathematics, Hispanic-American Baseline Essays*, Portland Public Schools. <http://www.pps.k12.or.us/depts-c/mc-me/be-hi-ma.pdf>  
 Pleiades Chapter of Mortar Board award “Knowledge knows no boundaries” (1998)  
 Invited Minority Scholar in Residency, Illinois State University (1997).  
 Member, Comité Internacional de Colaboradores, *Educación Matemática*, 1989- present  
 Organizer, Guanajuato State Meeting of Mathematics Teachers, 1988, 1987  
 Vice-president Asociación Nacional de Profesores de Matemáticas 1987-1989  
 President, Guanajuato Section, Asociación Nacional de Profesores de Matemáticas 1987-1989  
 Fellowship, Sistema Nacional de Investigadores 1986-1989  
 Scholarship, Consejo Nacional de Ciencia y Tecnología, 1983 – 1984  
 Scholarship, UNAM 1975-1978

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