# *Scott W. Slough*

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[Experience](#Experience), [Education](#Education), [Publications](#Publications), [Presentations](#Presentations), [Grants](#Grants), [Courses Taught](#Courses)

## *JOB EXPERIENCE*

**ASSOCIATE PROFESSOR OF SCIENCE EDUCATION AND**

**OCEAN DRILLING AND SUSTAINABLE EARTH SCIENCE (ODASES) SCIENCE EDUCATION SPECIALIST**

Texas A&M University, College Station, TX 77843 August 2005 to present.

Responsibilities include teaching undergraduate and graduate-level science education courses in the Department of Teaching, Learning and Culture, science education specialist with the ODASES (Ocean Drilling and Sustainable Earth Science) program, and research in science education. Additional duties include education and outreach with the Joint Oceanographic Institutes (JOI) Alliance in furtherance of the ODASES mission, including the School of Rock Expeditions.

**ASSSISTANT/ASSOCIATE PROFESSOR OF CHEMISTRY AND**

**DIRECTOR OF THE SCIENCE LEARNING CENTER**

University of Houston-Downtown. Houston, TX 77002 July 2000 to August 2005.

Responsibilities included teaching NS 3310 - Physical Science Studies, a course dedicated to pre-service elementary and middle grades teachers; CHEM 3320 – Environmental Chemistry; NS 6321 – Selected Topics in Physical Science; teaching a variety of freshman level chemistry courses, coordinating science education, Director of the Science Learning Center, and Co-Director of the UHD Urban Center for Student Success in Science, Technology, Engineering, and Mathematics (UCSS/STEM).

**ASSISTANT PROFESSOR OF EARLY CHILDHOOD EDUCATION AND READING**

Georgia Southern University. Statesboro, GA. August 1998 to July 2000.

Responsibilities included teaching science education courses at the undergraduate and graduate levels, teaching undergraduate math education courses, supervision of field-based programs, and teaching of various courses that support the early childhood major at the undergraduate level. Additional duties included participation in Project Sense, a 10-year project for training elementary teachers in hands-on, minds-on science instruction at the P-8 grade levels and working with doctoral students in the Ed.D. Curriculum Studies Program.

### LECTURER OF CHEMISTRY

Sam Houston State University. Huntsville, Texas. June 1993 to August 1998.

Responsibilities included teaching both the science majors and non-science majors freshman sequence and supervising the freshman non-science major laboratory instructors. Additional duties include environmental education specialist with Texas Regional Institute for Environmental Studies (TRIES).

### SCIENCE TEACHER

Humble Independent School District. Humble, Texas. 1992 to 1993.

### SCIENCE TEACHER

Cleveland Independent School District. Cleveland, Texas. 1989 to 1992.

## *Education*

Ed.D. IN SCIENCE EDUCATION

University of Houston. Houston, Texas, 1998. Dr. John M. Ramsey advisor.

DISSERTATION TITLE: *HIGH SCHOOL SCIENCE TEACHERS' PERCEPTIONS OF TELECOMMUNICATIONS UTILIZING A CONCERNS-BASED ADOPTION MODEL (CBAM)*

MASTER OF SCIENCE IN CHEMISTRY,

Sam Houston State University. Huntsville, Texas, 1994

MASTER OF EDUCATION,

Sam Houston State University, Huntsville, Texas, 1992.

TEACHER'S CERTIFICATION with a Science Composite,

Sam Houston State University. Huntsville, Texas. 1989.

BACHELOR OF SCIENCE FORESTRY with a major in Forest Management and a minor in Wood Utilization.

Stephen F. Austin State University. Nacogdoches, Texas. 1982.

## Scholarly Activities

***Books and Edited Special Issues of Journals***

Capraro, R. M. & **Slough, S. W.** (Eds.) (2008). *Project-Based Learning: An integrated Science, Technology, Engineering, and Technology (STEM) approach.* Rotterdam, Netherlands: SENSE Publishing.

**Slough, S. W.** & McTigue, E. M. (Eds.) (In Press). Special issue on science and reading in *Reading Psychology.*

***Book Chapters***

**Slough, S. W.,** & Milam, J.\* (2008). Theoretical framework for Project-Based Learning (PBL). In R. M. Capraro and S. W. Slough (Eds.) *Project-Based Learning: An integrated Science, Technology, Engineering, and Technology (STEM) approach.* Rotterdam, Netherlands: SENSE Publishing.

Capraro, R. M. & **Slough, S. W.** (2008). Why PBL? Why STEM? Why now? An introduction to Project-Based Learning: An integrated Science, Technology, Engineering, and Technology (STEM) Approach. In R. M. Capraro and S. W. Slough (Eds.) *Project-Based Learning: An integrated Science, Technology, Engineering, and Technology (STEM) approach.* Rotterdam, Netherlands: SENSE Publishing.

Morgan, J. & **Slough, S. W.** (2008). Classroom management considerations: Implementing STEM PBL. In R. M. Capraro and S. W. Slough (Eds.) *Project-Based Learning: An integrated Science, Technology, Engineering, and Technology (STEM) approach.* Rotterdam, Netherlands: SENSE Publishing.

St. John, K., Leckie, M., **Slough, S. W.**, Peart, L., & Niemtiz, M. (Accepted). Field geoscience education – The pilot school of rock program at sea for pre-college teachers and informal educators. In S. Whitmeyer and D. Mogk (Eds.) *Field geology education: Historical perspective and modern approaches.* Geological Society of America.

**Slough, S. W.,** & Chamblee, G. E. (Accepted). Math and science teachers’ concerns with graphing calculators. In Yamamoto, J (Ed.) *Technology leadership in education: Integrated solutions.* Hershey, PA: IGI Global.

***Peer Reviewed Journals***

Bryan, J. & **Slough, S. W.** (Accepted). Converging lens simulation design and image predictions. *Physics Education*

**Slough, S. W.** & Rupley, W. H. (Accepted). Insertion of Informational Narrative Text into Science Learning Progressions: A Natural Integration. *School Science and Mathematics Journal.*

Rupley, W. H., & **Slough, S. W.** (Accepted). Building prior knowledge and vocabulary in science. *Literacy Research and Instruction*.

McTigue, E. M. & **Slough, S. W.** (In Press 2009). Student-accessible science texts: Elements of design. *Reading Psychology*.

**Slough, S. W.,** McTigue, E. M., Kim, S.\*, & Jennings, S.\* (In Press 2009). Science textbooks’ use of representation: A descriptive analysis of four sixth grade science texts. *Reading Psychology*.

Niemitz, M., **Slough, S**., Peart, L., Klaus, A., St. John, K., & Leckie, M. (2008). Interactive virtual expeditions as a learning tool: The School of Rock expedition case study. *Journal of Educational Multimedia and Hypermedia, 17*(4), 561-580. [acceptance rate 10% - 19%]

Chamblee, G. E., & **Slough, Scott W.**, & Wunsch, G.(2008). Measuring mathematics and science teachers' perceptions of technology and change: A yearlong study. *Journal of Computers in Mathematics and Science Teaching, 27*(2), 183-194. [acceptance rate 10% - 19%]

**Slough, S. W.,** & Chamblee, G. E. (2007). Technology as an innovation in science and mathematics teaching. *School Science and Mathematics Journal, 107*(6), 222-224.

Leckie, R. M., St. John, K., Peart, L., Klaus, A., **Slough, S**., and Niemitz, M. (2006). Education and science connect at sea. *EOS Transactions*, AGU, Volume 87, Issue 24, p. 240-241.

Chamblee, G. E., & **Slough, S. W.** (2002). Implementing technology in secondary science and mathematics classrooms: Is the implementation process the same for both disciplines. *Journal of Computers in Mathematics and Science Teaching 21*(1), 3-15*.* [acceptance rate 10% - 19%]

**Slough, S. W.**, & McGrew-Zoubi (1996). Getting reluctant teachers published on the World Wide Web: An empowerment strategy. *Journal of Technology and Teacher Education*. *4*(3/4), 215-229. [acceptance rate 10% - 19%]

***Peer Reviewed Conference Articles***

Conference papers in technology education are important in their own right due to the rigorous peer-review of the entire paper prior to publication, often with low acceptance rates, and the timeliness associated with shorter publication schedules.

Hoge, B. L., **Slough, S. W.**, Spears, L., & Aoki, J. (2008). Building a dynamic resource gateway on the web: The HUNSTEM learning community. In McFerrin, Weber, R., Carlsen, R., & Willis, D. A. (Eds.), Society for Technology and Teacher Education Annual 2008 (pp. 4706-4713). Chesapeake, VA: AACE. [acceptance rate < 15% for full papers]

Prouhet, T.,\* & **Slough, S. W.** (2007). Facilitating scientific discovery through Google Earth and ocean cores. Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2006 (pp. 3973-3982). Chesapeake, VA: AACE. [acceptance rate < 15% for full papers]

Bryan, J. A., **Slough, S. W.,** & Milam, J.\* (2007). The design of a converging lens computer simulation and its effect on image predictions. Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2006 (pp. 3232-3236). Chesapeake, VA: AACE. [acceptance rate < 30% for brief papers]

**Slough, S. W.**, & Chamblee, G. (2007). Looking beyond short-term implementation and low-level concerns: Assessing the full impact of the Concerns-Based Adoption Model (CBAM). In C. Crawford et al. (Eds.), Society for Technology and Teacher Education Annual 2007 (pp. 952-957). Chesapeake, VA: AACE. [acceptance rate < 15% for full papers]

**Slough, S.** **W**., & Connell, M. (2006). Defining technogogy and its natural corollary, Technogogical Content Knowledge (TCK). In C. Crawford et al. (Eds.), Society for Technology and Teacher Education Annual 2006 (pp. 1053-1059). Chesapeake, VA: AACE. [acceptance rate < 15% for full papers]

Niemitz, M., **Slough, S**., Peart, L., Klaus, A., St. John, K. & Leckie, M. (2006). Ship-to-shore educational communications and interactivity via the World Wide Web: The School of Rock expedition case study. In P. Kommers & G. Richards (Eds.), Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2006 (pp. 191-198). Chesapeake, VA: AACE. [acceptance rate < 15% for full papers]

Connell, M. L., & **Slough, S. W.** (2005). Technology’s promise for science and mathematics learning. In Willis, D., Price, J. D., & Willis J. (Eds.) Society for *Technology and Teacher Education Annual 2005* (pp. 1910-1917)*.* Charlottesville, VA: Association for the Advancement of Computing in Education. [acceptance rate < 15% for full papers]

**Slough, S. W.,** & Chamblee, G. E. (2005). Assessing the impact of integrating technology in the curriculum: A synthesis of the Concerns-Based Adoption Model approach. Willis, D., Price, J. D., & Willis J. (Eds.) Society for *Technology and Teacher Education Annual 2005* (pp. 1033-1038)*.* Charlottesville, VA: Association for the Advancement of Computing in Education. [acceptance rate < 15% for full papers]

**Slough, S. W.**, Aoki, J., Hoge, B., & Spears, L. (2004). Development of an E-learning framework for web-based, Project-Based Learning in science. In G. Richard (Ed.) *World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2004.* (pp. 957-962). Association for the Advancement of Computing in Education, Charlottesville, VA. [acceptance rate < 15% for full papers]

Chamblee, G. E., & **Slough, Scott W.** (2004). Using the Concerns-Based Adoption Model to assess changes in technology implementation: A ten-year retrospective. In R. Ferdig and C. Crawford (Eds.). Society for *Technology and Teacher Education Annual, 20004* (pp. 864-871). Association for the Advancement of Computing in Education, Charlottesville, VA. [acceptance rate < 15% for full papers]

Chen, I., **Slough, S. W.,** & Garza, R. (2004). Web-based visualization tools as mindtools for science educators. In R. Ferdig and C. Crawford (Eds.). Society for *Technology and Teacher Education Annual, 20004* (pp. 4631-4636). Association for the Advancement of Computing in Education, Charlottesville, VA. [acceptance rate < 15% for full papers]

**Slough, S. W.,** Chamblee, G. E., & Wunsch, G. (2003). Reflections on a two-week technology immersion workshop as part of a yearlong professional development program. In C. Crawford, N. Davis, J. Price, R. Weber, and D. Willis (Eds.). Society for *Technology and Teacher Education Annual, 2003* (pp. 3073-3076)*.* Association for the Advancement of Computing in Education, Charlottesville, VA. [acceptance rate < 30% for brief papers]

Chamblee, G. E., **Slough, S. W.,** and Wunsch, G. (2003). Measuring mathematics and science teachers' perceptions of technology and change: A yearlong study. In C. Crawford, N. Davis, J. Price, R. Weber, and D. Willis (Eds.). Society for *Technology and Teacher Education Annual, 2003* (pp. 2873-2876). Association for the Advancement of Computing in Education, Charlottesville, VA. [acceptance rate < 30% for brief papers]

**Slough, S. W.,** & Chamblee, G. E. (2002). Science and mathematics teacher’s perceptions of graphing calculators and change. In D. Willis, J. Price, and N. Davis (Eds.). Information T*echnology and Teacher Education Annual, 2002* (pp. 2139 – 2143). Association for the Advancement of Computing in Education, Charlottesville, VA. [acceptance rate < 15% for full papers]

**Slough, S. W.,** & Chamblee, G. E. (2002). Graphing calculators and algebra I, algebra II, IPC, and chemistry teachers' perceptions of change.In D. Willis, J. Price, and N. Davis (Eds.). Information T*echnology and Teacher Education Annual, 2002* (pp. 1066 – 1070). Association for the Advancement of Computing in Education, Charlottesville, VA. [acceptance rate < 30% for brief papers]

**Slough, S.W.,** Chamblee, G. E. & Aull, J.\* (2001). Integrating mathematics, science, and technology education goals: An interdisciplinary approach. In J. Price, D. Willis, N. Davis, and J. Willis (Eds.) Information T*echnology and Teacher Education Annual, 2001* (pp. 2541 – 2546). Association for the Advancement of Computing in Education, Charlottesville, VA. [acceptance rate < 15% for full papers]

**Slough, S. W.,** & Chamblee, G. E. (2000). Grades 4 and 5 teachers' perceptions of technology implementation in mathematics instruction. In R. Robson (Ed.) *Mathematics/Science Education and Technology Annual, 2000* (pp. 363-368). Association for the Advancement of Computing in Education, Charlottesville, VA. [acceptance rate < 30% for brief papers]

**Slough, S. W.,** & Chamblee, G. E. (2000). Implementing technology in secondary science and mathematics classrooms: A perspective on change. In D. A. Willis, J. D. Willis, and J. Willis (Eds.) *Information Technology and Teacher Education Annual, 2000* (pp. 1021 – 1026). Association for the Advancement of Computing in Education, Charlottesville, VA. [acceptance rate < 15% for full papers]

**Slough, S. W**. (1999). High school science teachers’ perceptions of barriers and supporting conditions to telecommunications implementation. In D. A. Thomas (Ed.) *Mathematics/Science Education and Technology Annual, 1999* (pp. 526-530). [acceptance rate < 30% for brief papers]Association for the Advancement of Computing in Education, Charlottesville, VA.

**Slough, S. W.** (1999). Some concerns about the Concerns-Based Adoption Model (CBAM) and technology*.* In J. D. Price, J. Willis, D. A. Willis, M. Jost, and S. Boger-Mehall (Eds.) *Technology and Teacher Education Annual, 1999* (pp. 1949-1953). Association for the Advancement of Computing in Education, Charlottesville, VA. [acceptance rate < 30% for brief papers]

Chamblee, G. E., Sliva, J., **Slough S. W.,** & Louden, C. (1999). Implementing technology in secondary mathematics and science classrooms: Do we have common goals? Barriers? Models for change? In D. A. Thomas (Ed.) *Mathematics/Science Education and Technology Annual, 1999* (pp. 396-399). Association for the Advancement of Computing in Education, Charlottesville, VA. [acceptance rate < 30% for brief papers]

**Slough, S. W.** & McGrew-Zoubi (1996). Authoring on the World Wide Web: getting reluctant preservice teachers involved. *Technology and Teacher Education Annual,* 1996 (pp. 719 – 722). Association for the Advancement of Computing in Education, Charlottesville, VA. [acceptance rate < 15% for full papers]

\*Graduate student co-author

***Other Peer-Reviewed Formats***

**Slough, S. W.** (1999). A description of telecommunications use in the high school science classroom. In D. A. Thomas (Ed.) *Mathematics/Science Education and Technology Annual, 1999* (p. 438). Association for the Advancement of Computing in Education, Charlottesville, VA.

**Slough, S. W.** (1996). *Area under constructivism: A pilot study using a World Wide Web home page to assess professional development.* A paper presented at the 1996 National Association for Research in Science Teaching Annual Meeting, St. Louis, MO (ERIC Document Reproduction Service No. ED396 919).

**Slough, S. W.** (1995). Authoring on the World Wide Web: Getting students involved. *Across-the-University Writing Program,* Vol. 13 pgs. 5-6, Sam Houston State University, Huntsville, TX.

***Abstracts Published at Scientific Meetings***

Cantrell, K\*\*., Leija, L. D.\*\*, Henderson, J. D\*\*, Vazquez, J. F.\*\*, Johnson, K. & **Slough, S. W**. (2007, April). Dissolved Metal Abundances in Bayou Waters from Harris County Texas: A possible monitor of subsidence in the Houston-Galveston area. *Geological Society of America, Abstracts with Programs*, v.39, no.3, p.58-59.

Smith, R. L. and **Slough, S. W**. (2006, December), Secrets of the Sediments: Using real data to explore Earth’s histories in the 5-12 classroom, *Eos Trans.* *AGU, 87*(52), Fall Meet. Suppl.,Abstract ED41A-08.

Peart, L., Niemitz, M., Klaus, A., Leckie, M., Houpt, D., Hamlin, B., Crowder, L., Firth, J., Peng, C. & **Slough, S.** (2005, December). School of Rock: An ocean-going, hands-on research expedition for earth and ocean science teachers. *Eos Trans. AGU, 86*(52), Fall Meet. Suppl., Abstract ED23A-1242.

Hoge, B.; **Slough, S**., Aoki, J. and Spears, L., (2004, December) The Development of Sustainable Educational Networks Through Web-Based Project-Based Science Curricula: How HUNSTEM Will Accomplish the Possible. *Eos Trans. AGU, 85*(47), Fall Meet. Suppl., Abstract ED13F-07.

**Slough, Scott W.** (1996, March). Am I being Graded on This? Getting Reluctant Students Electronically Connected. *Abstracts of Papers of the American Chemical Society 211*: 38-CHED.

 \*\*Undergraduate student co-author

***Select Academic Presentations***

**Slough, S. W.**, Brown, I. A.\*, Hollas, T.\*, Knibbe, S. D.\*, Lipsett, T.\*, & Wilson, R.\* (2008, November). *How formal does an activity have to be to be informal science education?* A paper presented at the SW-ASTE Meeting, Irving, TX

Knibbe, S. D.\* & **Slough, S. W.** (2008, November). *Formal educators, professional development, and informal science education.* A paper presented at the SW-ASTE Meeting, Irving, TX

Brown, I. A.\* & **Slough, S. W.** (2008, November). *Informal science education: The integration of science applications in mathematics education*. A paper presented at the SW-ASTE Meeting, Irving, TX

 Lipsett, T.\* & **Slough, S. W.** (2008, November). *Informal science: Pumpkins come from Walmart* . A paper presented at the SW-ASTE Meeting, Irving, TX.

**Slough, S. W.** & Milam, J. O.\* (2008, January). *Exploring the levels of complexity within Problem-Based Learning: Implications for teaching and learning*. A paper presented at the Association for Science Teacher Education Conference 2008, St. Louis, MO.

Peart, L. W., **Slough, S. W.**, & Buckholtz, C. (2008, June). *Using multi-media technologies to collect meaningful data for gauging the effectiveness and impact of science education outreach.* A paper presented at the 2008 American Society of Limnology and Oceanography (ASLO) Summer Meeting, St. John’s, Newfoundland and Labrador, CA.

**Slough, S. W.**, & Milam, J. O.\* (2008, June). *Using video-editing software to asses [conceptual] change in pre-service teachers’ identities.* A paper presented at the 2008 American Society of Limnology and Oceanography (ASLO) Summer Meeting, St. John’s, Newfoundland and Labrador, CA.

Milam, J. O.\* & **Slough, S. W.** (2007, October). *Defending the mythology of open inquiry: A novel conceptual framework*. A paper presented at the SouthWest-Association of Science Teacher Education Conference 2007, Ft. Worth, Texas.

Bryan, J. A., **Slough, S. W.,** & Milam, J.\* (2007, April). *The design of a converging lens computer simulation and its effect on image predictions*. A poster presented at the National Association of Research in Science Teaching International Conference 2007, New Orleans, LA.

**Slough, S. W.** (2007, January). *Technogogical Content Knowledge (TCK) as a theoretical framework*. A paper presented at the Association of Science Teacher Education International Conference 2007, Clearwater, FL.

**Slough, S. W.** (2006, October). *Defining technogogy and its natural corollary, Technogogical Content Knowledge (TCK).* A paper presented at the SouthWest-Association of Science Teacher Education Conference 2006, Wichita, Kansas.

**Slough, S. W.** (2006, January). *Actions on Objects: A metaphor for teaching and learning in science.* A paper presented at the Association of Science Teacher Education International Conference 2006, Portland, OR.

**Slough, S. W**., Aoki, J., & Hoge, B. (2004, October). *Integrating visual technologies, constructivistic pedagogy, informal science education, and web-based PBL: Toward a theoretical framework*. A paper presented at the Southwest Regional Association for the Education of Teachers of Science (SW-AETS) 2004 Annual Conference, Georgetown, TX.

Haddock, D.\*\* & **Slough, S. W.** (2004, March). *Agricultural, mima mound, and forest soil analysis from sheldon lake state park*. A poster presented at the Texas Academy of Science Annual Meeting, Kerrville, TX.

**Slough, S. W.;** Lyons, P.; Morano, L.; Gulati, P.; McCullough, D. and Mouchaty, S. (2004, March). *Investigating Timelines as a Measure Of Academic Engagement: An Initial Explanation for Student Success in the UHD Scholars Academy.* A poster presented at the Texas Academy of Science Annual Meeting, Kerrville, TX.

Haddock, D.\*\* & **Slough, S. W.** (2003, March). *Metal Analysis of Field, Mima Mound, and Forest Soil Samples Collected at Sheldon Lake State Park.* A poster presented at the 3rd Annual Student Research Conference, University of Houston-Downtown. Houston, TX.

**Slough, S. W.** & Wunsch, G. (2003, April). *Hand-held Technology, Mathematics, Science, and Inquiry*. A paper presented at the 2003 Western Area Convention for the National Science Teachers Association National Convention, Reno, NV.

**Slough, S. W.** (2003, October). *Measuring Mathematics and Science Teachers' Perceptions of Technology and Change – An Interactive Poster.* A poster presented at the 2003 SW-AETS Meeting. Fort Worth, TX.

Griffard, Phyllis B.; **Slough, Scott W**.; Morris-Smith, Penny; & Spears, Larry (2002, April). *Standards-based Science Content Courses for Pre-service Elementary Teachers: A progress report.* A paper presented at the 2002 National Science Teacher's Association National Convention, San Diego, CA.

**Slough, Scott W.** (1999, October). *Project Sense (Science Education Network for the Southeast): An Effective 10-Year Collaborative.* A paper presented at the 1999 Southeastern Association for the Education of the Teachers in Science, Athens, GA.

Kent, Sophia, **Slough, Scott W.** & Ashley, Ruby (1999, March). *Making SENSE of Science.* Georgia Science Teachers Association, Atlanta, GA.

Slough, Scott W. & Kent, Sophia (1999, March). *Project SENSE: An Introduction to a Hands-on Math and Science Workshop.* Georgia Science Teachers Association, Atlanta, GA.

**Slough, Scott W.** & Ramsey, John M. (1999, March). *High School Science Teachers Perceptions of Barriers and Supporting Conditions to Telecommunications Implementation*. A paper presented at the 1999 National Association for Research in Science Teaching Annual Meeting, Boston, MA.

**Slough, Scott W.** (1998, March). *Who Uses Telecommunications in High School Science? A Qualitative Study* A paper presented at the Society for Information Technology & Teacher Education 9th International Conference (SITE 98), Washington, DC USA.

**Slough, Scott W.** & Slough, Pamela K. (1997, March). *Content, Concepts, and Algorithms in High School Chemistry.* A paper presented at the Texas Academy of Science Annual Meeting, Huntsville, TX.

**Slough, Scott W.,** McGrew-Zoubi, Robin, and St. Pierre-Hirtle, Jeannine (1997, March). *Development of a Framework for the Evaluation of Children's Literature in the Teaching of Science.* A paper presented at the 1997 National Association for Research in Science Teaching Annual Meeting, Oak Brook, IL.

**Slough, Scott W.,** Fleming, S., & Chiappetta, E. L. (1996, October). *Conceptual Chemistry: A High School Chemistry Curriculum Development Proposal.* A paper presented at the 1996 Southwest Regional American Chemical Society Conference, Houston, TX.

**Slough, Scott W.,** & McGrew-Zoubi, Robin (1996, October). *SamCATS: Teachers Teaching Teachers* A paper presented at the 1996 Conference for the Advancement of Science Teaching, Austin, TX.

**Slough, Scott W.** (1996, October). *Is There Really $750,000,000 for Technology Integration in Science Education in Texas? A Technology Plan for Science* A paper presented at the 1996 Conference for the Advancement of Science Teaching, Austin, TX.

**Slough, Scott W**. (1995, October). *What Research Says to the Chemistry Teacher.* Paper presented at Conference for the Advancement of Science Teaching, Corpus Christi, TX.

**Slough, Scott W.** (1995, November). *Generating a World Wide Web Home Page.* Workshop presented at Chemical Education Conference, Fayetteville, AR.

**Slough, Scott W.** (1995, November). *Authoring on the World Wide Web: Getting Students Involved*. Poster session presented at Chemical Education Conference, Fayetteville, AR.

**Slough, Scott W.** (1995, March). *Which Came First -- The Concept or the Math?* Paper presented at National Science Teachers Association National Convention, Philadelphia, PA.

**Slough, Scott W.** (1995, October). *Concrete Learners in the Abstract World of Chemistry.* Paper presented at the 41st Annual Conference for the Advancement of Science Teaching, Beaumont, TX.

**Slough, Scott W.,** Chiappetta, Eugene, L., & Ramsey, John M. (1994, October). *Clarification of the Constructivist's and Traditionalist's Views of Learning Science: Implications for Reform.* Paper presented at the 41st Annual Conference for the Advancement of Science Teaching, Beaumont, TX.

\*Graduate student co-author

\*\*Undergraduate student co-author

***Curriculum and Training Documents and Other Scholarly Products***

**Slough, S. W.** & Capraro, R. M. (2008). Non-Newtonian fluid mechanics STEM PBL. In R. M. Capraro and S. W. Slough (Eds.) *Project-Based Learning: An integrated Science, Technology, Engineering, and Technology (STEM) approach.* Rotterdam, Netherlands: SENSE Publishing.

**Slough, S. W.** & Capraro, R. M. (2008). Overview of the design of STEM PBLs In R. M. Capraro and S. W. Slough (Eds.) *Project-Based Learning: An integrated Science, Technology, Engineering, and Technology (STEM) approach.* Rotterdam, Netherlands: SENSE Publishing.

**Slough, S. W.** (2008). Exponential growth: A PBL on designing STEM PBL. In R. M. Capraro and S. W. Slough (Eds.) *Project-Based Learning: An integrated Science, Technology, Engineering, and Technology (STEM) approach.* Rotterdam, Netherlands: SENSE Publishing.

**Slough, S. W.** (2005). *UH-D Houston START Integrated Chemistry and Algebra Teacher Workshop.* Department of Natural Science, University of Houston-Downtown, Houston, TX. [87 pages].

**Slough, S. W.,** Nakamura, M., & Coleman, K. (2004). *UH-D CHEM START Summer Camp: Integrated Chemistry and Algebra II/Geometry for students entering the 10th/11th grade.* Department of Natural Science, University of Houston-Downtown, Houston, TX. [72 pages].

Aoki, J., Nakamura, M., & **Slough, S. W.** (2003). *UH-D BIO- START Summer Camp: Integrated Biology and Algebra I for students entering the 9th/10th grade.* Department of Natural Science, University of Houston-Downtown, Houston, TX. [60 pages].

Ashley, R. A., Kent, S., & **Slough, S. W.** (1999). Project SENSE (Science Education Network for the Southeast) Annual Report. Submitted to Ed Davis, University of Georgia. July 15, 1999.

**Slough, S. W.** & Chamblee, G. E. (1999). Making Connections - An Investigation of Grades 4 and 5 Teachers' Perceptions of Technology Implementation in Mathematics Instruction. Submitted to Arnie Cooper, Dean COE, Georgia Southern University, May 1, 1999.

**Slough, S. W.** (1998). Science With Sam Final Report. Submitted to GTE Foundation. November 2, 1998.

**Slough, S. W.** (1998). *The elementary teacher’s companion to Chemistry 135.* Department of Chemistry, Sam Houston State University, Huntsville, TX. [42 pages, sold in-house to fund student scholarships]

**Slough, S. W.** (1998). *The elementary teacher’s companion to Chemistry 115.* Department of Chemistry, Sam Houston State University, Huntsville, TX. [ 24 pages, sold in-house to fund student scholarships]

McGrew-Zoubi, R. R. & **Slough, S. W**. (1997). Sam Houston Regional Collaborative for the Advancement of Teaching Science (SamCATS) Final Report. Submitted to Kamil Jbeily, University of Texas. August 15, 1997.

McGrew-Zoubi, R. R. & **Slough, S. W.** (1996). Sam Houston Regional Collaborative for the Advancement of Teaching Science (SamCATS) Final Report. Submitted to Kamil Jbeily, University of Texas. August 15, 1996.

**Slough, S. W**. & Ramsey, J. (1995). *Chemical Reactions.* Department of Curriculum and Instruction, University of Houston, Houston, TX.

McGrew-Zoubi, R. R. & **Slough, S. W.** (1995). Sam Houston Regional Collaborative for the Advancement of Teaching Science (SamCATS) Final Report. Submitted to Kamil Jbeily, University of Texas. August 15, 1995.

**Slough, S. W.** (1994). *Chemistry 115 Lab Manual.* Department of Chemistry, Sam Houston State University, Huntsville, TX. [135 pages, sold in-house to fund student scholarships]

**Slough, S. W.** & Loeffler, P. (1993). *Chemistry 135 Class Notes.* Department of Chemistry, Sam Houston State University, Huntsville, TX . [120 pages, sold in-house to fund student scholarships]

***Invited Addresses, Presentations, and Workshops***

Capraro, R. & **Slough, S. W.,** (2007, May) *Planning and Implementing an Interdisciplinary PBL: The V-day Mystery.* Three-day workshop presented to Conrad High School teacher participants in the NTSTEM Center, Dallas, TX.

**Slough, S. W.,** Capraro, R., & Scheurich, J. (2007, May) *PBL IV* One-day workshop presented to Dallas ISD teacher participants in the NTSTEM Center, Dallas, TX.

**Slough, S. W.,** Capraro, R., & Scheurich, J. (2007, March) *PBL III.* One-day workshop presented to Dallas ISD teacher participants in the NTSTEM Center, Dallas, TX.

**Slough, S. W.,** Capraro, R., & Scheurich, J. (2006, December) *PBL II.* One-day workshop presented to Dallas ISD teacher participants in the NTSTEM Center, Dallas, TX.

**Slough, S. W.,** Capraro, R., & Scheurich, J. (2006, October) *PBL I.* One-day workshop presented to Dallas ISD teacher participants in the NTSTEM Center, Dallas, TX.

**Slough, S. W.** (2001-2005). *Using Web-based Databases for Scientific Inquiry.* An interactive workshop series presented to inservice teachers. (Presented in various forms from one day to two weeks 15+ times to date, 350+ total attendees), Houston, TX.

**Slough, S. W.** (2001-2005). *Integrating Math, Science, and Technology Using Graphing Calculators*. An interactive workshop series presented to inservice teachers. (Presented in various forms from one day to two weeks 15+ times to date, 350+ total attendees), Houston, TX.

**Slough, S. W.,** Chen, I., & Garza, R. (2000-2005). *Technology-Enhanced Science and Math in the Elementary School.* A workshop focused on the integration of science, mathematics, technology, and inquiry for grades K-6 presented to Houston Urban Learning Initiatives in a Linked Environment (HU-LINC), Houston, TX.

**Slough, S. W.**, & Garza, R. (2000-2003). *Earth Systems I and II.* A workshop focused on the earth science concepts of (1) the rock cycle, (2) watersheds and (3) components of the atmosphere for grades 6-8 presented to Houston Urban Learning Initiatives in a Linked Environment (HU-LINC), Houston, TX.

**Slough, S. W.** (2000-2002). *Exploring IPC in Home-Based Investigations*. A workshop focused on using everyday materials in the investigation of Physical Science Concepts presented to Houston Urban Learning Initiatives in a Linked Environment (HU-LINC), Houston, TX.

**Slough, S. W.,** Griffard, P., Chen, I. (2002, July).  *Shell Say Yes Science & Technology Teacher Workshop.* Two-day workshop for 75 HISD teachers focused on integrating math, science, and technology into instruction presented to Houston Urban Learning Initiatives in a Linked Environment (HU-LINC), Houston, TX.

**Slough, S. W.,** Nakamura, M., & Coleman, K. (2002, July). *Probing our Bayou Waters II: Using Probeware to Investigate Water Quality*. Two-week workshop for Alg I and IPC teachers that focused on integrated graphing calculators and scientific probes while investigating water quality in White Oak and Buffalo Bayous presented to Houston Urban Learning Initiatives in a Linked Environment (HU-LINC), Houston, TX.

**Slough, S. W.,** Griffard, P., & Chen, I. (2001, July).  *Shell Say Yes Science & Technology Teacher Workshop.* Two-day workshop for 75 HISD teachers focused on integrating math, science, and technology into instruction presented to Houston Urban Learning Initiatives in a Linked Environment (HU-LINC), Houston, TX.

**Slough, S. W.** (2001, July). *Region IV Water Monitoring Workshop.* Two-day workshop for middle school science teachers that focused on using LaMotte Test Kits for the testing of water quality on White Oak and Buffalo Bayous presented to Region IV ESC, Houston, TX.

**Slough, S. W.,** Nakamura, M., & Mazzoni, E. (2001, July). *Probing our Bayou Waters I: Using Probeware to Investigate Water Quality*. Two-week workshop for Alg I and IPC teachers that focused on integrated graphing calculators and scientific probes while investigating water quality in White Oak and Buffalo Bayous presented to Houston Urban Learning Initiatives in a Linked Environment (HU-LINC), Houston, TX.

**Slough, Scott W.** (2000 - 2005). *Using Web-based Databases for Scientific Inquiry.* An interactive workshop presented to in-service teachers on the use of the World Wide Web in the classroom. (Presented in various forms from three hours to one week – 10+ times to date with over 200+ attendees.).

**Slough, S. W.,** Griffard, P. (2000, August).  *Shell Say Yes Science & Technology Teacher Workshop.* Two-day workshop for 75 HISD teachers focused on integrating math, science, and technology into instruction presented to Houston Urban Learning Initiatives in a Linked Environment (HU-LINC), Houston, TX.

Ashley, R., **Slough, S. W.**, Kent, S., & Harvey, D. (2000, July). *Project SENSE*. Forty-five hour workshop presented to the Georgia's Eisenhower Higher Education Program, Statesboro, GA.

**Slough, S. W.** (2000, March) *Slime vs. Oobleck!* Featured science demonstration at Scott Johnson Elementary School Science Night presented at Scott Johnson Elementary School, Huntsville, TX.

Ashley, R., **Slough, S. W.**, Kent, S., & Harvey, D. (1999, July). *Project SENSE*. Forty-five hour workshop presented to the Georgia's Eisenhower Higher Education Program, Statesboro, GA.

**Slough, S. W.** (1999-2000) *So That's Science!* Invited series of science demonstrations and explanation tied to the Georgia State Standards presented weekly to third graders at Bulloch Academy, Statesboro, GA.

**Slough, S. W.** (1999, March) *Chemical and Physical Changes.* Featured science demonstration at Scott Johnson Elementary School Science Night presented at Scott Johnson Elementary School, Huntsville, TX.

**Slough, S. W.** (1998). *Science With Sam.* Keynote address presented to 75 grade 7-8 students plus teachers, administrators, and parents for the GTE FOCUS program.

**Slough, S. W.** (1997, Fall) *Science and Technology 2000.* Featured science demonstration at McCullough High School, Conroe, TX.

**Slough, S. W.** (1997, Fall). *Science With Sam.* Keynote address presented to 75 grade 7-8 students plus teachers, administrators, and parents for the GTE FOCUS program.

**Slough, S. W.** (1997). *Environmental Chemistry Applications and Science Curriculum Frameworks.* Forty-five hour workshop presented to the Eisenhower Grant for Regional Collaboratives for Excellence in Science Teaching from the Texas Education Agency, Huntsville, TX.

**Slough, S. W.** (1996, Fall) *Science and Technology 2000.* Featured science demonstration at McCullough High School, Conroe, TX.

**Slough, S. W.** (1996, Fall) *Science and Technology Career Day.* Featured science demonstration at Huntsville High School, Huntsville, TX.

**Slough, S. W.** (1996). *Science With Sam.* Keynote address presented to 75 grade 7-8 students plus teachers, administrators, and parents for the GTE FOCUS program.

**Slough, S. W.** (1996, Summer). *K-12 Science Curriculum Alignment Project*. Two-day workshop presented to K-12 science teachers at Huntsville ISD. Huntsville, TX.

**Slough, S. W.** (1996). *Environmental Geology Applications and Technology Integration in the Secondary Science Classroom.* Forty-five hour workshop presented to the Eisenhower Grant for Regional Collaboratives for Excellence in Science Teaching from the Texas Education Agency, Huntsville, TX.

**Slough, Scott W**. (1996, March). *What Research Says to the Science Teacher.* Invited keynote presented at Region IV Mini-Conference Conference for the Advancement of Science Teaching, Huntsville, TX.

**Slough, Scott W.** (1996-2005). *Using a Web Browser as a Presentation Manager.* An interactive workshop presented to pre-service teachers and in-service teachers on the use of the World Wide Web in the classroom. (Presented in the same format 5 times with over 75 attendees.)

**Slough, Scott W.** (1996-2005). *Surfing the Web.* An interactive workshop presented to pre-service teachers, in-service teachers, and administrators on the use of the World Wide Web in the classroom. (Presented in various forms from three hours to one week – 50 times with over 1000 attendees.)

**Slough, S. W.** (1995, Summer). *K-12 Science Curriculum Alignment Project*. Two-day workshop presented to K-12 science teachers at Huntsville ISD. Huntsville, TX.

**Slough, S. W.** (1995). *Environmental Chemistry Applications.* Forty-five hour workshop presented to the Eisenhower Grant for Regional Collaboratives for Excellence in Science Teaching from the Texas Education Agency, Huntsville, TX.

**Slough, S. W.** (1995, Fall) *Science and Technology 2000.* Featured science demonstration at McCullough High School, Conroe, TX.

**Slough, S. W.** (1995, Fall) *Science Under the Big Top.* Featured science demonstration at Huntsville Elementary, Huntsville, TX.

**Slough, S. W.** (1994, Fall) *Science and Technology 2000.* Featured science demonstration at McCullough High School, Conroe, TX.

**Slough, Scott W.** (1994, November). *Chromatography as a Teaching Tool for Secondary Science: A Forensic Study.* Invited 2-day seminar presented to Next-Step Teaching Collaborative SHSU/HISD, Huntsville, TX.

**Slough, Scott W.** (1994, October). *Authoring on the World Wide Web: Getting Students Involved*. Invited paper presented to the Across-the-University Writing Program.Sam Houston State University, Huntsville, TX.

## Grant Activities

Funded ($16,908,725 TC##)

Co-PI for *North Texas STEM Center (NTSTEM Center) Supplemental Grant*. TEA-T-STEM with Jim Scheurich (PI) and Robert Capraro (Co-PI) ($200,000 TDC#) 2006-2007.

Co-PI for *Engaging Middle School Students in Student-directed Inquiry Through Virtual Environments for Learning*. NSF-IMB (0628264) with Susan Pederson (PI). Janie Schielack (co-PI), and Douglas Johnson (co-PI ULL) ($1,685,499 TDC) 2006 - 2010.

Co-PI for *North Texas STEM Center (NTSTEM Center).* TEA-T-STEM with Jim Scheurich (PI) and Robert Capraro (Co-PI) ($400,000 TDC) 2006-2007.

Co-PI for *Acquisition of Inductively Coupled Plasma – Optical Emission Spectrometer for Undergraduate Research in the Natural Sciences*. NSF-EAR (0420790) Major Research Instrumentation Program with Kenneth Johnson (PI) ($106,167) 2004.

Co-PI for *Bioscience Inspiration and Opportunities for Students*. National Institutes of Health (1R25HL075747-01) with Baylor College of Medicine, Nancy Moreno (PI-Baylor College of Medicine). ($1,250,000) 2003-2008.

Co-PI for *Expanding Pathways to Success in Science at UHD and SJCN*. NSF-Science, Technology, Engineering, and Mathematics Talent Expansion Program (STEP) (0333312) with Larry Spears (PI), Sarah Janes (Co-PI - SJCN), Suzette Mouchaty (Co-PI), and Akif Uzman (Co-PI). ($3,632,024 TC) 2003-2009.

Co-PI for *UHD Urban Center for Student Success in Science, Technology, Engineering, and Mathematics (UCSS/STEM)*. DOD Army Research Office with Larry Spears (PI), Albert-Gomez Rivas, (Co-PI), Suzette Mouchaty (Co-PI), Kenneth Oberhoff (Co-PI), and Akif Uzman (Co-PI). ($6,757,755 TC) 2003-2009.

Co-Director (PI) for a series of 30 contact hour workshops. HU-LINC (Houston ISD’s USI grant) ($244,345 TDC - combined amount from 10 workshops) 2000 – 2005.

*Technology-Enhanced Science and Math in the Elementary School* (5 times) - focuses on the integration of science, mathematics, technology, and inquiry for grades K-6 with Irene Chen (co-instructor) and Roberto Garza (co-instructor)

*Earth Systems I and II* (3 times each) focuses on the earth science concepts of (1) the rock cycle, (2) watersheds and (3) components of the atmosphere for grades 6-8 with Roberto Garza (course instructor).

*Exploring IPC in Home-Based Investigations*, (2 times) focuses on using everyday materials in the investigation of Physical Science Concepts.

Co-PI (University Professional Development Coordinator) for *Houston TARGETS Mathematics and Science*. Texas Education Agency (263000221400833) with Ricki Price-Baugh (PI), Assistant Superintendent for Curriculum and Instruction, Houston Independent School District. ($2,025,000 TDC) 2003-2006.

Director (PI) for *Probing our Bayou Waters I and II: Using Probeware to Investigate Water Quality*, a two-week workshop for Alg I and IPC teachers that focused on integrated graphing calculators and scientific probes while investigating water quality in White Oak and Buffalo Bayous with Mitsue Nakamura, Ed Mazzoni (2001), and Keith Coleman (2002) as co-instructors. HU-LINC ($29,700 TDC) 2000-2002.

Director (Co-PI) for *Development of a Science Education Technology Learning Center and a Science and Technology Demonstration Laboratory* with Larry Spears (PI) and Phyllis Griffard. Shell Oil Company Foundation. ($408,000 TDC) 2000 – 2005.

Director (PI) for *Shell Say Yes Science & Technology Teacher Workshop 2000-2002.* A two-day workshop for 75 HISD teachers focused on integrating math, science, and technology into instruction with Phyllis Griffard (2000-2001) and Irene Chen (2001-2002) as co-instructors $14,250.

Director (PI) for *Region IV Water Monitoring Workshop,* a two-day workshop for middle school science teachers that focused on using LaMotte Test Kits for the testing of water quality on White Oak and Buffalo Bayous. Region IV $1,200 Summer 2001.

Co-Director (Co-PI) and Science Consultant for *Project SENSE*, a hands-on, minds-on program for providing ongoing professional development of teachers in grades P-8 in Southeastern Georgia, from Georgia's Eisenhower Higher Education Program with S. Kent and D. Harvey $57,785 1999 - 20001.

Co-Director (Co-PI), *Making Connections*. A Georgia Southern University, College of Education Grant with Greg Chamblee. $500 1998-1999.

Project Director (PI) for *Science With Sam,* a GTE FOCUS Grant. A collaborative project between the departments of Biology, Chemistry, Geology, History, and Physics and the University Relations and Development Office with an emphasis on Recruitment and Retention of Underrepresented Minorities in Science, Mathematics, and Engineering Careers. $30,000 1996-1998.

Project Director (PI), *K-12 Science Curriculum Alignment Project*. Huntsville ISD. $3000 1995-1996.

Co-Director (Co-PI) and Science Consultant for Eisenhower Grant for Regional Collaboratives for Excellence in Science Teaching from the Texas Education Agency with R. McGrew-Zoubi. $63,500 1994-1997.

*Environmental Chemistry Applications and Science Curriculum Frameworks* 1996-1997

*Environmental Geology Applications and Technology Integration in the Secondary Science Classroom* 1995-1996.

*Environmental Chemistry Applications* 1994-1995.

#TDC – Total Direct Costs

##TC – Total Costs (includes cash in-kind contributions)

**Submitted**

PI for *Project DIPS: Designing Instructional Practices in Science through Purposive Sequencing of Hands On Activities and Using Textbooks and Informational Narrative Texts*, IES (NCER-MS G2 - 0801301) with Bill Rupley (Co-PI) and Ronald Zellner (Co-PI) $1,358,642.

Co-PI for *Reading to Solve Verbal Problems (RSVP):**An Intervention to Translate Text Pattern Cognition in Reading into Solving Mathematical Word Problems Through Recognition, Generation, and Attainment (RGA)*, IES (NCER – Cognition G2 – 0900153) with Bill Rupley (PI) and Robert Capraro (Co-PI) $1,239,358.

Co-PI for *Effective Game Design for Informal Science Learning* (NSF-Informal Science Education) with Vinod Srinivasan (PI) and Don Gilman(Co-PI)$1,185,114

**Select Nonfunded**

PI for *Learning Environment Research Team in GeoScience*. NSF-DRL (6639161) with Bugrahan Yalvac (Co-PI) and Hersh Waxman (Co-PI) $1,312,350 [recommended for a full proposal].

Co-PI for Multibeam Bathymetry Survey of the NW Gulf of Mexico Continental Slope - Phase I: Data Collection, Education & Outreach. A proposal to the NOAA with Will Sager (PI) $453,609 (2008) [recommended for a full proposal].

Co-PI for Evaluating a Model Program for Increasing Educational and Career Opportunities for STEM Students at a MSI/HSI Urban University. A proposal to the NSF-REESE with Brad Hoge (PI), Jon Aoki (Co-PI), and Larry Spears (Co-PI) $868,345 (2007-2010).

Co-PI for SALE-IPY. A proposal to the NSF-IPY with Mahlon Kennicut (PI) and Robin Bell (Co-PI) $473,394 (2007-2008) [recommended for a full proposal].

***Service (2005-present)***

**International/National**

* NSF Reviewer, 2008.
* Editor (with Erin McTigue) of special edition on Science and Reading in *Reading Psychology* (2007-2008)
* Ad Hoc Reviewer, *Learning Environments Research*, 2005 – present.
* Reviewer, *SITE Conference*, 2005 - present
* School of Rock
	+ Expedition I – Victoria, BC to Acapulco, Mexico (Fall 2005)
	+ Expedition II – Gulf Coast Repository (Summer 2007)
	+ Expedition III – Gulf Coast Repository (Summer 2008)
* Society for Information in Technology and Teacher Education (SITE)
	+ Co-Chair for SITE Science Education SIG (2007 – 2013 – will serve three years as Assistant and then assume SIG Chair position for three years)
	+ SITE Science Education SIG Leadership Team Member (1996 – 2005)
	+ SITE Program Committee (2006 – present)

**Regional**

* SW-ASTE
	+ Past-President (2007-2008)
	+ President (2006-2007)
	+ President elect (2005-2006)

**University**

* Polar Palooza (2008)
* Summer pre-College Ocean Research Experience (SCORE) (2008 – present)
* Ocean Drilling and Sustainable Earth Science (ODASES) (2005 – present)
* ODASES Search Committee Ad-hoc Member (Fall 2005 – Fall 2007)

**College of Education**

* Future of Education Committee Member (Fall 2005 – Spring 2006)
* PRISE Advisory Board (2006 – 2007)

**Departmental**

* Graduate Committee (2008 – present)
* Faculty Evaluation Committee (2008-2009)
* Admissions Committees
	+ MEd online (Fall 2006 – present)
	+ All Graduate Science ed (Fall 2006 – present)
	+ Executive EdD (Spring 2007 – present)
* PhD Core Curriculum Committee (2006)
* Middle Grades Clinical Science Education Search Committee (Fall 2005 – Spring 2006)
* Assistant Professor Science Education Search Committee (Fall 2005 – Spring 2006)

**Professional Memberships**

National Memberships

* Association for the Advancement of Computing in Education (AACE)
	+ Society for Information Technology and Teacher Education (SITE)
		- SITE Science Education SIG (1996 – present)
			* Co-Chair for SITE Science Education SIG (2007 – 2009)
			* Chair for SITE Science Education SIG (2010-2013)
* Association for Science Teacher Education (ASTE)
* SouthWest Association for Science Teacher Education (SW-ASTE)
	+ (2002 – present)
	+ Board Member SW-ASTE (2002 – 2004)
	+ President-elect SW-ASTE (2004 - 2005)
	+ President SW-ASTE (2005 – 2007)
* National Science Teachers Association (NSTA)

**State Memberships**

* Science Teachers Association of Texas (STAT)
	+ Membership and Regional Meetings Committee
* Associated Chemistry Teachers of Texas (ACT2)
* Texas Science Education Leadership Association (TSLEA)
* Texas Academy of Science (TAS)

***Awards and Honors (2005 to present)***

* Co-PI and Co-Director of the Expanding Pathways to Success in Science at UHD and SJCN (NSF STEP-0336612) was highlighted in the NSF FY 2008 Budget Request to Congress on page 10 of the Education and Human Resources section (<http://www.nsf.gov/about/budget/fy2008/pdf/29_fy2008.pdf>) as “Award-Winning Scholars Academy Expands Students’ Pathways to Success.”
* Paper award at the World Conference on Educational Multimedia, Hypermedia and Telecommunications 2006. Our paper entitled “Ship-to-shore educational communications and interactivity via the World Wide Web: The School of Rock expedition case study” received a paper award and was recommended for submission to the *Journal of Educational Multimedia and Hypermedia.*
* Elected President of SouthWest – Association for Science Teacher Education (SW-ASTE) 2005-2007.
* Elected Co-Chair for SITE Science Education SIG (2007 – 2013) (promotion to Chair in 3 years).
* 2005 STAR Award from the Texas Higher Education Coordinating Board December 1, 2004 for closing the achievement gap for underrepresented population in Texas, which was awarded to the UH-Downtown Scholars Academy where I served as the co-Director.
* 2005 University Environmental Educator of the Year, presented by the Environmental Education Exchange (Greater Houston area).

***Courses Taught at Texas A&M University (2005 - present)***

* MEFB 460 **–** Mathematics Methods in the Middle School
* MEFB 470 **–** Science Methods in the Middle School
* EDCI 601 – PhD Studies in Teaching, Learning, and Culture
* EDCI 664 – Advanced Methods of Secondary Science Education
* EDCI 665 – Science Curriculum
* EDCI 682 **–** Seminar in Science Education
* EDCI 689 – Exemplary Technology in Secondary Science Education
* EDCI 689 – Broader Impacts of Scientific Collaborations
* EDCI 689 – Grant Writing

***Courses Taught at the University of Houston-Downtown (2000 – 2005)***

## CHEM 1305/1105 – Introductory Chemistry I

## CHEM 1307/1107 1308/1108 – General Chemistry I and II

## CHEM 3320 – Environmental Chemistry

## NS 3310 – Physical Science Studies

## NS 6310 – Selected Topics in Physical Science

## *Courses Taught at Georgia Southern University (1998 – 2000)*

## GSU 1211 – Leadership

## ECED 3132 – Assessment and Management

### ECED 4433 – P-5 Science

### ECED 4333 – P-5 Teaching Mathematics

### ECED 4733 – Methods II Practicum

### ECED 7430 –Advanced Science Methods

### ECED 8430 – Problems in P-5 Science

* ECED 8819 **–** P-5 Advanced Seminar and Field Study I

## *Courses Taught at Sam Houston State University (1994-1998)*

### CHEMISTRY 135 – Introductory Inorganic and Environmental Chemistry

### CHEMISTRY 138/139 – General Chemistry I & II

### ELEMENTARY EDUCATION 435 – Science in the Elementary School

### SECONDARY EDUCATION 587 – Environmental Chemistry Applications