

**VITA****NAME:** *FREDRICK L. SILVERMAN***POSITION:** Professor of Education  
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College of Education  
University of Northern Colorado  
Greeley, CO 80639**HOME ADDRESS:** 2010 46 Ave Unit 27  
Greeley, CO 80634**TELEPHONE:** Office: (970) 351-2760/2908  
Home: (970) 339-9568**EDUCATION:**

<u>Year(s)</u>	<u>Degree</u>	<u>Institution</u>	<u>Area of Study</u>
1978	Ed.D.	University of Houston, Houston, TX	Mathematics Education
1970	MAT	University of Chicago, Chicago, IL	Mathematics Education
1968	B.A.	Southern Methodist University, Dallas, TX	Mathematics & History

**WORK EXPERIENCE-Professional Academic:**

<u>Year(s)</u>	<u>Institution/Organization</u>	<u>Position</u>	<u>Responsibilities</u>
1988-present	University of Northern Colorado	Professor	Teaching, Scholarship & Service
2002 – 2005 1992-1993	Department of Elementary Ed Elementary Education Program University of Northern Colorado	Co-Chair Coordinator	Shared Leadership of Department Conduct meetings, oversee policy, interface with college
1987-present	University of Northern Colorado	Tenured	Teaching, Scholarship & Service
1984	University of Northern Colorado	Associate	Teaching, Scholarship & Service
1982-84	LSU-Shreveport of Education	Assoc. Prof. (Tenured)	Teaching, Scholarship & Service
1978-82	LSU-Shreveport of Education	Asst. Prof.	Teaching, Scholarship & Service
1978	University of Houston	Instructor	Teaching
1974-78	University of Houston	Grad. Student Teaching Asst.	Teaching & Earning Ed.D.
1973-74	Pinkston High School Dallas, Texas	Teacher	Teaching Math & Advising in Inner City Schools

1970-72	U.S. Air Force, Beale AFB, CA	Wing Education & Training	Scheduled & Administered Ground Training for Flight Crews
1969-70	Harvard-St. George	Teacher	7-12 Mathematics Teacher & Elementary School Inservice

**AREA OF SPECIALIZATION:**

Mathematics Education  
Curriculum and Instruction  
Citizenship Education

**RESEARCH AREAS/INTERESTS:**

Development of Mathematical Concepts	Naturally Occurring Mathematical Experiences
Problem Solving	Curriculum Integration: Mathematics & Social Studies
Piagetian Psychology and Mathematics	Mathematics Autobiography
Attitude Toward Mathematics	Democracy and Education

**EDITORSHIP:**

Silverman, Fredrick L., and Shockey, Tod. The Journal of Mathematics and Culture. A peer reviewed journal. Online at <http://nasgem.rpi.edu/pl/journal-mathematics-culture-s37> . Term of Editorship: 2005 – continuing.

**PUBLICATIONS-Juried** (Peer Reviewed is indicated for applicable entries by *pr*; otherwise, entries Editorially Reviewed):Book Chapter:

Silverman, Fredrick L. "Rick," with Strawser, Abbilynn; Strohauser, Donna; and Monzano, Noel. (2004). On the road with Cholo, Vato, and Pano: Using A Migrant Child's Dream for teaching and learning elementary school mathematics. Includes classroom-ready materials. In Exploring Mathematics through Literature: Articles and Lessons for Prekindergarten through Grade 8. Reston, VA: National Council of Teachers of Mathematics.

Lee, Fong-Yun, Silverman, Fredrick L; Molina, Marina; Esquibel, Carla; and Burnett, Peggy. (1997). A university and school partnership for initiating the use of mathematics autobiography. In Vicki Zack, Judy Mousley & Chris Breen (Eds.), Developing Practice: Teachers' Inquiry and Educational Change (pp. 143-149). Geelong, Victoria, Australia: Center for Studies in Mathematics, Science and Environmental Education, Deakin University. (pr)

Zur, Mordecai, and Silverman, Fredrick L. Problem Solving for Teachers. In Worth, Joan (Ed.) Preparing Elementary School Mathematics Teachers. Reston, VA: National Council of Teachers of Mathematics. 1988 (First published in The Arithmetic Teacher in Oct., 1980).

Monograph Chapter:

Silverman, Fredrick L.; Lamb, Charles E.; and Jones, Karen L. Using Machine Technology to Enhance Problem Solving in the Middle School Mathematics Classroom. In MATH MONOGRAPH #7: PROBLEM SOLVING IN THE MATHEMATICS CLASSROOM (Sid Rachlin, Ed.). Mathematics Council of the Alberta Teachers' Association. (April 1982): 84-87. (pr) (This monograph is also available through the ERIC collection)

Proceedings

Silverman, Fredrick L., and Shockey, Tod (Editors). (2005). National Council of Supervisors of Mathematics (NCSM) – Proceedings of the Ethnomathematics Strand. Annual Meeting. 2004. Available on the web.

Articles:

Garii, Barbara, and Silverman, Fredrick. (2008). Beyond the classroom walls: Helping teachers recognize mathematics outside of the school. Submitted to *For the Learning of Mathematics*. (pr)

Lee, Fongyun, and Silverman, Fredrick L. "Rick." (2008). Montessori math in preschool and kindergarten. Submitted to *Teaching Children Mathematics*. (pr)

Silverman, Fredrick L. "Rick," and Lee, Fongyun. (2008). Ethnomathematics: Equity, access, social justice, and implications for early childhood mathematics education. *Colorado Mathematics Teacher*, 41 (5): 6 – 9. (pr)

Katsap, Ada, and Fredrick L. "Rick" Silverman. (2008). A case study of the role of ethnomathematics among teacher education students from highly diverse cultural backgrounds. *Journal of Mathematics and Culture*. (3, 1): 66 - 102. (pr)

Silverman, Fredrick L. "Rick," Gary H. Fertig, Jennifer Harding-Dekam, and Susan Conklin Thompson. Advancing equity and high quality mathematics education with actions drawn from ethnomathematics. *Noticias de Todos: Mathematics for All*: v3, n2, Fall 2007.

Silverman, Fredrick L. "Rick;" Harding-DeKam, Jennifer; Fertig, Gary H.; and Thompson, Susan Conklin. (2007). Actions for productive citizenship and a better world through inclusive teaching and learning of mathematics. *Colorado Mathematics Teacher*. Spring 2007. (pr)

Fertig, Gary, and Fredrick L. "Rick" Silverman. (2007). Walking and talking geography: A small-world approach. *Social Studies and the Young Learner*. v20, n2, November/December 2007, 15 – 18. (pr)

Lee, Fong-Yun; Silverman, Fredrick L.; and Montoya, Pat. (2002). Assessing the mathematical performance of young ESL students. *Principal Magazine*. (81, 3), 29 - 31.

Lee, Fong-Yun, and Silverman, Fredrick, L. (2001). Using Mathematics Portfolio Assessment to Assess Children of Diverse Backgrounds. *Focus on Learning Problems in Mathematics*. 23(2 & 3), 102 - 120. (pr)

Silverman, Fredrick L. "Rick"; Strawser, Abbilynn; Strohauser, Donna; and Monzano, Noel. (2001). On the road with Cholo, Vato, and Pano. *Teaching Children Mathematics*. 7(6), 330-333. (pr)

Constas, Mark; Silverman, Fredrick L.; McBride, John. (2000). The perceived relationship between mathematics and science among pre-service elementary school teachers. *Illinois Schools Journal*, 79 (2), 12-23. (pr)

Fertig, Gary H., and Silverman, Fredrick L. (2000). Practicing democracy in middle level groups. *Illinois Schools Journal*. 79 (2), 61-74. (pr)

Lee, Fong-Yun; Silverman, Fredrick L.; and Leali, Shirley. (October 1996). *The inception of a mathematics autobiography*. *Australian Primary Mathematics Classroom*, 1, 2, 13-16. (pr)

Silverman, Fredrick L.; Lee, Fong-Yun; Molina, Marina; Esquibel, Carla; and Burnett, Peggy. (Summer 1996). *First steps to young children's math autobiographies*. *Colorado Mathematics Teacher*. 29, 4, 36-37. (pr)

Silverman, Rick; Fertig, Gary; and Loper, Christi. (Spring 1996). Math: Where you least expect it! *Colorado Mathematics Teacher*, 29, 3 10-11. (pr)

Kao, Wen-Ming, and Silverman, Rick L. (1994/1995). The variables that effect problem-solving performance and suggestions of instructional strategies for mathematics at the elementary school level. *Mathematics and Science Department Journal* 6, 26-37, published by Taichung Teachers College, Taichung, Taiwan. (pr)

- Tsuei, Te-hou, and Silverman, Fredrick L. (1994). Assisting upper elementary school students to learn mathematics through technology education. Kaohsiung Normal University Journal. 5(March): 75-85. (pr)
- Silverman, Fredrick L. *Baseball cards connect mathematics to a youngster's life*. (Summer 1992). Colorado Mathematics Teacher, 25, 4. 10. (pr)
- Silverman, Fredrick L., and Faircloth, C. Victoria. (March 1992). *Explorations with the tower of Hanoi*. Colorado Mathematics Teacher, 25, 3. 6. (pr)
- Chen, Long-Chuan, and Silverman, Fredrick L. *The effects of logo programming on children's cognitive outcomes: A meta-analysis*. Hualien Journal of Mathematics and Science Education, (June 1993) 82, 2, 45-61. (pr)
- Silverman, Fredrick L. (April 1993) Silverman responds to Mary Fries' comments on article published in The Arithmetic Teacher, April, 1992. 463. (pr)
- Silverman, Fredrick L.; Winograd, Ken; and Strohauser, Donna. (April 1992) 39, 8. Child-generated story problems. Arithmetic Teacher 6-12. (pr)
- McBride, John W. and Silverman, Fredrick L. (November 1991). Integrating elementary/middle school science and mathematics. School Science and Mathematics. 91, 7. (pr)
- Jurascheck, Bill, and Silverman, Rick. (Sep 1990). In Mrs. Columbine's Room - Graphing and Pennies. *The Colorado Mathematics Teacher*. 10. (pr)
- Jurascheck, Bill, and Silverman, Rick. (May 1990). In Mrs. Columbine's Room - Missing Addend Practice. *The Colorado Mathematics Teacher*. 6. (pr)
- Silverman, Fredrick L. Choosing software for goodness' sake. *The Colorado Mathematics Teacher* 23, 2 (Nov. 1989): 8 (pr)
- Silverman, Fredrick L., and Muehl, Sharon A. Calculators: On Balance, They Will Enrich School Mathematics. Illinois Schools Journal 69, 1 (Fall 1989): 29-35. (pr)
- Silverman, Fredrick; & Decker, Barbara. Charts and graphs for mathematics inquiry. Middle School Journal, 19, 4 (July 1988): 6-8. (pr)
- McBride, John W.; & Silverman, Fredrick L. Judging fairs fairly. Science and Children, 25, 6 (Mar. 1988): 15-18. (pr)
- Silverman, Fredrick; & Needham, Richard. Hot links: Tying together mathematics and social studies. School Science and Mathematics, 87, 8 (Dec. 1987): 692-704. (pr)
- Decker, Barbara C., and Silverman, Fredrick L. Extending thinking skills with children's literature. KENTUCKY READING JOURNAL. 7,1 (Winter 1986): 1-3. (pr)
- Silverman, Fredrick L. Big math word search. *Colorado Mathematics Teacher*. 18, 2 (Fall 1985): 9. (pr)
- Silverman, Fredrick L. School mathematics and the promise of computing. *Colorado Mathematics Teacher*. (Spring 1985): 15-18. (pr)
- Silverman, Fredrick L. Mathematics curriculum and its roots from the 40's forward. *Focus On Learning*. 11, 1 (Spring 1985): 67-74. (pr)
- Silverman, Fredrick L. and Creswell, John L. Preservice teachers: A profile of cognitive development. *Texas Tech Journal Of Education*. 93 (Fall 1982): 175-185. (pr)

Green, Joe L.; Silverman, Fredrick L.; and Gustavson, David B. Dewey, Piaget, and the "Common Man": A dialogue on educational issues. PROCEEDINGS OF THE 30TH ANNUAL MEETING OF THE SOUTHWESTERN PHILOSOPHY OF EDUCATION SOCIETY. XXX (1980): 65-78.

Silverman, Fredrick L. and Zur, Mordecai. Problem solving for teachers. ARITHMETIC TEACHER. 28, 2 (Oct 1980): 48-50 (pr)

Green, Joe L. and Silverman, Fredrick L. Aesthetic education and the plight of the qualitative. REVIEW JOURNAL OF PHILOSOPHY AND SOCIAL SCIENCE. 5, 1 and 2 (1980): 97-108. (pr)

Silverman, Fredrick L. Some characteristics of the cognitive development of preservice teachers. PROCEEDINGS OF THE NINTH ANNUAL INTERNATIONAL INTERDISCIPLINARY CONFERENCE ON PIAGETIAN THEORY AND ITS IMPLICATIONS FOR THE HELPING PROFESSIONS. University of Southern California Press. (This volume is on hold pending funding).

Silverman, Fredrick L.; Creswell, John L.; Vaughn, Larry R.; and Brown, Ric. The two dimensional structure of attitude toward mathematics. LOUISIANA EDUCATIONAL RESEARCH JOURNAL. 4, 1 (1979): 1-8. (pr)

#### Reviews:

Silverman, Fredrick L. (in process). Rethinking School: Teaching Social Justice by the Numbers by Eric Gutstein and Bob Peterson (Editors).

Silverman, Fredrick L. Review of EVALUATION OF EDUCATIONAL SOFTWARE: A GUIDE TO GUIDES by Nancy Baker Jones and Larry Vaughn (Editors). SCHOOL SCIENCE AND MATHEMATICS. 85, 5 (May/June 1985): 431-433.

Silverman, Fredrick L. Review of JEAN PIAGET by Margaret A. Boden and of EXPERIMENTS IN CONTRADICTION by Jean Piaget. EDUCATIONAL STUDIES. 13, 1 (Spring 1982): 64-70.

Silverman, Fredrick L. and Green, Joe L. Review of the Film PIAGET ON PIAGET. JOURNAL OF TEACHER EDUCATION. 30 (1979): 59.

### **PUBLICATIONS-Non-Juried:**

#### Articles:

Silverman, Fredrick L. "Rick." The President's Column in *NASGEm News*, (Fall 2008): v3, n1, 1

Silverman, Fredrick L. "Rick." The President's Column in *NASGEm News*, (April 2008): v2, n8, 7, 1.

Silverman, Fredrick L. "Rick." The President's Column in *NASGEm News*, (November 2007): v2, n1, 7.

Silverman, Fredrick L. "Rick." (2003). Mathematics across cultures. Newsletter of the North American Study Group on Ethnomathematics. Invited manuscript. (1,2, November 2003): 12 – 14.

Silverman, Fredrick L. "Rick." (2003). Prevailing classroom culture for school mathematics. Newsletter of the North American Study Group on Ethnomathematics. (1, 1 February 2003): 16 – 17, and (1, 2 November 2003): 19 – 20. This composition has appeared twice both as a short essay in the wake of ten years of mathematics education reform and also as a call for data for research in progress concerning the impact of that reform.

- Silverman, Fredrick L. "Rick." (2001) Forward. In *Math Links: Teaching the NCTM 2000 Standards through Children's Literature* by Caroline Evans, Anne Leija, and Trina Falkner. Englewood, CO: Teacher Ideas Press. Invited.
- Silverman, Fredrick L. "Rick." (2000). "Third Way" for Laboratory School is Possible. Greeley Tribune. Guest editorial. June 17, 2000. A-10.
- Silverman, Fredrick L., and Manzano, Noel N. (1998). Origami: in *Creasing Geometry in the Classroom*. Published at the website of Fascinating Folds. [www.fascinating-folds.com/welcome.htm](http://www.fascinating-folds.com/welcome.htm). First version appeared at Colorado Council of Teaching Mathematics Annual Conference, October, 1996.
- Barta, Jim, and Silverman, Rick. (1997). Mathematics and beadwork: Notes from a conversation with a Sioux artist. International Study Group on Ethnomathematics Newsletter, 12, 2, 4-5.
- Silverman, Rick (1994). *Mathematics and rollerblades*. Newsletter of the International Study Group on Ethnomathematics (ISGEm), 10, 1 (December 1994): 1.
- Silverman, Fredrick L. (1993). In April L. Gardner and Kathryn F. Cochran (Eds.) *Developing Teachers' Pedagogical Content Knowledge - A Mathematics Education Course Revised. Proceedings of a National Conference: Critical Issues in Reforming Elementary Teacher Preparation in Mathematics and Science*. Funded by the National Science Foundation.
- Silverman, Fredrick L. Quato, Fraction Whiz, Multiplication Touch It, and Hexapawn. In Take 'N Make Intermediate Activities (C.D. Reinauer, ed.). National Council of Teachers of Mathematics for the Houston Regional Conference. (March 1984): 1,3,5, and 23.
- Silverman, Fredrick L. A description of the roles of logics in Piaget's theory. LOUISIANA PHILOSOPHY OF EDUCATION JOURNAL. V (April 1979): 14-34.

#### Abstracts:

- Decker, Barbara C. and Silverman, Fredrick L. Abstract of "Extending Thinking Skills Through Children's Literature." 10th SOUTHEASTERN REGIONAL IRA CONFERENCE PROGRAM ABSTRACTS. Department of Curriculum and Instruction of Eastern Kentucky University. (Nov 1984): 42.
- Green, Joe L. and Silverman, Fredrick L. Abstract of "Aesthetic Education and the Plight of the Qualitative." THE PHILOSOPHER'S INDEX. 1982. Cumulative Edition, Vol. XVI. Philosophy Documentation Center, Bowling Green, OH.

### **PROFESSIONAL PRESENTATIONS-Juried:**

#### Proposals Accepted

- Lipka, Jerry; Andrew-Ihreke, Dora; Yanez, Evelyn; and Silverman, Fredrick. Mathematics in a Cultural Context: Model of Ethnomathematics for Leadership, Instruction, and Curriculum in Mathematics Education for all. Ethnomathematics SIG. Accepted for the 41st NCSM Annual Conference. April 2009. Washington, DC.
- Engblom-Bradley, Claudette; Jim Barta; and Silverman, Fredrick. Ethnomathematics Solutions to Equity: North American Study Group of Ethnomathematics (NASGEm) Panel. Accepted for the 41st NCSM Annual Conference. April 2009. Washington, DC.
- Fertig, Gary, and Silverman, Rick. (2008). Using Biography Context Webs to Engage Students in Historical Thinking. Colorado Council for the Social Studies (CCSS) Annual Conference. April 2009. Denver, CO.

### Presentations Completed

- Fertig, Gary, and Silverman, Rick. (2008). Using Biography Webs to Engage Students in Historical Thinking. 88th National Council for the Social Studies (NCSS) Annual Conference. November 2008. Houston, TX.
- Silverman, Fredrick L. "Rick," and Fertig, Gary H. (2008). Potpourri of Elementary School Mathematics and Social Studies Activities. Annual Fall Conference of the Colorado Council of Teachers of Mathematics, September 2008. Denver, CO.
- Garii, Barbara; Silverman, Fredrick L. "Rick;" and Barta, Jim. Crossing Borders: Visualizing School Mathematics Outside the Classroom Walls. Discussion Group 18: The Role Of Ethnomathematics In Mathematics Education. International Congress on Mathematical Education 11 (ICME 11). July 2008. Monterrey, MX.
- Shirley, Larry, Fredrick L. "Rick" Silverman, and Claudette Engblom-Bradley. Ethnomathematics in Your Classroom: Practical Suggestions. 2008 Annual Meeting of the National Council of Teachers of Mathematics. April 2008. Salt Lake City, UT.
- Silverman, Fredrick L. "Rick," Jim Barta, and Tod Shockey. Ethnomathematics Insights: Math, Culture, Access, and Equity. 40th Annual Conference of NCSM: Ethnomathematics SIG. April 2008. Salt Lake City, UT.
- Silverman, Fredrick L. "Rick," and Gary Fertig. Integrating Mathematics and Social Studies through a Pioneer Homestead Simulation. Annual Fall Conference of the Colorado Council of Teachers of Mathematics, October 2007. Denver, CO.
- Claudette Engblom-Bradley (Organizer), Jenni Harding-DeKam, Fredrick L. "Rick" Silverman, and others. . Ethnomathematics for Leadership in Our Schools, Part I: Providing Leadership to Diversify Mathematics in Our Classrooms. 39th Annual Conference of NCSM. March 2007. Atlanta, GA.
- Harding-DeKam, Jenni, and Fredrick L. "Rick" Silverman . Teacher Education, K-8: A Math Leadership Foundation: Using Ethnomathematics for Access and Equity for All. 39th Annual Conference of NCSM. March 2007. Atlanta, GA.
- Engblom-Bradley, Claudette, Fredrick L. "Rick" Silverman, Tod Shockey, Bill Collins, and Jim Barta. Ethnomathematics Research, Projects, and Activities. 2007 Annual Meeting of NCTM. March 2007.
- Silverman, Fredrick L."Rick," Jim Barta, and Tod Shockey. Ethnomathematics Insights: A Bridge between School Mathematics and Everyday Mathematics. 39th Annual Conference of NCSM: Ethnomathematics SIG Session. March 2007. Atlanta, GA.
- Silverman, Fredrick L. "Rick;" Harding-DeKam, Jennifer; Fertig, Gary; and Thompson, Susan Conklin. (2006). Actions for productive citizenship and a better world through inclusive teaching and learning of mathematics. September 2006. Denver, CO.
- Silverman, Fredrick L. "Rick;" Fertig, Gary; Harding-Dekam, Jenni; and Thompson, Susan. Teaching and Learning Mathematics for Productive Citizenship and a Better World. 38th Annual Meeting of the National Council of Supervisors of Mathematics (NCSM). 24 – 26 April 2006. St. Louis, MO.
- Fertig, Gary, and Silverman, Fredrick L. "Rick." (2005). The Pioneer Homestead Experience: A Simulation for the Elementary Grades. 85th Annual Conference of the National Council for the Social Studies. 17 – 20 November. Kansas City, MO.
- Fertig, Gary; Silverman, Fredrick L. "Rick;" and Harding-DeKam, Jenni. (2005). Using Photographs as a Primary Source for Teaching Community History and Effective Citizenship. Rocky Mountain Great Plains Regional Conference. 14 – 16 April. Denver, CO.

- Silverman, Fredrick L. "Rick" and Shockey, Tod (Organizers). (2005). *Mathematicians of the World - Mathematics in Other Cultures* 3-day Strand for the 37th Annual National Council of Supervisors of Mathematics (NCSM) Conference. 4 - 6 April 2005. Anaheim, CA.
- Shockey, Tod, Silverman, and Fredrick L. "Rick." *Reflections on Strand 3: Mathematicians of the World - Mathematics in Other Cultures*. 37th Annual National Council of Supervisors of Mathematics (NCSM) Conference. 4 - 6 April 2005. Anaheim, CA.
- Shockey, Tod, Silverman, Fredrick L. "Rick." (2004). *Reflections on the Ethnomathematics Strand*. 36th Annual National Council of Supervisors of Mathematics (NCSM) Conference. 19 – 21 April 2004. Philadelphia, PA.
- Silverman, Fredrick L. "Rick" and Shockey, Tod, and Barkley, Cathy. (Organizers). (2004). *Ethnomathematics: Connecting Mathematics to Culture*. 3-day Strand for the 36th Annual National Council of Supervisors of Mathematics (NCSM) Conference. 19 – 21 April 2004. Philadelphia, PA.
- Fertig, Gary and Silverman, Rick. (2003). *Children as Storytellers: Sharing Historical Biography with Peers*. Presented at the Annual Meeting of the Elementary/Early Childhood Special Interest Group, 83rd Annual Conference of the National Council for the Social Studies. 14 – 16 November 2003. Chicago, IL.
- Silverman, Fredrick L. "Rick." *Children's Road Literature: Mathematics Resource for Elementary School Children*. National Council of Teachers of Mathematics Eastern Regional Conference. November 14 – 16, 2002. Boston, MA.
- Silverman, Fredrick L. "Rick." *Ideas for Math through Games, Play, and Children's Literature*. Annual Conference of the Colorado Council of Teachers of Mathematics. 28 – 29 September, 2001. Denver, CO.
- Silverman, Fredrick L., and Mukhopadaya, Swapna. (April 2001). *The Role of Play and Games in Children's Understanding of Mathematics*. Proposed and accepted for presentation at the 79th Annual Meeting of the National Council of Teachers of Mathematics. Orlando, Florida.
- Blackburn, Lynne; Fertig, Gary; Silverman, Fredrick; Flock, Kathy; McNaney, Wendy; and Hewett, Linda. (Nov. 2000). *When You Were Born.....Connecting the Past and the Present by Building a Model Community*. 80th Annual Conference of the National Council for the Social Studies. San Antonio, TX.
- Silverman, Fredrick L. (April 2000). *Origami: Imbedded Geometric Concepts, Not Just Paper Folding*. Workshop. 78th Annual Meeting of the National Council of Teachers of Mathematics. Chicago, IL. In memory of Noel Manzano.
- d'Ambrosio, Ubiratan; Frankenstein, Marilyn; Powell, Arthur; Mukhopadhyay, Swapna; Segara, Antonio; and Silverman, Fredrick L. (Organizer and facilitator). (April, 1999). *Minicourse on Ethnomathematics*. NCTM Annual Conference. San Francisco, CA.
- Manzano, Noel N, and Silverman, Fredrick L. (Oct. 1999). *Origami: Variations on a Cube*. NCTM Western Regional Conference at Boise, Idaho.
- Silverman, Fredrick L.; Fertig, Gary H.; and Blackburn, Lynne M. (April, 1999). *Integrating Mathematics and Social Studies in Elementary School and Teacher Education: A Workshop*. NCTM Annual Conference at San Francisco, CA.
- Silverman, Fredrick L, and Manzano, Noel N. (Oct. 1998). *Origami for Geometry and Spatial Sense*, Joint Conference: NCTM Central Regional and School Science and Mathematics Association Annual. Louisville, KY.
- Lee, Fong-Yun, and Silverman, Fredrick L. *Children's Emotions in Learning Mathematics*. (April, 1998). NCTM 76th Annual Conference. Washington, DC.

- Barta, Jim; Eglash, Ron; Lipka, Jerry; Silverman, Rick; and Zaslavsky, Claudia. *Ethnomathematics: The Time is Right to Connect Mathematics and Culture. A conference within a conference.* (April, 1998). NCTM 76th Annual Conference. Washington, DC.
- Lee, Fong-Yun, and Silverman, Fredrick L. (April 1997). *Math Autobiography in the Primary Grades.* NCTM 75th Annual Conference. Minneapolis, MN.
- Barta, Jim, and Silverman, Rick. (Feb., 1998). *Ethnomathematics: The Time is Right to Connect Mathematics and Culture.* NCTM Western Regional Conference. Denver, CO.
- Silverman, Fredrick L., and Barta, Jim. (Nov. 1996). *Multicultural Literature as a Source For Youngsters' Mathematical Education.* Presentation at the National Council of Teachers of Mathematics Western Regional Conference. Albuquerque, NM.
- Manzano, Noel N., and Silverman, Fredrick L. (Oct. 1996). *Increasing Geometry in the Classroom.* Minicourse presented at the Annual Meeting of the Colorado Council of Teachers of Mathematics. Denver, CO.
- Silverman, Fredrick L., and Manzano, Noel N. (April 1996). *Origami: Informal Geometry and a Cultural Bridge.* Workshop presented at the Annual Meeting of the National Council of Teachers of Mathematics. San Diego, CA.
- Silverman, Fredrick L.; Perrich, Lynn; and Wagner, Kim (Oct. 1995). *Exploring Math in a Cemetery.* Annual Conference of the Colorado Council of Teachers of Mathematics. Denver, CO.
- Silverman, Fredrick L. and Marshman, Larry R. (April 1995). *Mathematics students are mathematics makers.* National Council of Teachers of Mathematics, 73rd Annual National Conference, Boston, MA.
- Lee, Fong-Yun; Button, Linda; Shepard, Roslyn; and Silverman, Fredrick L. (June 1994). *Mathematics portfolio assessment.* Workshop for the National Portfolio Conference, National Council of Teachers of English. Scottsdale, AZ.
- Silverman, Fredrick L. and Winograd, Ken (Nov 1993). *Mathematics and Language Connections with the Standards.* National Council of Teachers of Mathematics Western Regional Conference. Billings, MT.
- Silverman, Fredrick L. (Nov. 1992). *Mathematics and Language: Conversations for Context and Meaning.* National Council of Teachers of Mathematics Southern Regional Conference. Little Rock, AR.
- Silverman, Fredrick L., and Tindall, Kathleen. (Oct. 1992). *Manipulatives - Key to Teacher and Student Security in School Mathematics.* Annual Conference of the Colorado Council of Teachers of Mathematics. Denver, CO.
- Silverman, Fredrick L. and Chen, Chou-Yang. (Oct. 1992). *TIME: No Telling How Much There is to Do!* Annual Conference of the Colorado Council of Teachers of Mathematics. Denver, CO.
- Silverman, Fredrick L. and Kochman, Beverly J. (Mar, 1992). *Integration of Mathematics and Science for Middle Schoolers.* Annual Colorado Science Convention. Denver, CO.
- Silverman, Fredrick L., and Wishon, Phillip. (Jan. 1992). *Enhance Classroom Culture and Connect Elementary School Mathematics with Tomorrow's World.* Conference on Rethinking the 3 R's - III. Denver, CO.
- Silverman, Fredrick L. (Oct. 1991). *Developing Teachers' Pedagogical Content Knowledge - A Mathematics Education Course Revised.* Panel presentation to the National Conference on Critical Issues in Reforming Elementary Teacher Preparation in Mathematics and Science. Funded by the National Science Foundation. University of Northern Colorado, Greeley, CO.

- Silverman, Fredrick L.; Wishon, Phillip; and Johnsen, Rebecca. (Oct. 1991). Foundations for Numeracy and Problem Solving in Young Children. Annual Conference of the Colorado Council of Teachers of Mathematics. Denver, CO.
- McBride, John W. and Silverman, Fredrick. (March 1991). Using Science to Teach Elementary/Middle School Mathematics. National Convention of the National Science Teachers Association. Houston, TX.
- Silverman, Fredrick L., and Burron, Douglas S. (Oct. 1990). Let's Talk About This: The Role of Written and Oral Language in Mathematical Literacy. Annual Convention of the School Science and Mathematics Association. Cincinnati, OH.
- McBride, John W., and Silverman, Fredrick L. (April 1990). Integrating Elementary / Middle School Science and Mathematics. National Convention of the National Science Teachers Association. Atlanta, GA.
- Silverman, Fredrick L. (Oct 1989). UNC's Integrated Mathematics and Science Teacher Training Program for Preservice Elementary School Teachers. (With Charles McNerney and Jay Hackett) National Council of Teachers of Mathematics Regional Meeting. Denver, CO
- Silverman, Fredrick L. (Apr 1989). Charts and Graphs: K-5. 67th Annual Meeting of the National Council of Teachers of Mathematics. Orlando, FL.
- Silverman, Fredrick L., and McBride, John. (Dec. 1988). Teaching Mathematics through Science Activities in the Middle School. Annual Meeting of the School Science and Mathematics Association. Austin, TX.
- McBride, John, and Silverman, Fredrick L. (Dec. 1988) Integrating Elementary/Middle School Science and Mathematics. Annual Meeting of the School Science and Mathematics Association. Austin, TX.
- Silverman, Fredrick L., and Winograd, Ken. (Oct. 1988). Mathematics and Reading: Getting Youngsters Involved in Both. Annual Conference of the Colorado Council of Teachers of Mathematics. Denver, CO.
- Silverman, Fredrick L., and Needham, Richard L. (Aug. 1988). Mathematics and Social Studies: A Real Nice Couple. 35th Annual Conference for the Advancement of Mathematics Teaching. Houston, TX.
- Silverman, Fredrick L. (July, 1988). Using language Experience to Make Mathematics Relevant to Preservice Teachers. In Language Experience-Mathematics Experience: The Vital Link (with Barbara C. Decker). International Reading Association presentation at the 12th World Congress on Reading. Gold Coast, Queensland, Australia.
- Silverman, Fredrick L. (October, 1987). Mathematics and Reading: Arm in Arm in the Schools. Featured speaker presentation at the 12th Annual Conference of the Louisiana Reading Association. Shreveport, LA
- Marshman, Larry R., and Silverman, Fredrick L. (Apr. 1987). Computer Assistance for Development of Classification Skills. 65th Annual Convention of the Council for Exceptional Children. Chicago, IL
- Silverman, Fredrick, & Decker, Barbara. (March 1987). Reading, Charts and Graphs, and a Bridge from Concrete to Formal Operations. National Council of Teachers of Mathematics Southwest Regional Conference, Little Rock, Arkansas.
- Silverman, Fredrick, & Needham, Richard. (Oct. 1986). Hot Links: Tying Together Mathematics and Social Studies. 33rd Annual Conference for the Advancement of Mathematics Teaching, Austin, Texas.
- Silverman, Fredrick, & Abernathy, Sandra. (Oct 1986). Grapes and Graphs, Charts and Cherts. National Council of Teachers of Mathematics Western Regional Conference, Casper, Wyoming.

- Silverman, Fredrick, & Decker, Barbara. (July 1986). Bridging the Gap from Concrete to Full Formal Thinking in the Content Areas. Symposium for the International Reading Association Eleventh World Congress on Reading, London, England.
- Silverman, Fredrick L. (July 1986). Promoting Formal Thinking with Charts and Graphs: A Demonstration. International Reading Association World Congress on Reading. London, England. (This presentation was coordinated with the above symposium.)
- Silverman, Fredrick L. (April 1986). Empowering Students to Transform Stale Math Story Exercises into Invigorating Investigations. Symposium presentation for Pupil Potential and Fluency in a Broader Perspective. Thirty-first Annual Convention of the International Reading Association. Philadelphia, PA
- Silverman, Fredrick L. (April 1986). Problem Solving, Mathematics, and Bulletin Boards. 64th Annual Meeting of the National Council of Teachers of Mathematics. Washington, D.C.
- Silverman, Fredrick L. (Nov 1985). Problem Solving! Up Front on the Bulletin Board. National Council of Teachers of Mathematics Regional Meeting. Milwaukee, WI
- Silverman, Fredrick L. (Oct 1985). Bulletin Boards Bonanza for Math Problem Solving. Thirty-Second Annual Conference for the Advancement of Mathematics Teaching. Austin, TX
- Needham, Richard L., and Silverman, Fredrick L. (Oct 1985). Integrating Mathematics Concepts, Skills, and Manipulatives with Social Studies Concepts and Skills. Colorado Council of Teachers of Mathematics Annual Meeting. Colorado Springs, CO
- Silverman, Fredrick L., and Marshman, Larry R. (June 1985). Microcomputing with Inservice Educators. Seventh International Conference on Computers and the Humanities. Brigham Young University, Provo, UT
- Decker, Barbara C., and Silverman, Fredrick L. (May 1985). Promoting Comprehension and Full Formal Thinking in the Content Areas. 30th Annual Convention of the International Reading Association. New Orleans, LA
- Decker, Barbara C. and Silverman, Fredrick L. (Nov 1984). Extending Thinking Skills Through Children's Literature. Southeastern Regional International Reading Association Conference, 10th Annual Meeting. Lexington, KY
- Silverman, Fredrick L. (Apr 1984). Using Bulletin Boards to Stimulate Problem Solving (Slide Presentation). National Council of Teachers of Mathematics, Annual Meeting. San Francisco, CA
- Silverman, Fredrick L. (Mar 1984). Problem Solving Invitations Through Bulletin Boards (Slide Presentation). National Council of Teachers of Mathematics, Regional Meeting. Houston, TX
- Silverman, Fredrick L. (Nov 1982). Quickies and Think Boxes: Approaches to Problem Solving. National Council of Teachers of Mathematics, Regional Meeting. New Orleans, LA
- Silverman, Fredrick L. (Oct 1982). Look at That Problem Solving Plethora! National Council of Teachers of Mathematics, Regional Meeting. Topeka, KS
- Silverman, Fredrick L. (March 1986). Problem Solving with Bulletin Boards. National Council of Teachers of Mathematics Regional Meeting. Dallas, TX
- Silverman, Fredrick L. (Nov 1980). Mathematics Curriculum and Its Roots From the 40's Forward: Symposium Paper. American Educational Studies Association, Annual Meeting. Colorado Springs, CO. (A version of this paper appears in the Spring, 1985, issue of FOCUS ON LEARNING).

- Silverman, Fredrick L. (Oct 1980). Quickies, Think Boxes, and Problem Solving. Conference for the Advancement of Mathematics Teaching, Annual Meeting. Austin, TX
- Silverman, Fredrick L. (Mar 1980). Management and Ideas for Learning Centers. National Council of Teachers of Mathematics, Regional Meeting. Dallas, TX
- Green, Joe L.; Silverman, Fredrick L.; and Gustavson, David B. (Nov 1979). Dewey, Piaget, and the "Common Man": A dialogue on Educational Issues. Southwestern Philosophy of Education Society, Annual Meeting. Denton, TX (A version of this paper is published in the Proceedings of the Southwestern Philosophy of Educational Society).
- Green, Joe L.; Silverman, Fredrick L.; and Gustavson, David B. (Oct 1979). Billy Joe Average and the Educational Chagrin: A Concerned Citizen's Dialogue with Dewey and Piaget. American Educational Studies Association, Annual Meeting. Cincinnati, OH
- Silverman, Fredrick L. (Feb 1979). Some Characteristics of Cognitive Development of Preservice Teachers. International Interdisciplinary UAP Conference on Piagetian Theory and Its Implications for the Helping Professions, Ninth Annual Meeting. Los Angeles, CA. (Two versions of this research are named for publications, one in the proceedings this meeting and the other for a compendium of papers selected from those presented since the inception of this conference series).
- Silverman, Fredrick L. and Reinauer, Charles D. (Apr 1977). The Twiddle Operation--An Example of Making Mathematical Errors Meaningful. National Council of Teachers of Mathematics, Annual Meeting. Cincinnati, OH
- Shores, Jay H.; Underhill, Robert G.; Silverman, Fredrick L.; and Reinauer, Charles D. (Apr 1977). An Analysis of the Effects of the Use of Manipulatives and Problem "Chunking" on First Grade Children's Addition and Subtraction Problem Solving Modeling and Accuracy. American Educational Research Association, Annual Meeting. New York, NY
- Silverman, Fredrick L. and Creswell, John L. (Oct 1976). Action Mathematics. National Council of Teachers of Mathematics, Regional Meeting. Orlando, FL
- Silverman, Fredrick L. and Vaughn, Larry R. (Apr 1976). CBTE and the Open Classroom. National Council of Teachers of Mathematics, Annual Meeting. Atlanta, GA
- Silverman, Fredrick L. and Vaughn, Larry R. (Dec 1975). Personalizing Instruction Through Learning Packages and Games. National Council of Teachers of Mathematics, Regional Meeting. New York, NY
- Vaughn, Larry R. and Silverman, Fredrick L. (Sep 1975). Personalizing Instruction with Secondary School Mathematics Students. Sabine Area Council of Teachers of Mathematics, Fall Meeting. Beaumont, TX
- Creswell, John L.; Silverman, Fredrick L.; and Vaughn, Larry R. (Apr 1975). Determining Competencies for Teachers of Mathematics. National Council of Teachers of Mathematics, Annual Meeting. Denver, CO
- Creswell, John L.; Silverman, Fredrick L.; and Vaughn, Larry R. (Mar 1975). A Competency-Based Methods Course for Prospective Secondary Mathematics Teachers (Slide Presentation). National Council of Teachers of Mathematics, Regional Meeting. Washington, DC

**Juried Symposium:**

- Silverman, Fredrick L. (Organizer); Wiebe, James; Sharpe, Glenn; and Sammons, Morris. (Nov. 1980). Faces of Mathematics Curriculum. American Educational Studies Association, Annual Meeting. Colorado Springs, CO. (Each member presented a paper, the last of which was a response. Dr. Silverman's paper is named previously.)

**Juried Workshops:**

Manzano, Noel, and Silverman, Rick (Oct. 1994). Origami: Bringing Into the Fold Informal Geometry for the Elementary Grades. Colorado Council of Teachers of Mathematics Annual Conference. Denver, CO.

Silverman, Fredrick L. and Decker, Barbara C. (Nov. 1983). Yes! You Can Stimulate Thinking in the Classroom: Workshop II. Louisiana Professional Improvement Program at LSUS. Shreveport, LA.

Silverman, Fredrick L. and Decker, Barbara C. (Nov 1982). Yes! You Can Stimulate Thinking in the Classroom: Workshop I. Louisiana Professional Improvement Program at LSUS. Shreveport, LA.

**PROFESSIONAL PRESENTATIONS-Non-Juried:****Presentations Completed**

Silverman, Fredrick L. "Rick;" Shockey, Tod; and Barta, Jim. (Organizers). Using Ethnomathematics to Expand Students' Personal Connections with Mathematics for More Meaningful Learning. Ethnomathematics Reunion/Special Interest Session, 38th Annual Conference of the National Council of Supervisors of Mathematics. 24 - 26 April 2006. St. Louis, MO.

Silverman, Fredrick L. "Rick" and Shockey, Tod (Organizers). Using Ethnomathematics to Influence Mathematics Education in Schools. Ethnomathematics Reunion/Special Interest Session, 37th Annual Conference of the National Council of Supervisors of Mathematics. 4 - 6 April 2005. Anaheim, CA.

Silverman, Fredrick L. "Rick" and Shockey, Tod (Organizers). Differentiating "Ethnomathematics" and "Multicultural Mathematics." Ethnomathematics Reunion, 36th Annual Conference of the National Council of Supervisors of Mathematics. 19 – 21 April 2004. Philadelphia, PA.

Silverman, Fredrick L. "Rick" and Shockey, Tod. (2003). (Organizers and Coordinators). (2003). Using Ethnomathematics to Develop Contexts for Learning Mathematics. Ethnomathematics Reunion, 35th Annual Conference of the National Council of Supervisors of Mathematics. 7 – 9 April 2003. San Antonio, TX. Invited.

Silverman, Fredrick L. "Rick." (2003). A Sketch of Numeric Me. Presented for Using Ethnomathematics to Develop Contexts for Learning Mathematics. Ethnomathematics Reunion, 35th Annual Conference of the National Council of Supervisors of Mathematics. 7 – 9 April 2003. San Antonio, TX.

Silverman, Fredrick L. "Rick," and McCasland, Shannon. (2003) Selections from Children's Literature of the Holocaust. Aims Community College. April, 2003. Greeley, Colorado.

Silverman, Fredrick L. "Rick," Shockey, Tod, and Barkley, Cathy. (Organizers and Coordinators). (2002). Exploring Some Possibilities that Ethnomathematics Presents for Enriching School Mathematics Experiences. 34th Annual Conference of the National Council of Supervisors of Mathematics. 19 - 21 April 2002. Las Vegas, NV. Invited.

Silverman, Fredrick L. "Rick." (2002). Math through Children's Literature. In Exploring Some Possibilities that Ethnomathematics Presents for Enriching School Mathematics Experiences. 34th Annual Conference of the National Council of Supervisors of Mathematics. 19 - 21 April 2002. Las Vegas, NV. Invited.

Barta, Jim, and Silverman, Rick (Organizers and Coordinators). (2001). Ethnomathematics: The Time is Right to Reconnect Mathematics and Culture. Three-day strand at the 33rd Annual Conference of the National Council of Supervisors of Mathematics. 2 – 4 April 2001. Orlando, Florida. Invited.

Downey, Matt; Edwards, Carolyn; Jacobs, Mike; Silverman, Rick; and Wishon, Phil. (Oct. 2000). Character Education in Teacher Preparation. Panel moderated by Cal Frazier and organized by Phil Wishon.

Silverman presented "Modeling Character Education for Prospective Teachers through Mathematics in Context with Children's Literature." Colorado Character Education Conference. Denver, CO. By invitation.

- Silverman, Fredrick L. "Rick." (Oct. 2000). Mathematics and Three Examples of Children's Road Literature. Meeting of the Weld County Council of the International Reading Association. Greeley, CO.
- Silverman, Fredrick L. (June 1999). Tidbits from Children's Literature with an Eye toward Mathematics Education in the Grades. Invited presenter. Literature in the Content Areas Workshop, a special summer offering organized by Dr. Jo-Ann Mullen. University of Northern Colorado, Greeley, CO
- Silverman, Fredrick L. (Fall, 1998). Silverman facilitated a breakout session for the Fifth Annual Science and Mathematics Teacher Education Conference: Field Experience, Constructivism, and the Standards for Mathematics and Science Teaching. November 20-21, 1998. Breckenridge, Colorado.
- Kuerbis, Paul; Silverman, Rick; Kellogg, Nancy; and Jones, Christine. (October 17-18, 1997). The Current Portrait of Science and Mathematics Assessment in Colorado and Nationally. Fourth Annual Science and Mathematics Teacher Education Conference: New Roles for Assessment - Implications for Mathematics and Science Teacher Education. Breckenridge, CO
- Silverman, Fredrick L. (Feb. 1995). *Mathematics-The Search for Nonobvious Relationships*. Invited colloquium presentation sponsored by the Mathematics Department, Towson State University. Towson, MD
- Silverman, Fredrick L. (Feb. 1994). *Examples of Literature for Children as Springboard for Teaching Time*. Elementary Education Association. University of Northern Colorado. Greeley, CO
- Silverman, Fredrick L. (June 1993). *Taking a Peek at Mathematics as a Search for Non-obvious Relationships*. Presentation to the faculties of the Division of Elementary, Middle School, Early Childhood Education and Reading and the Laboratory School, Elementary and Middle Grades. University of Northern Colorado, Greeley, CO.
- Silverman, Fredrick L. (Oct. 1992). *Problem Solving Explorations with Toothpicks*. Sponsored by Student Elementary Education Association. University of Northern Colorado, Greeley, CO
- Silverman, Fredrick L. (May 1992). *Expanding the MAST Hotline to Facilitate Professional Development Through Electronic Networking*. MAST Hotline Advisory Board Meeting. Greeley, CO
- Silverman, Fredrick L. (Feb/Mar 1991). Faculty Governance and Campus/System Communications: Examples from the UNC. Panel presentation to Annual Meeting of Western States Association of Faculty Governance (with Ernest Allen, U.S.CO; John Bernard, U. Houston; and Van Shelhamer, Montana State University). Boulder, CO
- Silverman, Fredrick L. (Feb/Mar 1991). Chair/Organizer for Faculty Rights & Protection: Legal Aspects. Panel presentation to Annual Meeting of Western States Association of Faculty Governance. Panelists were Alan V. Comedy (UNC), Alan A. Matheson (AZ St. U.), and Arthur Partridge (UNC). Boulder, CO
- Silverman, Fredrick L. (Nov. 1989). Mathematics Education with Equity and Content Integration. In conjunction with (Kovar, Roger A., and Hall, Gene E., Coordinators) "Project 30 - A Fresh Look at Teacher Education. Colorado Alliance for Science Annual Meeting. University of Northern Colorado, Greeley, CO
- Silverman, Fredrick L. (Apr 1989). Effective Activities for Meaningful Concept Development in Mathematics. Staff development presentation at Scott Elementary School. Greeley, CO
- Silverman, Fredrick L. (Mar 1989). Transitions and Accomplishments in Undergraduate Mathematics Education: Perspectives from the NSF Pre-Service Elementary Math/Science Project. Annual Board Meeting. Greeley, CO

- Silverman, Fredrick L. (Feb. 1989). 1989 Mid-Winter Retreat for the Mathematics Leadership Institute of North Carolina: K-8 Interdisciplinary Connections for Mathematics, Language, and Science. By invitation. Raleigh, NC
- Silverman, Fredrick L.; and Marshman, Larry R. (Jan. 1988). Microcomputing To Enhance Classification Performance. 60th Winter Conference, University of Northern Colorado, Greeley, CO
- Silverman, Fredrick, & Abernathy, Sandra. (Jan 1987). Mathematics from the Healthy Side: Problem Solving with Fruits and Vegetables. 59th Annual Winter Conference, University of Northern Colorado, Greeley, CO.
- Silverman, Fredrick. (Sep 1986). Math Problem Solving Through Exciting Bulletin Boards. Invited presentation at BOCES Annual Educational Conference, Sterling, CO
- Silverman, Fredrick. (Sep 1986). Group Problem Solving from Charts and Graphs. Invited presentation at BOCES Annual Educational Conference, Sterling, CO
- Needham, Richard L., and Silverman, Fredrick L. (Nov 1985). Integrating Mathematics Concepts, Skills, and Manipulatives with Social Studies Concepts and Skills. Fall Drive-In Conference of the University of Northern Colorado Laboratory School. Greeley, Colorado. (This session repeated the earlier presentation to Colorado Council of Teachers of Mathematics on October 18, 1985.)
- Powell, Debbie, and Silverman, Fredrick L. (Jan 1985). Evaluating Software for the Elementary Grades. 57th Annual Winter Conference. University of Northern Colorado, Greeley, CO
- Silverman, Fredrick L. (June 1984). Bringing Science in Range of Children: An Echo of Nathan Isaacs. Sigma Xi, Shreveport-Bossier City Chapter Local Meeting. Shreveport, LA
- Silverman, Fredrick L. (Mar 1983). Motivation and Mathematics Education. North Louisiana Mathematics Association, Spring Meeting. Bossier City, LA
- Silverman, Fredrick L. (Mar 1982). Drill and Practice at the Problem Solving Level (CDA). Caddo Parish Association of Education Share Fair. Shreveport, LA
- Silverman, Fredrick L. (Aug 1981). Steps Toward Effective Evaluation. Invited Presentation for the Related Instructors Section of Louisiana Vocational Association, Annual Meeting. Shreveport, LA
- Silverman, Fredrick L. (Oct 1980). Curriculum Reflections: The "Old Math" and the "New." North Louisiana Mathematics Association, Fall Meeting. Shreveport, LA
- Silverman, Fredrick L. (Mar 1980). A Response to M.L. Bowman, P.L. Meader, and M. M. Merrett's THE LIBRARY IN THE TEACHING PROCESS. Education Forum. Shreveport, LA
- Silverman, Fredrick L. (Feb 1980). Ideas for Individualizing Mathematics. The Special Child in the Educational Mainstream: An LSUS Funded Program. Many, LA
- Silverman, Fredrick L. (Feb 1980). Individualizing Mathematics: Management and Material (Slide Presentation). The Special Child in the Educational Mainstream: An LSUS Funded Program. Zwolle, LA
- Silverman, Fredrick L. and Harkness, Anita. (May 1979). Folding Cubes and Hexaflexagons. North Louisiana Association of Mathematics, Spring Meeting. Natchitoches, LA
- Silverman, Fredrick L. (Apr 1979). Responses to W. E. McCleary's "Research and Government Publications." Education Forum. Shreveport, LA

Silverman, Fredrick L. (Apr 1979). A Description of the Roles of Logics in Piaget's Theory. Louisiana Philosophy of Education Society, Annual Meeting. Shreveport, LA. (A version of this paper is published in the Proceedings of the Louisiana Philosophy of Education Society.)

Silverman, Fredrick L. (Feb 1979). Tiling: A Mathematical Learning Activity. Caddo Parish School District. Shreveport, LA

Silverman, Fredrick L. (Jan 1978). A Cafeteria of Math Activities for Junior and Senior High School Students. Spring Branch Council of Teachers of Mathematics, Winter Meeting. Houston, TX

Silverman, Fredrick L. (Oct 1974). The Open Classroom. Texas Student Teacher Association, University of Houston Affiliate, Regular Meeting. Houston, TX

### **Non-Juried Workshops:**

Teaching with Primary Sources UNC Staff. Thinkin' About Lincoln: Valuable Resources to Plan for Lincoln's 200th Birthday. November 2008. Greeley, CO. Dr. Silverman was Scholar in Residence for Fall 2008.

Silverman, Fredrick L. (March 1999). Hands On - Minds On - Math in the Real World. Invited presenter. Twelfth Annual Kaleidoscope Conference. Denver, CO.

Silverman, Fredrick L. (Oct. 1992). Problem Solving Explorations with Toothpicks. Sponsored by Student Elementary Education Association. University of Northern Colorado. Greeley, CO.

Silverman, Fredrick L., (Nov. 1991) Manipulatives for Elementary and Middle Level Mathematics. Sponsored by Pi Lambda Theta. University of Northern Colorado, Greeley, CO.

Silverman, Fredrick L., and Kochmann, Beverly J. (Nov. 1991). Math for Fun. Workshop presented at "Expanding Your Horizons" Conference in Math, Science, Technology, Engineering and Non-Traditional Careers for Girls (Grades 6-9). University of Northern Colorado, Greeley, CO.

Silverman, Fredrick L. (July 1990). Mathematics Problem Solving for Inservice Teacher Enhancement in North Carolina. By invitation. East Carolina University, Greenville, NC

Silverman, Fredrick L. (March 1990). Math Manipulatives: Rods and Tangrams. Sponsored by Pi Lambda Theta. University of Northern Colorado, Greeley, CO

Silverman, Fredrick L. (Feb. 1989) 1989 Mid-Winter Retreat for the mathematics Leadership Institute of North Carolina: Problem Solving and Mathematical Innovation for Grades K-8. By invitation. Raleigh, NC

Silverman, Fredrick L. (Nov 1981). Problem Solving in an Interdisciplinary Context. Invited workshop presented at the Department of Mathematics of the Louisiana Association of Educators, Annual Meeting. Monroe, LA

Silverman, Fredrick L. (Aug 1979). Effective Grouping in Mathematics: College Preparatory Sequence. Caddo Parish School District. Shreveport, LA

Silverman, Fredrick L. (Aug 1979). Effective Grouping in Mathematics: Remedial Sequence. Caddo Parish School District. Shreveport, LA.

### **RESEARCH PROJECTS**

Effectiveness of Integrating Mathematics and Social Studies Education for Prospective Elementary Teachers. Initiated Fall 2003. Continuing.

Mathematics Autobiography and Assessment Project with Fong-Yun Lee. Continuing since 1994. Continuing.

Homelessness in America. With Gary Fertig and Colleen Callahan. Implemented a 4 week investigation of Homelessness in America with Middle Level students at the Laboratory School, University of Northern Colorado. Fall, 1997.

### **PROJECTS/GRANTS SUBMITTED FOR FUNDING:**

Lee, Fong-Yun and Fredrick L. "Rick" Silverman. Mathematics Autobiography with Chinese and U. S. Children. \$8,500. Funded by peer review process with UNC Provost Grant. 2008. Implemented Fall 2008.

Lee, Fong-Yun and Fredrick L. "Rick" Silverman. Mathematics Autobiography with Chinese and U. S. Children. \$2,500.00. Not funded. Encouraged to revise and resubmit. In revision for 2008 cycle.

Silverman, Fredrick L. "Rick," and McCasland, Shannon.. To the City of Greeley Human Relations Commission to support the Greeley Holocaust Memorial Observances for 2008. \$500.00. Funded

Silverman, Fredrick L. "Rick," and McCasland, Shannon. To the City of Greeley Human Relations Commission to support the Greeley Holocaust Memorial Observances for 2006. \$500.00. Funded.

Participant (2004) in grant writing to participate in the IRIS Center for Faculty Enhancement, headquartered at Peabody College, Vanderbilt University, Department of Special Education. IRIS Center invited UNC faculty to write modules. Dr. Tracey Mueller, DEBEE, lead this effort.

Fertig, Gary, Silverman, Fredrick L. "Rick," and Thompson, Susan. (Principal Investigators). (2003 and 2004). How America Works: Helping Children Understand the Economics of Democratic Citizenship." Developed in 2003. Submitted in Jan 2004 to Coca-Cola Foundation. \$59,314. Funds depleted. Not funded.

Silverman, Fredrick L. "Rick." (2003 - 2005). Participant in grant funded by State of Colorado for staff development of University faculty for incorporating ELL/ESL experiences into teacher education programs. Beth Franklin and Linda Button, Principal Investigators.

Silverman, Fredrick L. "Rick." (2002). Invited consultant for a Literacy grant developed by Dr. Linda Button and Dr. Helen Gerretson and funded under the "No Child Left Behind authorization."

Silverman, Fredrick L. "Rick." (2002). Using Technology for Integrating Mathematics and Social Studies in Elementary Teacher Education. UNC Department of Educational Technology in the call for proposals under the UNC PT3 Grant. Accepted. \$500.00 faculty stipend plus support for staff development.

With Gary Fertig (Spring 1998). Proposal submitted to the Holocaust Awareness Institute of the University of Denver to support presentation at the University of Northern Colorado of the Federman Workshop on Holocaust Education: A Follow-Up. Funded for \$500.00.

With Dave Anderson (Fall, 1997). Proposal submitted to MIND/Honors CCHE Grant Committee to support guest scholar Dr. John Gaterud for the Honors and MIND Programs. Funded for \$500.

With personnel at Kruse Elementary School, Fort Collins, CO. (Spring, 1996). Silverman on grant writing team. Funded for \$12,000 by Colorado Partnership.

With personnel at Centennial Elementary School, Evans, CO. (Spring, 1997). Silverman on grant writing team. Proposal for \$10,000 submitted to Colorado Goals 2000.

With Steven Leth (Feb. 1993) *Mathematics Teachers Power Enhancement Project (PEP)*. Proposal for Teachers of Grades 3, 4, and 5 with summer and academic year components. Submitted to the National Science Foundation. \$600,000 requested. Not funded.

With April Gardner. (Jan. 1993). Elementary Mathematics and Science Teaching Program (E-MAST). Three years for selected elementary preservice teachers to concentrate on mathematics and science pedagogy and content and to support in-service teachers as teaching fellows. Funded by Colorado Commission on Higher Education, Dwight D. Eisenhower Title II. July 1993-July 1996. Funded for \$180,000.

With Philip Wishon. (1990). Problem Solving Symposium in Elementary and Middle School Mathematics. Summer 1990 20% Set Aside Proposal. The proposal was one of 22 submitted to the College of Education for review. It was one of 13 forwarded to the University Screening Committee. Not funded.

With the Rocky Mountain Mathematics Education Consortium and the Colorado Department of Education (1989). The Colorado Mathematics Coalition. Dr. Silverman is on the Steering Committee. The project was funded by the Mathematical Sciences Education Board of the National Research Council. The grant provides for laying the foundation of a coalition of business and industry, policy sector, and education to advance mathematical education in Colorado. \$10,000.

(July 1988) Travel and personal development grant to present at the Twelfth World Congress on Reading, Gold Coast, Queensland, Australia. \$2,100.00.

With joint team from College of Education and College of Arts and Sciences A Model Program in Science and Mathematics for Elementary Preservice Teachers. Funded Sep. 1987-Dec. 1992 by NSF for \$1.14 million.

With John H. Swaim and David L. Pringle (Spring 1987), "An Exemplary Program for Preservice Preparation of Middle School Mathematics and Science Teachers: An Inter-College Approach." Submitted to NSF May, 1986; not funded.

With Virginia Conahan (February, 1987), "A Follow-up Proposal Study on the Two-Dimensional Structure of Attitude Toward Mathematics." Not funded.

With Jo-Ann Mullen, Philip Mullen, and Virginia Conahan (February 1987), "Exemplary Retraining Program for Mid-Life Scientific and Technical Professionals for New Careers as Mathematics and Science Teachers." Submitted to the U.S. Department of Education, Fund for the Improvement of Post secondary Education. Not funded.

The College of Education, Office of Research, provided \$250.00 funding for a pilot study of Colorado Middle School and Junior high school teachers' preparation to teach mathematics. Investigators were Dr. John Swaim, Renee Adams (masters' degree candidate with Dr. Swaim), and Dr. Silverman. Fall 1985.

### **PROFESSIONAL CONSULTATION:**

<u>Year(s)</u>	<u>Institution</u>	<u>Activity</u>
2005	Buffalo Ridge Elementary School Brent Young, Principal, Laramie, WY	Staff development in mathematics education in UNC multidiscipline team with Susan Thompson, Jenni Harding-DeKam, & Gary Fertig
2004	Aurora Academy, Aurora, CO	Provided consultation on several occasions by telephone and email. At no charge.
2003	Merrill Prentice Hall Pearson Education Publishers	Critical review of prospectus for <u>Foundations for Teaching Multicultural Math in Elementary and Middle School</u>
2003	Merrill Prentice Hall Pearson Education Publishers	Critical review for Robert B. Ashlock's <u>Error Patterns in Computation</u> (8 ed.)
2002	<u>International Journal of Educational Research</u> (IJER). Yeping Li & Glenda Lappan, Eds.	Invited review & comprehensive edit of 3 articles for math education special issue
2002	<u>FOCUS</u> on Learning Problems in Mathematics	Invited manuscript review

1999	<u>Socio-cultural Aspects in Mathematics Education: An international Perspective</u> the world through mathematics Bill Atweh, Helen Forgasz, & Ben Nebres (Eds.)	Chapter reviewer of Numeracy: navigating
1998-1999	Alternative Homes for Youth Greeley, CO	Mathematics Education Workshop series on teaching and learning with Manipulatives.
1997	State Systemic Initiative Weld District 6 & UNC Connect Most..." and Focus Group Leader:"	Workshop facilitator for Hammond, L. D. (Kappan, Nov. 1996), "What Matters Teacher Education Program Effectiveness
1996	Psychology in Mathematics Education: Teacher as Researcher Working Group	Peer review of manuscript
1994-96	UNC Department of Special Education Preparing School Teachers for Students with Severe/Profound Disabilities in an Inclusion Setting. Lewis Jackson, Director. Funded in part by N.I.E.	Advisory Board Member for Mathematics Education and Elementary Education
1996	Colorado Education Association	Review of Data in Termination Hearing
1994	Colorado Education Association	Expert witness in Mathematics Education. Testified under oath at termination hearing in Colorado Springs, CO
1994	Social Sciences and Humanities Research Council of Canada	Review proposal and make recommendation on funding.
1992	Colorado Education Association	Expert witness in Mathematics Educ. Testified under oath at termination hearing-Colorado Springs, CO.
1993	Delmar Publishers Inc.	Textbook Prospectus Review
1992	Jefferson County Schools	Participant in development of proposals for the Chatfield Mathematics Technology Project.
1992-1999	<u>International Journal of Qualitative Studies in Education</u>	Manuscript Review
1992	Mathematics & Science (MAST) Center Hotline	Oversee booth at Channel 4 Education Expo.
1989-present	Mathematics and Science (MAST) Center Hotline	Provide answers to questions and needs teachers raise on mathematical education.

1991-92	Metropolitan State College of Denver Mathematics and Science Teaching Center	Guidance on course development on mathematical modeling for elementary and middle level teachers.
1991	Wadsworth Publishing Company	Manuscript review team.
1991	Texas Instruments Inc.	Advised Texas Instruments on development of calculators for mathematics education.
1990	Heinemann Educational Books Portsmouth, NH	Review prospectus for book on on mathematics journals.
1990	Wm. C. Brown Publishers Madison, WI	Accepted invitation to review mathematics education books prepublication.
1990	Texas Instruments Inc. Dallas, TX	Accepted invitation to join workshop Instructor Referral Program.
1989-90	Aspen, CO School District	Assistance in locating leaders for mathematics education inservice workshops
1989	Wadsworth Publishing Company Belmont, CA	Review prospectus and Chapter outline for mathematics Education
1989	Enhancing Teaching of Elementary School Science NSF Funded Project at UNC Jim Schreck, Director	Mathematics, science and Language integration
1989	North Carolina Department of Public Instruction	Mathematics Problem Solving and Curriculum Integration for K-8 Teachers
1988	Division of Statewide Programs University of Northern Colorado	Monitor for Graduate Workshop on Manipulatives and Problem Solving
1988	Eaton Public Schools Eaton, CO	Mathematics Problem Solving, K-8
1988	Englewood Public Schools Englewood, CO	Elementary School Mathematics Curriculum Audit
1988	Fayetteville State University Fayetteville, North Carolina	Mathematics Education and Problem Solving for K-3 Teachers
1988	Trinidad State Junior College Inservice teacher education program	Prepared half-hour video tape segment on "Contemporary Insights in Mathematics Education."
1987-89	EQUALS in Science/Technology Lawrence Hall of Science Grant funded by National Science Foundation	National Advisory Board Member for Mathematics Education and Problem Solving

1987	Western College Reading & Learning Assn	Manuscript review
1987	Shawsheen Elementary School	Computers and Mathematics
1987	UNC Laboratory School	Manipulatives and problem solving in elementary school mathematics
1987	Schools of Eagle, Colorado	Implementing problem-solving and success-based education for mathematics education.
1986	Northeast BOCES	Problem solving (see non-juried presentations)
1985 & 1989	Children's Museum of Denver Denver, CO	Developing Proposals for Mathematics exhibits for patrons and resource kits for teachers.
1986	Academic Press Inc. Orlando, FL	Reviewed prospectus for <u>Mathematics for Elementary Teachers</u> for Prepublication decision making.
1985 & 1986	Eaton Public Schools Eaton, CO	Planning mathematics inservice program and leading discussion in problem solving in elementary and secondary school mathematics.
1985 & 1986	Laboratory School University of Northern Colorado, Greeley, CO	Developing alternatives in elementary & middle school mathematics curriculum. school mathematics curriculum.
1984	Northern Boards of Cooperative Educational Services (BOCES)	Conceptualizing Outdoor Education at McGregor Ranch and Associated Grant Writing.
1984	Judson Elementary School Caddo Parish School District Shreveport, LA	Innovation in Mathematics Drill & Practice
1983	Bossier Parish Schools District Bossier City, LA	Computer Educ. Curriculum Guidance
1983	5th District Professional Development Center Shreveport, LA	Establishment of Micro-computer Services and Assisting in Grant Writing
1983	South Highlands Elementary School Caddo Parish School District Shreveport, LA	Enriching Basal Mathematics Texts
1982	School Away from School Caddo Parish School District Shreveport, LA	Creative Teaching in Mathematics and Science
1982	5th District Professional Development Center Shreveport, LA	Mathematics Remediation in Intermediate Grades

1981	Curriculum Development Center Caddo Parish School District Shreveport, LA	Mathematics Strategies for Gifted Junior High School Students
1981	Green Acres Junior High School Bossier Parish School District Bossier City, LA	Motivation Strategies for Instruction
1981	LSU Medical Center in Shreveport Shreveport, LA	Measurement & Evaluation of Instruction of Instruction
1981	LSU Medical Center in Shreveport Shreveport, LA	Methods of Presenting Instruction
1980	Bethune Junior High School Caddo Parish School District Shreveport, LA	Methods of Teaching Fractions
1980	Alexander School, Caddo Parish School District Shreveport, LA	Using Multiembodiment & Mathematical Variability
1980	J. S. Clark Junior High School Shreveport, LA	Mathematics Curriculum
1979	SHREVEPORT JOURNAL, Kiwanis Club, and Chamber of Commerce Shreveport, LA	Curriculum and Editorial Assistance for PARENTS CAN MAKE A DIFFERENCE
1979	Southwood High School, Caddo Parish School District Shreveport, LA	Developing Mathematics Attitude
1979	Caddo Parish School District Shreveport, LA	Influencing Math Attitude
1979	St. Paul's Learning Center Shreveport, LA	Use of Commercial and Household Items to Teach Mathematics
1975	School Districts of Sheldon, Crosby, and Channelview Clearlake, TX	Piaget and Teaching Mathematics
1974	LaPorte School District LaPorte, TX	Classroom Management and Individualized Instruction

## PROFESSIONAL ASSOCIATION PARTICIPATION:

### Membership/Service:

<u>Year(s)</u>	<u>Organization</u>	<u>Location</u>
2007-08	<b>International Congress on Mathematical Education 11</b> Co-Organizer with Marcos Cherinda (Mozambique) for Ethnomathematics Discussion Group. July 2008.	Worked by Internet Conference in Monterrey, MX.

1966-present 98-2000 continuing	<p><b>National Council of Teachers of Mathematics (NCTM)</b>          Reson, VA          Year 2000 Annual Conference: Program Committee          Review manuscripts <u>Teaching Children Mathematics</u>, 1996 ff          Presenter at numerous Annual and Regional Conferences          Official Delegate to the National Assembly in 2008 (alt), 2007 (alt), 2006, 2005, 2004, 2003, 2002, 1991, 1990, 1989, 1988, 1987, 1984, and 1983</p> <p>Presider, Annual Conference, 1999, 1998, 1994, 1991, &amp; 1990          Western Regional Conference: 1998          Southwestern Regional Conference - October 1989          Chair, NCTM Materials Committee, Presider          Eval Committee: 1982 Southern Regional Conference</p>	
1993 - present 2000-09 2000-06, 07, 08, 09	<p><b>National Council of Supervisors of Mathematics (NCSM)</b> Boulder, CO          -Presenter at Annual conferences of NCSM          Annual Meeting Program committee of NCSM – Organizing Strands on Mathematics &amp; Culture (Ethnomathematics) (Joint with ISGEM or NASGEM). With Jim Barta (2000, 01, &amp; 06)          With Tod Shockey (2002 – 06) &amp; Cathy Barkley (2002 &amp; 03)          Organized Ethnomathematics Reunion/Special Interest Sessions 2000 – 07 with Barta and/or Shockey.</p>	
2003 - present 2008	<p>TODOS: Mathematics for All          Iris Carl Award Selection Committee</p>	Tempe, AZ.
1998	<p><b>United States Holocaust Memorial Museum</b>          Since 1998, the USHMM has been a partner supporter of the Annual Greeley Holocaust Memorial Observances</p>	Developed and presented the Federman Workshop On Holocaust Education: A Follow-Up. May, 1998, University of Northern Colorado, Greeley, CO (with Gary Fertig)
1998	<p>Congregation Har Shalom:          Jewish Film Series</p>	Discussion leader for “Europa, Europa,” Golden Globe Best Foreign Film Award Winner. Fort Collins, Co, May, 1998
1991-present	<p><u>The Quarterly Journal of Ideology</u> - Editorial Review Board</p>	Shreveport, LA
1991-92	<p>Colorado Alliance for Science Member of Math Council</p>	University of Colorado Boulder, CO
1990-92	<p>Colorado University Faculty Leaders Association</p>	Colo. School of Mines Golden, CO
1990-92	<p>Western States Association of Faculty Governance          Co-Chair of Program Committee          1991 Annual Meeting - Presenter and Panel Organizer          Committee on Constitution and Bylaws</p>	University of Nevada Reno, NV
1997	<p><u>The Harvard Education Letter</u>          Survey respondent for <u>HEL</u> Research Network</p>	Harvard University Boston, MA

1990-present	Benjamin Bannaker Association	Oak Park, IL
1990-present	<b>International Study Group on Ethnomathematics (ISGEm)</b>	Universidade Pedagogica Maputo, Mozambique
2001-present	<b>North American Study Group on Ethnomathematics NASGEm)</b>	Towson University Baltimore, MD
2006-08	President (elected 2006)	
2005	First Vice President	
1998-99	Vice -President ISGEm - North American Section (NA) Organized and facilitated mini-course for 1999 Annual conference of NCTM Nominating Committee Co-Chair	San Francisco, CA
2005-present	Co-Editor, <i>Journal of Mathematics and Culture</i>	
2007	Contributor to <i>NASGEm News</i>	
2000	Re-elected Vice President	
2000	NASGEm Nominating committee Co-chair	
2000-present	Executive Board Member continuously	
2001-2002	North American Study Group on Ethnomathematics (NASGEm) Vice President-Membership	
2002-2007	NCTM Representative or NCTM Representative Alternate (2007)	
1997-98	Co-organizer and facilitator of Mini-course of 1998 Annual Conference of NCTM	Washington, DC
1988-present	<b>Women and Mathematics Education</b>	Mount Holyoke College South Hadley, MA
1984-present	<b>Colorado Council of Teachers of Mathematics</b> Presidential Awards Screening Committee, 1995 & 1992 Presenter at numerous Annual Conferences Presider, Annual Conference; 1991-1993	Denver, CO
1985-92	Colorado Council of Teachers of Mathematics: Board Member and NCTM Representative	Denver, CO
1987-1995	<u>Texas Mathematics Teacher</u> - review panel	Denton, TX
1987-1995	Texas Council of Teachers of Mathematics	Austin, TX
1986-present	<b>Colorado Association of Teacher Educators</b>	Greeley, CO
1978-present	American Association of University Professors	Washington, DC
1975-present	<b>American Educational Research Association</b>	Washington, DC
2006	Reviewer: AERA 2007 Annual Conference Proposals	
1977-present	<b>SIG: Research in Mathematics Education</b> (intermittent)	
2003-present	<b>SIG: Research in Social Studies Education</b>	
1978-88	American Educational Studies Association	Atlanta, GA
1983-87	Association for Educational Data Systems	Washington, DC
1983-90	International Society for Technology in Education	Eugene, OR

1985-present	<b>International Reading Association</b>	Newark, DG
1982-88	Kappa Delta Pi	West Lafayette, IA
2001-present	<b>Association of Mathematics Teacher Educators (AMTE)</b>	San Diego State University San Diego, CA
1997	Cited with Madeline Milian, in <u>Teaching Children Mathematics</u> (Nov. 1997) for contributions to L. Garrison's "Making the NCTM Standards work for Emergent English Speakers."	
2000-present 2003, 2008	<b>National Council for the Social Studies (NCSS)</b> Presented at Annual Conference	Washington, DC
2000-present	NCSS Special Interest Group Early Childhood & Elementary. Attended and assisted leader Dr. Mary Haas	Morgantown, WV
1983-89	National Science Foundation Available for mathematics education proposal review	Washington, DC
1976-present	Phi Delta Kappa	Bloomington, IA
1976-82	Phi Kappa Phi	Baton Rouge, LA
1981-present	<b>School Science and Mathematics Association</b> Presenter at numerous annual conferences.	Bowling Green, OH
1985-92	Editorial Review Board-SCHOOL SCIENCE AND MATHEMATICS	
1980-82	University Affiliated Programs Conference on Piagetian Theory - Dr. Silverman reviewed proposals for conference presentation.	U. Southern California Los Angeles, CA
1978-84	Louisiana-Mississippi Council of Teachers of Mathematics	Baton Rouge, LA
1978-85	Southwest Educational Research Association	Dallas, TX
1978-85	Southwestern Philosophy of Education Society	Columbia, SC
1978-84	Louisiana Association of Teachers of Mathematics	Baton Rouge, LA
1983-84	Vice President. Dr. Silverman was to be nominated for President, 1985-86. Moved to Colorado.	
1981-83	Program Co-chair for Louisiana State Mathematics Teacher's Conference	Lake Charles, LA
1978-84	Louisiana Educational Research Association	Lafayette, LA
1978-85	Louisiana Philosophy of Education Society	Shreveport, LA
1978-84 1981-83	North Louisiana Mathematics Association President	Shreveport, LA
1979-80	Vice President	

## **PROFESSIONAL ACTIVITY - OTHER**

Silverman, Fredrick L. "Rick." (April, 2005). Greeley Holocaust Memorial Observances: Contemporary Significance of Remembering the Holocaust and Confronting Deniers. Images, hosted by Dr. Ed Phillipsen. Greeley Area TV.

Silverman, Fredrick L. "Rick," and McCasland, Shannon. (2003). The Holocaust, Its Significance, and Memorial Observances. Television interview on Images, hosted by Dr. Ed Phillipsen.

Silverman, Fredrick L. (Dec. 1989). An Examination of Mathematics Education in the United States. Radio talk-show interview by Arni Burron. KNUS. Denver, CO.

### **Integrated Mathematics and Science Laboratory Materials**

Silverman, Fredrick L., and Knees, Beth. (Fall 1988). Marble Launcher Lab. (Adapted from Marble Shoot in Spaces by Dale Seymour Publications, 1982).

### **Instruments Developed/Revised for NSF funded Preservice Elementary Mathematics/Science Project**

Science Attitude Scale - Revised -Thompson, C.L. and Shrigley, R.L. (1986). Revising the Science Attitude Scale. School Science and Mathematics 86, 4, 331-343. 14 new items were developed by Teresa McDevitt, Henry Heikkinen, and Fredrick L. Silverman

Teach Mathematics Attitudes Scale - Developed by Teresa McDevitt, Henry Heikkinen, and Fredrick L. Silverman. Adapted from Thompson and Shrigley (above).

### **UNPUBLISHED MANUSCRIPTS**

Silverman, Fredrick L. "Rick." Some thoughts and perspectives on mathematics education for learners whose home language is not English. In progress.

Silverman, Fredrick L.; McBride, John W.; and Conostas, Mark A. An Integrated Science and Mathematics Approach for the Elementary School.

Silverman, Fredrick L.; Gilbert, Robert K.; and Abernathy, Sandra A. Involving Students in the Mathematical Process.

University of Northern Colorado Pre-Service Elementary Science/Mathematics Project, Senior Staff. (Feb. 1992). Recommendations for Teacher Preparation: An Interim Report from UNC's Pre-Service Elementary Science/Mathematics Project. University of Northern Colorado, Greeley, CO.

Silverman, Fredrick L. (1991). Community-Action-Self. Commencement Address. University of Northern Colorado, Greeley, CO.

Silverman, Fredrick L.; and Marshman, Larry R. (1988) Microcomputing inservice: a five year retrospective.

Silverman, Fredrick L. Blessings, Troubles, and Perseverance (Nov. 1987). Message delivered at the Annual Interfaith Thanksgiving Service. First United Presbyterian Church. Greeley, CO.

Silverman, Fredrick L., and Marshman, Larry R. (1985) Microcomputing with Inservice Teachers.

Silverman, Fredrick L., and Marshman, Larry R. (1985) A microcomputing course for inservice educators.

### **CONFERENCE ORGANIZATION**

The Role Of Ethnomathematics In Mathematics Education: Discussion Group 18. (July 2008). International Congress on Mathematical Education 11 (ICME 11). Monterrey, MX. Dr. Silverman co-chaired the Organizing Team with Marcos Cherinda of Mozambique.

Unity and Disunity: Ethnic Issues for the 90's - Examining Cultural Diversity. (Sept. 1990). Dr. Silverman co-chaired planning committee. University of Northern Colorado, Greeley, CO.

Math Solution Workshop (Jan. 1988). Dr. Silverman was the site coordinator for this full-day workshop series conducted by the Marilyn Burns Education Associates. 350 mathematics educators and administrators attended. University of North Colorado, Greeley, CO.

National Diffusion Network (NDN) Special Mathematics and Science Strand for the UNC Winter Conference (Jan. 1988). Dr. Silverman planned and coordinated this series for presentation of eight successful mathematics and science projects. University of Northern Colorado, Greeley, CO.

## COMMUNITY SERVICE:

<u>Date(s)</u>	<u>Activity</u>	<u>Location</u>
2008	The Bridge Assisted Living: Origami Activities (with Fongyun Lee)	Greeley, CO
2004	Garden Square of Greeley Chanukkah Presentation	Greeley, CO
2004	Shawsheen Elementary School Chanukkah Presentation	Greeley, CO
2003 – 2007	Greeley Museums Education Committee Examine/test exhibits & recommend activities for them	Greeley, CO
2003 – 2007	Greeley Museums Program Planning Committee Recommend and review programming ideas for Greeley Museums Representing UNC by designation of Vice-Provost Dr. Vinnie Scalia Appointed by Mr. Chris Dill, Superintendent of Greeley Museums	
2003	<u>Images</u> - Greeley Public TV. Dr. Ed Phillipson, host. Dr. Phillipson interviewed with Shannon McCasland on the Holocaust, Memorial Observances, and their significance.	Greeley, CO
2003	Cameron Elementary School 5th Grade Leadership Program Ms. Donna Strohauer, Advisor and Organizer. Presented ideas And questions about leaders and leadership	Greeley, CO
2002	Forum Member for UNC MIND 292 Class, Comparative Religions With Ron Edgerton, Alpha Gun, Zack Marshall, & Matt Bersagle	UNC University Center Organized by Derek Clark
2002	Presentation of Judaism with JoAnn Mullen	First Presbyterian Church Greeley, CO
2002	Chanukkah Presentation	Senior Activities Center Evans, CO
2000	School Improvement Committee Members develop & review plans and policy for school improvement	Jackson Elementary Greeley, CO
2000, 03, and 05	<u>Images</u> - Greeley Public TV Moderator: Ed Phillipsen, V. Chair of Greeley Human Relations Commission. (2000) Panel Organizer & Member For Interview along with JoAnn Mullen & Suzanne Doerner, (2003) with Shannon McCasland on	Greeley, CO

Holocaust Memorial Observance, (2005) solo on Holocaust Memorial Observances.

2000	Respondent to survey from the Greeley Transitional House. Ms. Beth Bowers, Investigator Completed survey on best ways GTH can meet Community needs.	Greeley, CO
2000	Respondent to survey from CSU Economics Dept. Dr. Alexandra Bernasek, PI. Completed "Household Financial Decision-making Survey	Fort Collins, CO
2000	Participant in Public Hearings on Reconstitution of the UNC Laboratory School. Spoke at Public Hearings before the UNC Board of Trustees, UNC Faculty Senate, and at the College of Education	Greeley, CO
2000	Presented "Diverse Reflections on Being a Jew"	Unitarian Universalist Church of Greeley
2000	Hist 290 - American Immigration. Janet Worrall, Professor. Judaism & Immigration Presentation	UNC Greeley, CO
2000 to pres 2000 to pres	Origami Sessions: Residents & Staff Chanukah presentation	The Bridge - Assisted Living. Greeley, CO
1999-2001	Veloy, Vigil Art Exhibit (Upcoming in 2001) Contact for artist gallery in New Mexico and UNC personnel	Michener Gallery Michener Library UNC, Greeley, CO
1999	Taught (with Noel Manzano) mathematics through Origami to incarcerated youth, Ages 12 - 18	Gilliam Youth Services Center Dr. Shirley Leali, teacher Denver, CO
1999	Panelist for class on religion. Speaking from a Jewish perspective on religious matters and current societal issues	Sociology 101 Walt Francis, Instructor UNC, Greeley, CO
2007	Presenter to the Kiwanis Club of Greeley Golden "K"	Organized and presented a program on lessons of the Holocaust and Greeley annual Memorial Observances
1989-present	<b>Holocaust Memorial Observance Planning Committee Co-Chair &amp; occasional presenter.</b> Programs reach hundreds of persons each year in Greeley & Weld County.	Greeley, CO
1998	Holocaust education lesson for Mr. Don Perl's 5th Grade	John Evans Junior High School, Greeley, CO

1997	Member of team that prepared grant proposal for funding from Colorado Goals 2000. Centennial Elementary School	Evans, CO
1996	Presentation to two classes on Democratic Citizenship, Elections, & Presidential Inauguration. Kruse Elementary School	Fort Collins, CO
1996 - 1999	Shared with 2nd graders some of my experiences, values and views, as a Jew, as others did from their faiths	Our Savior's Luthern Church Greeley, CO
1996	Member of team that prepared successful grant proposal funded by Colorado Partnership. Kruse Elementary School	Fort Collins, CO
1993-1996 1997-Present	<b>Greeley Interfaith Association</b> -Representing Beth Israel Synagogue	Greeley, CO
1992-present	<b>Beth Israel Synagogue Board of Directors</b> (multiple terms)	Greeley, CO
1992	Presentation and discussion on Civil Rights to Ms. Ruth Thrun's 9th Grade class on multiculturalism-Laboratory School, UNC	Greeley, CO
1992	Mr. Jim Reed's 5th Grade class-Cameron Elementary School Team taught problem solving lesson with pattern pieces.	Greeley, CO
1991	Expanding Your Horizons-Presented workshop on mathematics for adults at 1991 Conference	Greeley, CO
1990	Thinking Skills Committee-Weld County District 6 Schools Members wrote Thinking Skills Exit Outcomes	Greeley, CO
1990	Colorado State University, College of Engineering Integration of Science, Technology, and Mathematics Grant Proposal. Responded to letter request to study proposal and provide feedback.	Ft. Collins, CO
1989	Read Aloud for Children at Dos Rios Elementary School	Greeley, CO
1985-present 1987-1989 1996-present	<b>Greeley Chamber Orchestra Board of Directors</b> Greeley Chamber Orchestra Secretary, Board of Directors Arrangements for portraits of guest artists	Greeley, CO Greeley, CO
1985	Demonstration of Big Track, a programmable toy, at Shawsheen Elementary School	Greeley, CO
1982-present	Chanukkah programs at selected schools	Greeley, CO and Shreveport, LA
1984	Team Member to Develop and Analyze Survey for Adult Education Program Agudath Achim Synagogue	Shreveport, LA
1981-84	Board of Directors, River Oaks Homes Association	Shreveport, LA
1978-84	Judge at debates, mathematics fairs, and science fairs	Shreveport, LA
1982-84	B'nai Zion Religious School Committee	Shreveport, LA

1982-83	Teacher at B'nai Zion Religious School	Shreveport, LA
1982-83	Board of Directors, Montessori School for Shreveport	Shreveport, LA

**UNIVERSITY SERVICE**Department/Unit:

<u>Date(s)</u>	<u>Position</u>	<u>Activity</u>
2004	University Consultant Mentor	Inducted several new University Consultants into the role
2004 – 2005	Search Committee	Chair and member to fill 1 position.
2002 - pres	Department Co-Chair	Assist in leadership of Department of Elementary Ed.
2002-2003	Department Search Committee, Co-Chair	Search & screen to fill faculty positions
2002	Department of Elementary Ed & Elementary Program Area	Assisted in program review. Collaborated to establish Dept of Elementary Ed. Co-planned/attended meetings with faculty & Dean.
2002	Dept, Prog. Area, PTEP NCATE Preparations	Wrote several sections of rejoinder, met with reviewers & faculty, assisted with poster session
2000	Preparation for Colorado State Review & Participation	Completion of Standards-Course Alignment Matrices for EDEL 470 and EDEL 520. Meetings with team Members
2005-pres	Donated Subscription	<u>National Geographic Magazine</u>
2000-pres	Donated Subscription	Donated subscription to <u>Rethinking Schools</u> to Dept. of Elementary Education
1999-2000	Alculturator for new faculty	Assisting new faculty comfortably and knowledgeably accommodate to their new faculty positions
1997	Elementary Education Master's Degree Program	Reviewed Committee Co-Chairs' drafts & submitted written responses; developed with Gary Fertig outline for new entry course
1996-98	Post-Baccalaureate Licensure Committee	Licensure program refinement for post-baccalaureate students
1994	Chair, Search Committee	Lead selection process, convene meetings, interface with university and candidates
1993-94	DARC Policies Review and Revision Committee	Examine current acceptance and retention policies for Division doctoral students and make recommendations to faculty and chair of Division
1993	Doug Burron Retirement Party Committee	Organize and implement the Appreciation party for Dr. Burron on his retirement.

1990	DISCOVER UNC	Advised incoming students during their visit to campus.
1990-present	Professional Teacher Education Program (PTEP) Elementary level committee	Develop and implement teacher education reforms for elementary licensure program. Continual program and EDEL 470 refinement. Mentoring consultants & problem solving.
2000		Implemented teacher work sample.
1984-on going	Elementary Grad Faculty	Conversations on policy, programs, & delivery. Review & recommend on course proposals by prospective auxiliary faculty.
1998		Interviewee of External Program Reviewers; Service in Program Review Committee
1989-90	Division Evaluation and Review Committee	Assess performance of Division Chair, Review faculty appeals, and recommend to COE Dean.
1989	Faculty Search Committee for mathematics education, social studies, middle school, and reading positions.	Screen applicants and recommend prospective faculty.
1988	MA Admissions Committee for Statewide Access Degree Program in Elementary Education	Screen applicants for qualifications to enter MA external degree program
1988	Chair, Division Evaluation Review Committee	Investigate faculty performance appeals. Prepare report to Dean on Division Director's performance.
1988	Faculty Search Committee	Screen applicants and recommend prospective new faculty.
1984-88	Program Advisory Board Division of Educational Studies College of Education University of Northern Colorado	Advise Division Director on issues concerning division, University and Community. Faculty liaison work.
1985	Committee for Preparation to Teach Gifted and Talented Division of Educational Studies College of Education University of Northern Colorado	Committee prepared report on teacher training to facilitate education of gifted and talented.
1985	Committee, Flowers and Socials Division of Educational Studies College of Education, UNC	Prepared policy statement and planned morale raising project.
1984	Recruitment Committee Division of Educational Studies College of Education, UNC	Considered means by which to attract minority students.

1980-82      Travel Funds Committee  
 Department of Education  
 Louisiana State University  
 Shreveport, LA      Developed criteria for allocating travel money.

School/College:

<u>Date(s)</u>	<u>Position</u>	<u>Activity</u>
2008	Early Childhood Education Search Committee	Screened candidates, interviewed, made recommendation to STE Director and Dean
2008	Doctoral Studies Committee	Policy planning and implementation for Ed. D.
2008	First International Teacher Education Conference Colorado-Siberia	Planning Committee for Faculty Visit from Novosibirsk State Pedagogical University
2006-2008 2006	STE Faculty Evaluation Committee STE Faculty Performance Review Process Process Leader, Member, STE Evaluation Task Force	Administered faculty performance review process Developed faculty performance review process for presentation to STE faculty for adoption consideration & modification. Led one faculty group Compiled faculty assessments, & wrote report for STE Acting Director
2007	Author for NCATE Report section on Elementary PTEP Work Sample Analysis	Analyzed data pertaining to teacher candidate performances for Work Sample components: Lesson Plans, Evaluative Essays, & Reflective Essays
2007	STE Faculty Performance Evaluation Committee  Faculty evaluation group leader	Developed faculty performance review process for presentation to STE faculty for adoption consideration and modification. Compiled faculty assessments, led review meeting, wrote assessment report for STE Evaluation Committee and STE Director
2007	Banner Bearer for CEBS	Carried the College Banner for Spring 2007 Commencement
2005 – 2006	STE Director Search Committee	Member of committee to search & screen candidates to recommend to Dean
2003 - 2006	Staff Supervision & Assessment, by Appointment of the Dean	Supervisor for Ms. Vicky Stroomberger, responsible for annual assessment, mid-year evaluation, leave approvals, and the like.
2002 and continuing	Leadership Council Member College of Education	Deliberate issues affecting COE & advise Dean (shared with Dept. Co-Chair, alt from Fall 2003)
2005 – 2008, 2002	College of Ed/Behavior Sciences Service Award Selection Committee	Review nominees' documents & name awardee

2001	College of Education Teaching Award Selection Committee	Reviewed nominees' documents & named awardee
2001-2002	Search Committee	Member to search & screen for faculty positions
2000	UNC Urban Teacher Education Center. Governing committee	Meetings on Policies for Urban Teacher Ed. Center. Faculty competence oversight
2000	Character Education Interest Group Participant, Phil Wishon, Chair	Meeting, presenting, & writing on Character Education
2000	Participant	Mediation hearings in dispute between COE Professor & Administrators
1999-2000	Elementary Education Ed. D. Program Committee, Co-Chair	Initial meetings of committee co-chairs and with SSTTE Directors and Education Dean
1999-2000	College of Education Diversity Task Force	Initial meeting of committee to address College of Education diversity needs
1997-Present	Departmental Evaluation Committee	Orchestrate faculty evaluations in School for Study of Teaching & Teacher Education
1999	Search Committee	Appointed member to screen and recommend four candidates
1998	Search Committee	Appointed member to screen and recommend candidates
1997	Search Committee	Appointed member to screen and recommend two candidates
1997	Elementary Education Ed.D. Program Review	Discussion participant, critic, & reviewer for Graduate Dean's Recommendations
1996-present	Elementary PTEP	Develop, implement, & refine elem teacher education program, standards/outcomes, mentoring univ consultants, & problem solving.
2006	EDEL 470 Faculty	Refinement, maintenance & course problem solving.
1994-95	Classroom of Future Project Committee	Studying and recommending to College Dean for classroom with high technology.
1992-93	Banner Bearer for College of Education	Carried banner at Spring 1993 & Fall 1992 Commencement Ceremonies.
1993	Elementary PTEP Member	Formulated teacher education program reform and member Reconciliation Subcommittee.
1993	Outstanding Recognition Awards Committee	Examination nominees' credentials for award and recommend awardees to College Dean

1991	NCATE-Faculty governance leaders on-campus meeting	Discuss UNC governance process for teacher education.
1989-93	College Academic Computing Committee	Assess College of Education Current needs and projection for academic computing services. Recommend to College of Education Dean.
1989	Faculty achievement Awards Committee	Review materials of candidates for Awards.
1988	Participant in University of Washington, Center for Educational Renewal's "Study of the Education of Educators"	Intensive interview with researcher
1986-88	Chair, Unit Evaluation Appeals Committee, College of Education, UNC	Reviewed appeals and prepared written report for the Dean
1985-86	Search Committee for Director Laboratory School College of Education, UNC	Screened applicants and interviewed finalists for Director of Lab School.
1985	Search Committee for Mathematics Faculty at Laboratory School College of Education, UNC	Screened applicants and interviewed finalists for faculty positions at the Laboratory School.
1985	Budget Review Committee College of Education, UNC	Studied budget proposals for components of the College of Education and made recommendations to the Dean.
1984	Educational Services Center Computer Education Grant Writing Team, UNC	Prepared recommendations for grant proposals.
1983	Chair of Committee Projecting Future Needs of Computing College of Education Louisiana State University at Shreveport	Produced document for use in projecting total LSUS computing needs in next 5 years.

## UNIVERSITY:

<u>Date(s)</u>	<u>Position</u>	<u>Activity</u>
1991 - present	UNC Preview Days	Presented advisement and represented the STE/Division PTEPs to prospective teacher education students and their parents
2007	Embracing Community, Together: UNC and Greeley/Weld Partnering Forum	Member of the Planning Committee and Presenter
2006-cont	Schulze Endowment Board Member	Review/recommend policy and regulations. Search/screen candidates for Robert O. Schulze Endowed

Chair for Academic Yr 2006-07

2005 – 2007	IDLA/PTEP Coordinating Council	Review IDLA Major & Elementary PTEP for constructive changes
2005-cont	UNC Constitution Review Authority	Members review issues that require analysis for conflict or harmony with UNC Constitution
2002 - 2004	North Central Accreditation Preparation	Member, Criterion V Committee, Dean Kathleen Roundtree, Chair (2002-2004)
2003 – pres	UNC Liaison with Greeley Museums	Facilitate communication between UNC & Greeley Museums. Contribute to planning.
2005	Member of Greeley Museums Education Committee	Generating program ideas in concert with other members
2003	UNC Junior Day	Presented session to high school juniors & their parents about the Elementary PTEP
1999-2000	TEAM UNC member	Interface with UNC Foundation for fundraising related to SSTTE
1999	UNC News and Publications	Member of focus group to pilot survey probe on campus communication
1998-99, 96-97	Mathematics and Science Teaching Center (MAST) Advisory Board Member	Deliberate and set policy, oversee expenditures, and review actions of the Center
1984-cont	Member, Teacher Education Faculty	Teaching in Teacher Education Programs
1997-2000	Faculty Senate re-elected to 3 year term	Faculty Governance from College of Education
1998-2000	Vice-Chair of Senate	Lead Senate in Chair's Absence and other assignments
1997-2000	Faculty Senate Executive Committee at large member (1997) Senate Vice-Chair 1998-99 and 1999 - 2000	Formulate Senate agenda and deliberate issues
1998-2000	Faculty Senate Welfare Committee	Deliberate matters of faculty welfare and recommend positions for Faculty Senate discussion or vote
1997-Spring	Faculty Senate by appointment of Dean of College of Education	Faculty Governance
1996	Term Faculty Conference Committee	Deliberated personnel status of term faculty members & made recommendation to President and

Senate.

1996	Member of focus groups	UNC News & Publications & UNC Research Corporation
1996	UNC Graduate School	Hosted Thailand's Apunchanit Jenjit to observe Elementary PTEP course integration and Partnership Schools Program.
1996-97	Committee to resolve AAUP Censorship	Members worked with President and AAUP to conclude remaining compliance issues.
1995-96	University Compensation Task Force Member	Comprehensive examination of faculty remuneration structure
1995-96	Secretary of Faculty Senate	Responsible for record of Senate meetings and other duties
1995-96	Faculty Senate Executive Committee Member	Business and Policy Oversight
1993-1996	Faculty Senate, College of Education Representative	Serve as member of UNC Faculty Governance Body
1993-94	Academic Policies Committee of Faculty Senate	Deliberate and make recommendations regarding academic issues.
1993	Presidential Performance Review Panel	Met with consultant Dr. Ed Penson to offer specific insights on UNC President's performance.
1992	Presidential Task Force University Laboratory School	Gather data and compile report on mission, programs, curriculum, and agency relations.
1992	UNC Presidential Tour	Traveled with University President Lujan to promote UNC in Colorado.
1991-92	Board of Trustees Member Elected by Faculty	Duties of legally accountable oversight and policy body of the University.
1991	Board of Trustees Member Elected by Faculty	Commencement address: "Community, Action, Self"
1991-95	Salary Equity Committee	Recommendations to President on faculty salaries.
1992	Codification Committee	Review procedures, regulations, and policies, and make recommendations to Faculty Senate

1991	UNC Homecoming	Hosted honored Alumna Dr. Louise Johnson
1991	UNC Presidential Search Committee	Screened about 180 applicants, conducted interviews and recommended to Board of Trustees
1991-1996	Banned Books Week	Reader from a banned book
1991-95	Advisory Committee on Cultural Diversity, Member	Promote campus pluralism by analysis of recruiting, hiring, and retaining minority and women faculty and recruiting and retaining minority students. Makes recommendations to President.
1990-91	Chair of Faculty Senate University of Northern Colorado	Member of President's Executive Staff. Preside at Senate Executive Committee and regular meetings. Appoint members to standing committees, and coordinate governance role of the Senate.
1991 & 1989	Blind Reviewer for Graduate School	Reviewed dissertation and provided critical analysis and feedback.
1989-91	Facilitation Committee for LEAP	Promote more campus pluralism by analysis of recruiting, hiring, and retaining minority and women personnel and by recruiting and retaining minority students. Make recommendations to President.
1990-91	Statewide Mission Council	Formulate guidelines for delivery of programs throughout Colorado. Recommend to President.
1990-91	President's Ad Hoc Committee on Distribution of New Monies	Analyze problem and recommend to President. Composition represents faculty, deans, and central administration.
1990	Ad Hoc Committee on COBA Market Adjustment Overage	Analyze problem & recommend to V.P. for Academic Affairs. Membership.
1990-91	University Coordinating Council	Ad hoc group of faculty, students, SPEEC, PAESC, central administration, and deans to form small panel University body.
1990	Unity and Disunity - Ethnic Issues for the 90's: Examining Cultural Diversity in Higher Education	Co-Chair Conference Planning committee

1989-90	Re-elected Secretary of Faculty Senate	Member of Senate Executive Committee. Participating actively in governance issues of UNC. Responsible for correspondence.
1988-91	Faculty Senate subcommittee on Promotion and Tenure	Reviewed issues of promotion and tenure. Screened Chapter 3 of Codification (faculty issues), negotiated with administration to complete first Faculty Handbook since 1978.
1988	Search Committee for Associate VP for Academic Affairs	Search and Screen Applicants and recommend to V.P. for Academic Affairs.
1986-87	Faculty Senate, Executive Committee, UNC	Secretary of Senate
1985-91	Faculty Senate College of Education Rep. (Re-elected 1988)	Serve as member of UNC faculty representative body.
1985-90	Welfare Committee, Subcommittee of the Faculty Senate University of Northern Colorado	Studied issues directly affecting faculty and campus welfare and formulated policy recommendations for the Senate.
1985-86	Task Force on Elementary Education Program Revision Combined membership of College of Arts and Sciences and College of Education, UNC	Program revision for teacher certification and academic competence in subject matter fields.
1985-86	Elections Committee, UNC	Conducted elections and Subcommittee of the Faculty Senate formulated related policy.
1981-86	Computer Utilization Committee Louisiana State University in Shreveport, LA	Formulation of policy for University and 3rd party access.
1979-83	Library Committee, Louisiana State University in Shreveport	Budget and Policy Review.
1982	Search Committee for (1) Director of Institutional Research/Planning and for (2) Director of Information Services	Screened applicants, interviewed finalists, and made recommendations to the Chancellor for both positions.

#### **OTHER PROFESSIONAL SERVICE:**

<u>Date(s)</u>	<u>Position/Event</u>	<u>Activity</u>
2007 – 2008	ICME 11 – 2008 International Congress on Mathematics Education Monterrey, MX	Co-Chair for “Ethnomathematics and Mathematics Education” with Marcos Cherinda of Mozambique. The team of 5 international Ethno-

	Also listed with Conferences Organized	mathematicians solicited proposals, will screen them, and with lead the DG-18 session for selected papers.
2006	University of Texas at El Paso Mathematics Department Requested by chair Dr. Helmut Knaust	Reviewed scholarly dossier for a Promottion/Tenure candidate
2004 – 2005	External Reviewer for P & T	Reviewed scholarly dossier for a Promotion & Tenure candidate at St. Joseph's University. Requested by Dean John J. McCall.
2004	Manuscript review with Madeline Milian	Dr. Milian invited me to co-review "Non-verbal communication of bi-lingual students solving mathematics problems" for <u>Bilingual Research J.</u>
2003	University of Northern Colorado	Member of Evaluation Committee for Faculty member in Department of EBBE & Subsequently member of ECC with COE Dean
2002	University of Alaska – Fairbanks	External Reviewer for Promotion
2000	University of Mass - Boston	Outside Reviewer for Tenure & Promotion
2000	University of Louisville	Outside Reviewer for Tenure & Promotion
1999	American University Washington, DC.	Review of professional credentials for 5th year Pre-tenure reappointment candidate
1999	University of Louisville Louisville, KY	Review of professional credentials for promotion & tenure candidate
1999	University of North Dakota Presidential Search Subcommittee	Participated in interviews at UNC concerning UNC Presidential candidate Dr. Steve Hulbert
1997-98	Outside reviewer for Utah State University	Review proposals for funding consideration
1997	Course Outline review, University of Houston at Clear Lake, TX	Critique for Dr. Cynthia Davis for her proposed "Seminar on Content of Secondary School Courses in Algebra & Applicable instructional Techniques
1992	Outside Reviewer Colorado State University Department of Mathematics	Promotion review of curriculum vita for Dr. Duane Clow
1990	Outside Reviewer University of Louisville Department of Secondary Ed	Promotion and tenure review or curriculum vita of Dr. Robert Ronau

**GRADUATE STUDENT COMMITTEES-Doctoral:**

2008-cont	Committee member and co-chair for MaryJo Stanley
2008-cont	Faculty Representative for Christina Zafiris,
2006-cont	Committee member for Ms. Angie Nguyen
2005- 2007	Committee member for Ms. Ruth Thrun. Completed 2007.
2002 - 2005	Committee Research Chair (Dr. Picard, Co-Chair) for Jenni Harding-DeKam. Completed 2005
2002-2006	Committee member for Bob Keele. Defacto chair when initial chair resigned.
1999-2003	Committee Co-Chair for Chiling. Liu. Passed exams, 01. Began proposal, 02. New Com, 03
1997-1999	Committee member for Alice Horton. Graduate School Representative. Doctor of Education earned 1999.
1997-1999	Committee member for Raefel S. Belloso. Graduate School Representative. Doctor of Education earned 1999.
1997-98	Committee member for Rodney Troyer. Graduate School/Representative. Doctor of Education earned 1998.
1996-97	Committee member for Kao-Yen Chen. Doctor of Education earned 1997.
1995-1997	Committee member for Ming-Ling Yang. Doctor of Education earned 1997.
1996-98	Committee member for Lynne Blackburn. Doctor of Education earned 1998.
1995-1997	Committee Co-Chair for Mr. E-Sin Lin.
1995-1996	Committee member for Ms. Lori K. Payne. Doctor of Philosophy earned 1996.
1993-present	Co-Chair of Mr. Noel Manzano's Committee. Noel died in April, 2000, his work nearly complete.
1985-1995	Co-Chair of Mr. Harvey Woodrome's Committee. Woodrome earned the Doctor of Education Degree in August, 1995.
1993-1994	Committee member for Mr. Royle Vagle. Doctor of Education earned 1994.
1992-1994	Committee member for Mr. Long-Chuan Chen. Doctor of Education earned 1994.
1992-1994	Committee member for Mr. Wen-Ming Kao. Doctor of Education earned 1994.
1991-1993	Committee member for Ms. Marti Dever. Doctor of Education earned 1993.
1989-1993	Committee member for Ms. Carolyn Linster. Doctor of Education earned 1993.
1987-1990	Chair of Mr. Ken Winograd's Committee. Winograd earned the Doctor of Education Degree in August, 1990, and accepted a faculty position at Oregon State University, Corvallis, OR
1985-1990	Chair of Ms. Barbara Schneider's Committee. Schneider terminated her program during the Summer of 1990 and returned to family business.
1986-1987	Mathematics Education Specialist on Ms. Mary Hamms' Committee. Hamm earned the Doctor of Education Degree in 1987 and accepted a position in the Ohio State University System.

**GRADUATE STUDENT COMMITTEES-Master's:**

- 1987 Mathematics Education Specialist on Kathy Granas' Master's Degree Committee.
- 1986 Mathematics Education Specialist on Gail Pottenger's Master's Degree Committee.
- 1986-1990 Mathematics Education specialist on Ms. Linda L.G. Brown's Committee.
- 1985-1986 Mathematics Education specialist and research advisor on Ms. Renee Adams' Committee.

**UNDERGRADUATE STUDENT COMMITTEES-Honors**

- 1999-2000 Co-Chair for Amanda Meadow's Committee

**STUDENT SCHOLARSHIP**

- 2001 Liu, Chialing. (2001). How parents can help children with their achievement in mathematics. EduMath (Dec 2001). EduMath is an official publication of the Hong Kong Association for Mathematics Education. Ms. Liu wrote her manuscript while a student of Dr. Silverman in EDEL 725.
- 2001 Silverman, Rick, and a panel of UNC Honors students (2001). Honors 200: American Road Stories. Scholars Day of Academic Excellence Week. April 6, 2001. Greeley, CO. Dr. Silverman was teaching Honors 200.
- 2001 Shumate, Jonathan; Almeida, Chelly; Curtis, Morgan. (2001). American Road Stories. National Collegiate Honors Conference. October, 2001. Chicago, IL.
- 2000 Silverman, Fredrick L. "Rick"; Strawser, Abbilynn; Strohauser, Donna; and Manzano, Noel. (2001). On the road with Cholo, Vato, and Pano. Teaching Children mathematics. (7) 6, 330-333. Ms. Strawser and Mr. Mansano were students of Dr. Silverman.
- 1999 Silverman, Fredrick L., and Manzano, Noel. (Oct. 1999) Origami: Variations on a cube. Workshop. NCTM Western Regional Conference. Boise, ID. Manzano is a doctoral candidate in Elementary Education in the School for study of Teaching and Teacher Education.
- 1998 Silverman, Fredrick L., and Manzano, Noel N. (Oct, 1998). Origami for Geometry and Spatial Sense: Extended Session. Joint Conference: NCTM Central Regional and School Science and Mathematics Association Annual. Louisville, KY.
- 1997 With Ms. Lynne Blackburn, completed critical review of "Mathematics in the Multiage Classroom" for publication consideration National Council of Teachers of Mathematics Teaching Children Mathematics.
- 1997 With Mr. E-Sin Lin, completed outside review on Mathematical Ecology of Three Native American Cultures: The Ute, Shoshone, and the Arapaho for Utah State University's New Faculty Research Grant Program.
- 1997 Lin, E-Sin. The Game of Cuisenaire Rods: "Roddles." Ping Tung Teachers College Reporter, No. 10. R.O.C.

- 1997 Blackburn, Lynne M., and Flock, Kathy J. Ideas for integrating an elementary multiage curriculum. Accepted for publication. Ms. Blackburn developed the draft for this article as a student in EDEL 725.
- 1996 Heuwinkel, Mary K. New ways of learning = New ways of teaching. Accepted for publication in Childhood Education. 73, 1, 27-31. Ms. Heuwinkel developed the draft of this article when she was a student in EDEL 725.
- 1996 Manzano, Noel N., and Silverman, Fredrick L. Origami: Increasing Geometry in the Classroom. Minicourse presented at the Annual Meeting of the Colorado Council of Teachers in Mathematics. Denver, CO. October 18, 1996.
- 1996 Silverman, Fredrick L., and Manzano, Noel N. Origami: Informal Geometry and a Cultural Bridge. Workshop presented at the Annual Meeting of the National Council of Teachers of Mathematics. San Diego, CA. April 27, 1996. Mr. Manzano is a UNC doctoral student.
- 1996 Woodrome, Harvey N. An Exploratory Study of Emergency Care Treatment Knowledge of Selected Colorado Elementary School Teachers and Staff. Fredrick L. Silverman and Catherine R. Jackson co-sponsored this presentation at University of Northern Colorado, Academic Excellence Week, April, 1996.
- 1996 Pletcher, Marci. An Investigation into the Use of the Van Hiele Model of Teaching Geometry in Elementary Mathematics Textbook Series. Thesis submitted for the Honors Program and the Bachelor of Arts Degree for May, 1997. Fredrick L. Silverman reviewed drafts of Ms. Pletcher's thesis on the basis of which she made revisions.
- 1995 Multiage Classrooms: A new way to learn math by Randall Zila, Noel Manzano, and Marti Dever. Principal 73, 4 (March 1994). The paper was developed for EDEL 725.
- 1994 Anderson, Linda; Brandsborg, Jill; Heuwinkel, Mary; and Manzano, Noel. The Nuts and Bolts of Classroom Constructivism: Activities and Discussion. UNC Research Day. April 7, 1994. Fredrick L. Silverman was sponsor and consultant.
- 1994 Woodrome, Harvey N. The Case for CPR and Emergency Procedures Training for Colorado Elementary School Teachers. UNC Research Day. April 7, 1994. Fredrick L. Silverman was sponsor.
- 1993 Brinkman, Kristie; Kauffmann, Kim; and Schlagel, Brenda. Homemade Math Manipulatives for Teachers. Presentaion for the Colorado Council of Teachers of Mathematics Annual Conference, Denver, CO. October, 1993. Follow-up to project in Fredrick L. Silverman's class.
- 1993 Co-author with Mr. Long-Chuan Chen. The effects of logo programming on children's cognitive outcomes: A meta-analysis. Hualien Journal of Mathematics and Science Education. Mr. Chen and I developed this article when Mr. Chen was a student in EDEL 725.
- 1993 "Helping Children Learn the Concept of Time" by Chou-Yang Chen was published in Taiwan by The Journal of the Friends of Elementary School Teachers. Mr. Chen developed this paper for EDEL 725. Mr. Chen and Silverman presented a session on this topic for the 1992 Annual Conference of the Colorado Council of Teachers of Mathematics.
- 1991 Silverman and doctoral student Beverly J. Kochmann presented workshop entitled "Math for Fun" at Expanding Your Horizons conference at the University of Northern Colorado, Greeley, CO.
- 1991 Alexis Rekkas' manuscript on metacognition, which she developed in EDEL 725, has been published in Illinois Schools Journal.

- 1991 Nancy B. Robinson and Marie Doyle, students from EDEL 725, have had their paper on mathematics, language, and children's beliefs about mathematics has been published by the Colorado Council of the International Reading Association Journal.
- 1991 Nancy B. Robinson and Marie Doyle presented their work on mathematics, language, and children's beliefs about mathematics at the Annual Conference of the Colorado Council of Teachers of Mathematics, Fall 1991.
- 1990 Sue Bellin. What good are timed arithmetic fact tests? Principal 70 (November 1990). Ms. Bellin developed her paper as a student in EDEL 725.
- 1989 Karen Hicks presented her paper "Worldwide Eighth Grade Math Achievement through the Years" at the 2nd Annual Fall Conference of the Colorado North Central Association. Ms. Hicks developed the paper as a student in EDEL 725.
- 1989 Fredrick L. Silverman and Sharon A. Muehl's article on calculators and mathematics education appeared in Illinois Schools Journal. Article was developed while Muehl was a student in EDEL 621.

## TEACHING:

### Courses Taught:

2003-cont	Post-Baccalaureate Practicum	Post-Baccalaureate Program	UNC	Grad
1998, 2001	American Road Stories	Honors Program Arts & Sciences	UNC	Ugrad
1996-present	Integrated methods: Elementary School mathematics & Soc Studies	School for the Study of Teaching and Teacher Education (SSTTE, Dept of EI Ed)	UNC	Ugrad
2000		Eled Post-Bac Prog	UNC	Grad
1990-1995	Problem Solving in Elementary School Mathematics	EIEd. & Reading	UNC	Grad
1988	Math & Science Education in Middle Schools	EIEd. & Reading	UNC	Grad
1985-present	Seminar in Math Ed	EIEd. & Reading	UNC	Grad
1985-present	Special topics in Math Ed	EIEd. & Reading	UNC	Grad
1984-present	Rchd Applications Math EI School	EIEd. & Reading	UNC	Grad
1984-present	Practicum in Elementary Education	EIEd. & Reading	UNC	Grad
1984-1995	Effective Instruction in Elementary School Math	EIEd. & Reading	UNC	UGrad
1984-87, 2000	Supv. Student Teachers	EIED. & Reading	UNC	UGrad
1978-84	Intro. to Ed. Research	Education	LSUS	Grad

1983-84	Computers in Teaching	Education	LSUS	Grad
1978-84	Advanced Topics Mathematics Education	Education	LSUS	Grad
1978-84	M/M Sec. School Math	Education	LSUS	UGrad
1978-84	M/M El. School Math	Education	LSUS	UGrad
1978-84	Sup. Student Teachers	Education	LSUS	Ugrad
1980-82	Principles of Sec. Ed.	Education	LSUS	Grad
1978-82	M/M Sci. in Sec. School	Education	LSUS	UGrad
1975-77	College Algebra	Col. Of Tech.	U. Houston	UGrad
1975	Math Methods Sec. Sch.	C & I	U. Houston	UGrad
1975	Col. Schools Computing Science Material	C & I	U. Houston	Grad

**Courses Developed:**

2000	EDEL 520: Effective Instruction in Elementary School Mathematics, adapted from Integrated Methods II	Education	UNC Post Bac	
1998	Teaching for the Democratic Ideal	Education	UNC	Grad
1996-1997 2000-01 2006	American Road Stories Revised Revised, submitted proposal	Honors Program	UNC	Ugrad
1995-96	Integrated Methods II: Elem. School Mathematics & Social Studies	Education	UNC	Ugrad
1990	Problem Solving in Elem. School Mathematics	Education	UNC	Grad
1988-89	Effective Instruction in Elem. School Mathematics (with Science integration for NSF project)	Education	UNC	UGrad
1988	Practicum in Math Curriculum, Denver Children's Museum	Education Statewide Programs	UNC	Grad
1988	Mathematics/Science Education in Middle Schools	Education	UNC	Grad
1983	Computers in Teaching	Education	LSUS	Grad
1980	Principles of Elem. Ed.	Education	LSUS	Grad
1978	Intro. to Ed. Research	Education	LSUS	Grad

1978	Advanced Topics in Mathematics Education	Education	LSUS	Grad
1978	M/M Sec. Sch. Math.	Education	LSUS	UGrad
1978	M/M Sci. in Sec. School	Education	LSUS	UGrad

### **PROFESSIONAL DEVELOPMENT ACTIVITIES:**

#### Workshops, Clinics, Symposia, Conferences:

- 2007/2008 Population Connection Workshop Participant. Attended session at UNC with my students. Conducted by Carole Makela.
- 2008 Teaching with Primary Documents. Workshop conducted by Anne Bell and staff, June, 2008.
- 2008 InVivo Qualitative Research Workshop. Conducted by Kristi Jackson, Queri, Inc., June 2008.
- 2008 Quality Matters. Workshop for development of online courses. UNC CETL. Fall 2008.
- 2008 Blackboard Training Course. Led by Sasha Sidorkin, Spring 2008.
- 2003 - 2006 Participant in grant funded by State of Colorado for staff development of University faculty for incorporating ELL/ESL experiences into teacher education programs. Project included a study trip to Juarez, Mexico, and El Paso, TX, in September, 2005, collaboration to develop a pictorial display of our experiences, and initiation of a book about our research and learnings. Beth Franklin and Linda Button, Principal Investigators.
- 2003 Research on Mathematics Education in Rural Settings. James Schultz (Organizer). Research Pre-session, NCTM Annual Conference, April, 2003. San Antonio, TX.
- 2003 On Latinos and Mathematics: A View of the "Possible." Lena Licon Khisty (Organizer). Research Pre-session, NCTM Annual Conference, April, 2003. San Antonio, TX.
- 2003 Treating Lessons as Experiments: A Model for Improving Teaching and Teacher Education Programs. Jim Hiebert, et al. (Organizers). Research Pre-session, NCTM Annual Conference, April, 2003. San Antonio, TX.
- 2002 Grant Fellow for "Preparing Tomorrow's Teachers to Use Technology" (PT3)
- 2002 NCATE Workshop sponsored by College of Education. Erskine Dottin, facilitator. August, 2002.
- 2001 "Blackboard" Workshop. "Blackboard" is a course management system for on-line courses and course supplements. UNC Center for Professional Development. August, 2001.
- 2001 "Where Does CSAP Come From? Whose Test Is It?" and "Using CSAP Grade 10 Math Results in Professional Development Activities." CDE personnel (including Glenn Bruckhart) and others. Two sessions in the CSAP strand at the Annual Meeting of the Colorado Council of Teachers of Mathematics. September 28 – 29. Denver, CO.
- 2000 Administrators Mini-conference on Assessment. Annual Meeting of Colorado Council of Teachers of Mathematics. October, 2000.
- 2000 Workshop on "Developing and Implementing Teacher Work Sample." Presented by Dr. Mary Reynolds. Western Oregon State University, at University of Northern Colorado. December, 2000.
- 1999 Annual Conference of National Council of Teachers of Mathematics. Participant in information and feedback session on Principles and Standards, a new document scheduled for release in April, 2000.

- 1998 National Council of supervisors of Mathematics (NCSM) Leadership Conference: Mindsets. Denver, CO, February, 1998.
- 1997 Cognitive Coaching Workshop sponsored by Weld County School District 6. January-May, 1997.
- 1994- present Attendee, facilitator, or presenter at the Annual Mathematics and Science Methods Conference of Colorado, Breckenridge, CO, Fall, each year.
- 1996 Conference within a Conference: Australian Mathematics Education. Full-day workshop. 74th Annual Meeting of National Council of Teachers of Mathematics
- 1995 Attended Assessment Conference of American Association of Higher Education, July 1995. Participated in Alverno Project Program.
- 1994 Local working group for review and recommendations on the draft of Assessment Standards for School Mathematics, National Council of Teachers of Mathematics, 1993. Convened by William A. Juraschek at Colorado University-Denver.
- 1992 Making Algebra Child's Play: A Hands-On Equations Workshop. Henry Borenson, presenter. Denver, CO.
- 1992 Grow Lab Workshop on integration of science, mathematics, and other curriculum areas. Presented by the National Gardening Association through a grant from the National Science Foundation. Denver Botanical Gardens, Denver, CO.
- 1991 Sci-Math Workshop on integration of mathematics and science. Presented under the auspices of the Colorado Facilitator of the National Diffusion Network. Denver, CO.
- 1991 Summer 1991 Enhancement Network seminar series on alternative assessment, incorporation of technology, equity and cultural diversity, and curriculum integration through funding from the National Science Foundation. University of Northern Colorado, Greeley, CO.
- 1991 Writing Across the Curriculum. Presented by Professor Toby Fulwiler. University of Northern Colorado, Greeley, CO.
- 1990 Writing in the Math Class (3-8). Presented by Marilyn Burns Education Associates. Colorado, Springs, CO
- 1989 Supernet/Bitnet Training. Presented by UNC to enable faculty and staff to use networking to communicate with personnel at distant institutions and locally via information transfer equipment.
- 1988 University of Chicago School Mathematics Project (UCSMP) Users Conference. Presented at the University of Chicago and featuring Zalman Usiskin, Max Bell, Paul Sally, and Izaak Wirzup. Two day conference reviewed accomplishments of the UCSMP in areas of US mathematics curriculum reform and analysis of international school mathematics materials and achievement.
- 1988 Consultations with mathematics and science educators at Queensland University, Brisbane, Australia, and participation in mathematics and language sessions at the 12th World Congress on Reading, Gold Coast, Queensland, Australia.
- 1988 FAMILY MATH 12 hour in-service professional development program sponsored and conducted by Colorado Department of Education and the EQUALS program of Lawrence Hall of Science, University of California, Berkeley. Denver, CO, March, 1988
- 1988 The Math Solution full day seminar for mathematics supervisors. Presented by Marilyn Burns Education Associates. Greeley, CO, January 1988

- 1988 Toward a Scientific Practice of Science Education. By "invitation only". Seminar series sponsored and conducted by Lawrence Hall of Science, University of California at Berkeley. Berkeley, CA, January 1988
- 1987 With William Popejoy and Shirley Warden, "Computers in Mathematics Classrooms," National Council of Teachers of Mathematics and the National Science Foundation by competitive selection, July/August, 1987.
- 1987 "Thinking Skills: A Phi Delta Kappa Educational Foundation Workshop," January, 1987, presented by Dr. Robert Marzano, Director of Research at the Mid-Continent Regional Educational Laboratory, 59th Annual Winter Conference, University of Northern Colorado, Greeley, CO
- 1986 Symposium on Aerospace Education, Martin Marietta Co. & Colorado Education Advisory Council on Aviation and Space, Denver, CO
- 1986 Time Management and Distress Control, Phi Delta Kappa, UNC Winter Conference, Greeley, CO
- 1985 Workshop on Language Arts and Mathematics, National Council of Teachers of Mathematics, Regional Conference, Milwaukee, WI
- 1984 Career Education Leadership Institute, Educators in Industry Program, General Electric Foundation & Ohio Univ., Athens, OH.
- 1984 Improvement of College Teaching, Prof. Development Center of Baylor University, AAUP of LSUS, Shreveport, LA
- 1983 Computers and Technology in Mathematics Education, National Council of Teachers of Mathematics, Seminar Series, Dallas, TX
- 1982 Instructional Strategies for College Teachers, AAUP of LSUS, Shreveport, LA

### HONORS AND AWARDS:

- |      |   |  |
|------|---|--|
| 2006 | Nominee for Lucille Harrison Award  | UNC  |
| 2006 | Listed in <i>Empire Who's Who Among Executives and Professionals in Education</i> | A vanity press   |
| 2004 | Outstanding Service Provider  | College of Education, UNC                                |
| 2003 | Outstanding Teacher Award nominee<br>Outstanding Service Provider Award Nominee   | College of Education, UNC<br>College of Education, UNC   |
| 2002 | Banner Bearer, College of Education   | Carried college standard at Fall Commencement            |
| 2002 | Outstanding Service Provider nominee  | College of Education, UNC                                |
| 2002 | Outstanding Teacher Award nominee   | College of Education, UNC                                |
| 2001 | Outstanding Teacher Award nominee   | College of Education, UNC                                |
| 2001 | Outstanding Service Provider nominee  | College of Education, UNC                                |
| 2001 | Listed in <u>2000 Outstanding Scholars</u> of the 21st Century.                   | International Biographical Center. Cambridge, England.   |
| 2000 | Outstanding Teacher Award.  | College of Education, University of Northern Colorado    |
| 2000 | Mortar Board Award for Superiority in Teaching and Advancement of Students        | University of Northern Colorado Chapter of Mortar Board. |

1999	Banner Bearer, College of Education	Carried college standard at Fall Commencement
1998-2000	NCTM Year 2000 Annual Conference Program Committee	National Council of Teachers of Mathematics. Council Committee, by invitation.
1997	Federman Teacher Workshop on Holocaust Education	United States Holocaust Memorial Museum, Washington, DC Competitive selection based on Proposal.
1996	<u>Men of Achievement</u>	International Biographical Center, Cambridge, England.
1996	<u>Who's Who in America, Who's Who in the West, Who's Who in Science and Engineering</u>	Marquis, New Jersey
1992	Achievement Award	University of Northern Colo.
1992	College Outstanding Service Provider	College of Education, UNC
1990-92	<u>Who's Who in American Education, 1989-1990, 1991-1993, and 1992-1993 Editions</u>	The National Reference Institute, Washington, D.C.
1989	Outstanding Teacher Award	College of Education, UNC
1989	Nominee for Professor of the Year Award Council	Univ. of Northern Colorado Student Representative
1988	Achievement Award	Univ. of Northern Colorado
1988	Nominee as Outstanding Member of UNC Faculty	Alpha Omicron Chpt. Pi Lambda Theta
1988	Prize for best research/essay article (shared with co-author John W. McBride)	National Science Teachers Assoc. <u>Science and Children</u> , 1987-1988
1985	"Scholar of the University"	Univ. of Northern Colorado
1984	Outstanding Faculty Award	LSU in Shreveport
1982	<u>Personalities Of The South</u>	American Biographical Institute
1981	Outstanding Young Men of America	U.S. Junior Chamber of Commerce
1974-78	Graduate Assistantship	University of Houston
1968-70	Tuition Scholarship Award	University of Chicago
1968	Phi Beta Kappa	Southern Methodist University
1968	USAF ROTC Presidential Award	Daughters of the American Revolution

1968	<u>Who's Who in American Colleges &amp; Universities</u>	Southern Methodist University
1968	Avilla Winn Hay Award	Southern Methodist University
1968	Blue Key	Southern Methodist University
1967	Hyman I. Jacobson, National Scholastic Award	Sigma Alpha Mu Fraternity