

Stephen Bryant Rainwater

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Educational Background

- 1989 Ed.D. Texas A&M University-Commerce, Commerce, Texas
 Major: Supervision, Curriculum, and Instruction
 Secondary and Higher Education
 Minor: Computer Science
- 1987 M.S. Texas A&M University-Commerce, Commerce, Texas
 Major: Computer Science
- 1977 M.S. Stephen F. Austin State University, Nacogdoches, Texas
 Major: Mathematics
 Minor: Statistics
- 1975 B.S. Stephen F. Austin State University, Nacogdoches, Texas
 Major: Mathematics
 Minor: French

Professional Experience

- 2007-2011, 2018-present **Department Chair**, Department of Computer Science, The University of Texas at Tyler. In addition to expected faculty responsibilities in teaching, scholarship, and service, other job tasks included departmental administration and management: budget preparation and oversight, curricula development, program assessment, faculty/staff evaluation, instructional leadership, class scheduling, advisement, recruitment, retention, facilities, daily office operations etc. Supervision of nine full-time faculty, one support staff, and three adjunct faculty. Also budget authority for annual operating budget exceeding \$1 million.
- 1993-2007, 2011-2018 **Associate Professor** (tenured), Department of Computer Science, The University of Texas at Tyler. Responsibilities included instruction in undergraduate and graduate computer science, academic advisement, curriculum and grant development, research advising, etc.

- 1982-1993 **Assistant Professor**, Department of Mathematics and Computer Science, The University of Texas at Tyler. Responsibilities included instruction in undergraduate and graduate computer science, academic advisement, and curriculum development.
- 1978-1982 **Instructor**, Department of Mathematics, Tyler Junior College. Responsibilities included instruction in mathematics and computer science for freshman and sophomore students, academic advisement, curriculum development, and coordinating the mathematics computer laboratory.
- 1978 **Programmer/Analyst**, Brown and Root, Inc., Houston, Texas. Responsibilities included analysis, design, implementation, evaluation, documentation, and maintenance of software systems (COBOL) for cost accounting group.
- 1976-1977 **Graduate Teaching Assistant**, Department of Mathematics and Statistics, Stephen F. Austin State University, Nacogdoches, Texas. Responsibilities included instruction in college algebra, assisting students in the department statistical laboratory, and grading for the graduate faculty.
- 1976 **Instructor**, Department of Mathematics, Spring Branch Memorial Senior High School, Houston, Texas. Responsibilities included instruction in geometry and algebra for freshman and junior students.

Publications, Presentations, Grants, Endowments, and Peer Reviews

Publications

- Rainwater, Stephen B., Fan, L., and Natarajan, V. 2015. "The Impact of Animations on Learning Achievement in an Undergraduate Data Communications Course." *Journal for Computing Teachers*. Fall 2015, pages 5-11.
- Rainwater, Stephen B. and Natarajan, V. 2014. "The Effectiveness of Animations in Teaching Recursive Algorithms." *Proceedings of the 5th Annual International Conference on Computer Science Education*, 5(1), pages 80-84.
- Rainwater, Stephen B. 2013. "The ISTE® NETS•CSE: Advancing Computer Science Teaching in the Digital Age." *Proceedings of the 10th World Conference on Computers in Education*. 10(3), pages 147-148. Torun, Poland.

Publications (continued)

- Rainwater, Stephen B. 2012. "The ISTE® NETS•CSE: A Model for Effective Teaching and Learning of Computer Science for the 21st Century." *Proceedings of the International Conference on Teaching and Learning with Technology*. Singapore.
- East, Philip, Bentley, Charmaine, Kmoch, Joseph, Rainwater, Stephen, Goode, Joanna, and Stephenson, Chris. 2011. "NCATE Standards for Preparation of Secondary Computer Science Teachers." *Proceedings of SIGCSE 2011: The 42nd ACM Technical Symposium on Computer Science Education*. 42(1), pages 42-45.
- Subramanian, Nary and Rainwater, Stephen B. 2009. "Closed-Loop Industry Partnership for Successful Interdisciplinary Capstone Projects in Computer Science." *Proceedings of the 3rd Annual Texas Computer Education Association Educational Technology Research Symposium*. 3(1), pages 94 - 105.
- Rainwater, Stephen B. 2007. "From the TCEA President." *TechEdge*, Texas Computer Education Association. 26(2), Winter 2007, page 6.
- English, Brian M. and Rainwater, Stephen B. 2006. "The Effectiveness of Animations in an Undergraduate Operating Systems Course." *The Journal of Computing Sciences in Colleges*. 21(5), pages 53-59.
- Rainwater, Stephen B. 2006. "From the TCEA President." *TechEdge*, Texas Computer Education Association. 26(1), Fall 2006, page 5.
- Rainwater, Stephen B. 2006. "From the TCEA President." *TechEdge*, Texas Computer Education Association. 25(4), Summer 2006, page 5.
- Rainwater, Stephen B. 2006. "From the TCEA President." *TechEdge*, Texas Computer Education Association. 25(3), Spring 2006, page 4.
- Rainwater, Stephen B. 2003. "Incorporating a Closed Laboratory Into a First Course in Computer Programming." *Proceedings of 9th Annual University of Texas System Instructional Technology and Distance Education Conference*. <http://www.utpb.edu/reach/itde/abstracts.htm>
- King, Ronald S. and Stephen B. Rainwater. 2002. "Linking Multiple Databases: Term Project Using Sentences DBMS." *Proceedings of the National Educational Computing Conference*.
- King, Ronald S. and Stephen B. Rainwater. 2002. "The Associative Data Model." *The Journal of Computing in Small Colleges*. 17(5), pages 154-160.
- Rainwater, Stephen B. 2001. "Enhancing Computer Science Instruction With PowerPoint and Excel." *Proceedings of the International Network of Educational Technology (INET) Conference*.

Publications (continued)

- Rainwater, Stephen B. 2000. "Using Spreadsheets to Teach Digital Principles." *Proceedings of the Texas Computer Education Association Annual Conference*.
- Rainwater, Stephen B. 1998. "Animating Algorithms and Dynamic Processes with PowerPoint." *Proceedings of the Texas Computer Education Association Annual Conference*.
- Rainwater, Stephen B. 1998. "The Status of Computer Science Education in Texas Public High Schools." Abstract in *1998 Texas Academy of Science Annual Meeting Program*.
- Rainwater, Stephen B. and Jennifer J. Salley. 1998. "An Alternative Strategy for the Teaching Dynamic Processes and Algorithms in Computer Science." Abstract in the *1998 Texas Academy of Science Annual Meeting Program*.
- Rainwater, Stephen B. 1992. "Which Should It Be...Pascal or C? The Use of C as a Primary Instructional Language." *Proceedings of the Texas Computer Education Association Area V Conference*.
- Rainwater, Stephen B. 1991. "Technology and the Teaching of Secondary Mathematics." *Proceedings of the Texas Computer Education Association Annual Conference*.
- Rainwater, Stephen B. 1991. "Technology and the Teaching of Secondary Mathematics." *Proceedings of the Second Annual Conference on Technology*.
- Rainwater, Stephen B. 1989. *Predictive Effects of Community College Student Characteristics on Academic Achievement in Computer Science at an Upper-Division University*. Dissertation. East Texas State University.
- Rainwater, Stephen B. 1987. "A Survey of Undergraduate Computer Science Programs at Upper-Division Universities of Texas." *Proceedings of the Eleventh Annual Federation of North Texas Area Universities Computer Science Conference*. 11(1), pages 174-179.
- Rainwater, Stephen B. 1986. "Artificial Intelligence and Education: The Past, Present, and Future." *Project Janus: 1986*. pages 96-105.
- Subramanian, Nary and Stephen B. Rainwater. 2007. "Capstone Projects in Computer Science: Throwing Students to the Wolves". Submitted for refereed consideration of publication in *Proceedings of SIGCSE 2008: The 39nd ACM Technical Symposium on Computer Science Education*.

Submitted for Publication

Rainwater, Stephen B. and Brian M. English. 2005. "The Effectiveness of Animations in an Undergraduate Operating Systems Course". Submitted for refereed consideration of publication in *Proceedings of SIGCSE 2006: The 37nd ACM Technical Symposium on Computer Science Education*.

Rainwater, Stephen B. and Brian M. English. 2005. "Animations as Pedagogical Tools in an Undergraduate Operating Systems Course". Submitted for refereed consideration of publication in *Proceedings of the 10th Annual Innovation and Technology in Computer Science Education Conference*.

Rainwater, Stephen B. and George M. Whitson III. 1988. "The Effectiveness of Using Departmental Course Outlines to Coordinate the Teaching of Multiple Section Courses." NECC.

Computer Science Animations and Web Software Publications

<http://apps.uttyler.edu/Rainwater/COSC3355/Animations/index.htm>

<http://williamstallings.com/OS/Animation/Animations.html>

<http://daaanimations-dev.appspot.com/>

<http://dccanimations.appspot.com/>

<http://www.uttyler.edu/cs/documents/digital-principles.xlsx>

Conference Presentations

"Using Microsoft Excel to Teach Digital Principles." WeTeach_CS Summit. UT Austin Center for STEM Education. Austin, Texas; June, 2016.

"The Role of Animations in Teaching Computer Science." Texas Computer Education Association 2016 Annual Conference. Austin, Texas; February, 2016.

"UT LSAMP 1993 - 2015: A Legacy of Student Scholars." UT LSAMP Student Research Conference. El Paso, Texas; September 2015.

"The ISTE® NETS•CSE: Advancing Computer Science Teaching in the Digital Age." 10th World Conference on Computers in Education. Torun, Poland; July 2013.

"The ISTE® NETS•CSE: A Model for Effective Teaching and Learning of Computer Science for the 21st Century." International Conference on Teaching and Learning with Technology. Singapore; March 2012.

Conference Presentations (continued)

- "Pre-Release of the NETS for Technology Directors, Coaches, and Computer Science Teachers." ISTE 2011 Conference. Philadelphia, PA; June 2011.
- "Computational Thinking for All." ISTE 2011 Conference. Philadelphia, PA; June 2011.
- "NCATE Standards for Preparation of Secondary Computer Science Teachers." SIGCSE 2011: 42nd ACM Technical Symposium on Computer Science Education. Dallas, Texas; March 2011.
- "Closed-Loop Industry Partnership for Successful Interdisciplinary Capstone Projects in Computer Science." TCEA Educational Technology Research Symposium. Austin, Texas; February 2009.
- "Programming Contest Roundtable." Panel Discussion Leader. TCEA 2004 and 2005 Annual Conferences. Austin, Texas; February 2004, 2005.
- "Incorporating a Closed Laboratory into a First Course in Computer Programming." 9th Annual University of Texas System Information Technology and Distance Education Conference. Odessa, Texas; May 2003.
- "Linking Multiple Databases: Term Project Using *Sentences* DBMS." 2002 National Educational Computing Conference. San Antonio; June 2002.
- "The Associative Data Model." 13th Annual Consortium for Computing in Small Colleges: South Central Conference. April 2002.
- "Discussion Focus on Secondary Level Technology Application Certification." Panel Discussion. Texas Computer Education Association 2002 Annual Conference. Austin, Texas; February 2002.
- "Enhancing Computer Science Instruction with PowerPoint and Excel." Region 1 ESC Technology Conference. South Padre Island; May 2001.
- "Enhancing Computer Science Instruction with PowerPoint and Excel." International Network of Educational Technology Conference. The University of Texas at El Paso; January 2001.
- "Using Spreadsheets to Teach Digital Systems." TCEA 2000 Annual Conference. Austin, Texas; February, 2000.
- "An Alternative Strategy for Teaching Algorithm and Dynamic Processes in Computer Science: Using Animations Developed with Microsoft PowerPoint." UT System Annual Telecommunications and Information Technology Conference. Brownsville, August, 1999.

Conference Presentations (continued)

- "Developing an Animation-Based Virtual Classroom for Computer Science." Texas Computer Education Association 1999 Annual Conference. Austin, Texas; February, 1999.
- "Animating Algorithms and Dynamic Processes with PowerPoint." Texas Computer Education Association 1998 Annual Conference. Austin, Texas; February 1998.
- "The Status of Computer Science Education in Texas Public High Schools." 1998 Texas Academy of Science Annual Meeting. Tyler, Texas; March, 1998.
- "Which Should It Be: Pascal or C? The Use of C as a Primary Instructional Language." Texas Computer Education Association Area V Conference. Dallas, Texas; 1992.
- "The Utility of the Graphing Calculator." ETSU Community College Mathematics and Science Conference -- Making Connections: Revitalizing the Teaching of Math and Science." Commerce, Texas; October 2, 1992.
- "The Graphing Calculator in the Secondary Curriculum." TISD Technology and Teaching Conference. Tyler, Texas; October 1991.
- "Technology and the Teaching of Secondary Mathematics." Conference for the Advancement of Mathematics Teaching. Houston, Texas; August, 1991.
- "Technology and the Teaching of Secondary Mathematics." Conference on Technology. Houston, Texas; June, 1991.
- "Technology and the Teaching of Secondary Mathematics." Texas Computer Education Association Annual Conference. Corpus Christi, Texas; June, 1991.
- "Building a Binary Integer Adder Using the Casio fx-8000G Programmable Calculator." San Jacinto College Conference on Technology. Houston, Texas; June 1990.
- "Power Up Your Math Instruction." Conference for the Advancement of Mathematics Teaching. San Antonio, Texas; August, 1989.
- "First Timer's Orientation." Presented program overview at the NCTM Southwestern Regional Conference. Marshall, TX; March, 1988.
- "A Survey of Undergraduate Computer Science Programs at Upper-Division Universities in Texas." Federation of North Texas Area Universities Computer Science Conference. Denton, TX; April, 1987.

Conference Presentations (continued)

- "Implementing Data Structures With BASIC." Conference for the Advancement of Mathematics Teaching. Austin, Texas; October, 1985.
- "Probability and the Microcomputer." Spring Conference of the East Texas Council of Teachers of Mathematics. Henderson, Texas; February, 1984.
- "Probability and the Microcomputer." Conference for the Advancement of Mathematics Teaching. Austin, Texas; October, 1983.
- "Using Technology in Secondary Mathematics." Presented at the Texas TAME Conference. Tyler, Texas; Spring, 1990.
- "Computer Use Seminar." Presented at the Smith County Juvenile Attention Center. Tyler, Texas; Spring, 1988.
- "Teaching BASIC to Data Processing Students." Presented at the Texas Education Agency Data Processing Instructors Inservice Workshop for Texas Community Colleges. Tyler, Texas; May, 1983.
- "Workshop in BASIC Programming." Presented to Tyler ISD Middle School Computer Literacy teachers. November, 1985.
- "Computer Refresher Course." Presented to Tyler ISD Middle School Computer Literacy teachers. April, 1985.
- "Computer Awareness Seminar." Presented for the Junior League of Tyler. January, 1984.
- "Computer Awareness Seminar." Presented to the Texas Society of Medical Technology. Tyler, Texas; November, 1983.
- "Computer Awareness Seminar." Presented for the Northeast Texas Cooperative Teacher Center. Kilgore, Texas; October, 1983.
- "Careers in Computer Science." Presented to students at the Bullard High School Career Day. April, 1983.
- "Computer Literacy Workshop." Presented to administrators of the Tyler Independent School District. April, 1983.
- "Computer Programming Workshop." Presented to students at Clarkston Elementary School. Tyler, Texas; Spring, 1983.
- "An Overview of Computer Science." Presented to the Lindale High School Computer Club. March, 1983.
- "Careers in Computer Science." Presented to students at a UT-Tyler Talented Youth Seminar. March, 1983.

Conference Presentations (continued)

"Computer Literacy Workshop." Presented for the Northeast Texas Cooperative Teacher Center. November, 1982.

"Microcomputer Workshop." Presented for East Texas Association for the Gifted. Tyler, Texas; November, 1982.

"Computer Literacy Seminar." Presented at fall conference of the East Texas Council of Teachers of Mathematics. September, 1982.

Grants Awarded

Louis Stokes STEM Pathways and Research Alliance: University of Texas System LSAMP - NSF Award # HRD-1826745 - \$145,400 - 2018-2023

CIRTL INCLUDES: Toward an Alliance to Prepare a National Faculty for Broadening Success of Underrepresented 2-Year and 4-Year STEM Students - NSF Award # 1649092 - Funding TBD - 2017

WeTeach_CS: Professional Development Training for Prospective Computer Science Teachers - Texas Regional Collaboratives for Excellence in Science and Mathematics Teaching - Center for STEM Education - UT Austin - \$50,000 - 2017

WeTeach_CS: Professional Development Training for Prospective Computer Science Teachers - Texas Regional Collaboratives for Excellence in Science and Mathematics Teaching - Center for STEM Education - UT Austin - \$44,000 - 2016

UT System Louis Stokes Alliance for Minority Participation: A Senior Model Focused on Student Success - NSF Award # HRD-1202008 - \$222,320 - 2013-2017

UT System Louis Stokes Alliance for Minority Participation (LSAMP) Phase IV - NSF Award # HRD-0703584 - \$349,946 - 2007-2012

Dwight David Eisenhower Mathematics and Science Program. "Using Technology in Secondary Mathematics." Funding of \$31,644 awarded to conduct summer institute for Tyler ISD secondary mathematics teachers - 1990

Grant Proposals Submitted

Kulkarni, Arun D., and Stephen B. Rainwater. 2009. Greater Texas Foundation "Rising to the Challenge Scholarship Program." Proposed funding of \$24,000.

Rainwater, Stephen B., Sumit Ghosh, and Kay Pleasant. 2005. National Science Foundation preliminary proposal. "Project **StellarNET: Students and Teachers Engaged in Learning Logic And Reasoning in NorthEast Texas.**" Proposed funding of \$595,060.

Grant Proposals Submitted (continued)

Rainwater, Stephen B. and Ronald S. King. 2002. Texas Technology Workforce Development Grant Program (TETC). "Project **STELLAR: Success Through Enhancement of Laboratories, Logical thinking, And Recruitment.**" Proposed funding of \$63,446.

Endowments Secured

The Lecil and Barbara Chandler Endowed Professorship in Computer Science. 2003. Was instrumental in securing \$100,000 permanent endowment. Funds distributed from the endowed professorship will be used to benefit faculty teaching, service, and scholarship.

The Lecil and Barbara Chandler Computer Science Endowment. 2002. Was instrumental in securing \$25,000 permanent endowment to benefit computer science faculty research endeavors.

Invited Peer Reviews

Editorial Review Board, *ISTE Journal for Computing Teachers* - 2009-2016

International Society for Technology in Education Annual Conference. Reviewer for conference presentations. 2007-2016.

Texas Computer Education Association Educational Technology Research Symposium. Reviewer for paper submissions. 2007-2009.

The University of Texas of the Permian Basin. External reviewer of faculty applications for tenure and/or promotion in the department of mathematics and computer science. 2007, 2012.

Texas Higher Education Coordinating Board Minority Health Research and Education Grant Program. 2005.

National Agency for Higher Education of Sweden (Council for the Renewal of Higher Education). Reviewed proposed pedagogical project submitted by Daniels et. al of Uppsala University: "Implementation Strategies for Open Ended International Group Projects that Benefit both Students and Teachers". 2004.

National Agency for Higher Education of Sweden (Council for the Renewal of Higher Education). Reviewed proposed pedagogical project submitted by Sebek et. al of University College of Mälardalen: "A Model for Student Active Learning: Programming Five Points as a Pilot Course". 2003.

National Agency for Higher Education of Sweden (Council for the Renewal of Higher Education). Reviewed proposed pedagogical project submitted by Rantakokko et. al of Uppsala University: "Interactive Learning of Algorithms". 2002.

Newspaper and Television Interviews

UT Tyler profs team up with undergraduates for a summer research project, *Tyler Morning Telegraph*, July 24, 2018, pages 6A-7A

TJC, UT Tyler students conduct research through Stokes Alliance program, *Tyler Morning Telegraph*, July 18, 2017, pages 6A-7A

Program gives minority students taste of grad school, *Tyler Morning Telegraph*, July 16, 2017, pages 7A-7B

UT Tyler, TJC students get taste of research in summer program, *Tyler Morning Telegraph*, July 5, 2016, pages 1B-2B

UT Tyler, TJC unite at research academy, *Tyler Morning Telegraph*, June 23, 2015, pages 1B-2B

Undergraduate Research: Students tackle summer projects, *Tyler Morning Telegraph*, July 29, 2014, pages 1B-2B

The Science of Research & Opportunity: Summer Research Academy puts undergrads in the lab, *Tyler Morning Telegraph*, July 9, 2013, pages 1B, 3B

Research Academy Encourages Students to Pursue Science Careers:
<http://www.cbs19.tv/Global/story.asp?s=10638144>

East Texas Recession Survival Guide: Top College Majors:
<http://www.kltv.com/Global/story.asp?S=9711711>

Public Testimony

Texas State Board of Education. Provided testimony in support of computer science as a fourth-year science and mathematics credit course in the recommended and distinguished Texas high school graduation plans. 2006.

Texas State Board of Education. Provided testimony regarding technology credit courses in the recommended Texas high school graduation plan. 2002.

Texas State Board for Educator Certification. Provided testimony in support of separate secondary teaching certification in computer science. 2000.

Consulting

Principal Evaluator for Eisenhower and Teacher Quality Grant Programs:

1995 "Patterns, Relations, and Functions" - Kilgore College

Consulting (continued)

- 1996 "Developing Logic and Analysis Skills" - Kilgore College
- 1996 "Probability and Measurement" - Kilgore College
- 1996 "Planting Science in the K-8 Curriculum" - Kilgore College
- 1997 "Creating Algebraic Thinking with Elementary Teachers" - KC
- 1997 "Enhanced Algebra Using Manipulatives, Problem Solving, and Technology" - The University of Texas at Tyler
- 1998 "Statistics and Graphing in Mathematics" - Kilgore College
- 1998 "Developing Numerical Concepts with Elementary Teachers" - Kilgore College
- 1998 "Planting Science for the Future" - Tyler Junior College
- 1999 "Sowing for Success in the Edible Classroom" - Tyler JC
- 1999 "Integrating Technology into the Teaching of Elementary Geometry" - Kilgore College
- 1999 "Integrating Technology into the Teaching of Problem Solving" - Kilgore College
- 2000 "A Technological Approach to the Teaching of Solid Geometry" - Kilgore College
- 2000 "Sowing for Success in the Edible Classroom" - Tyler JC
- 2000 "Ecosystems" - Tyler Junior College
- 2001 "A Technological Approach to the Teaching of Patterns, Relations, and Functions" - Kilgore College
- 2001 "Sowing for Success in the Edible Classroom" - Tyler JC
- 2001 "Reading Centers for Ecosystem Explorations" - Tyler JC
- 2002 "A Technological Approach to the Teaching of Mathematical Modeling" - Kilgore College
- 2002 "A Technological Approach to the Teaching of Probability" - Kilgore College
- 2002 "Sowing for Success in the Edible Classroom" - Tyler JC
- 2003 "Incorporating Algebraic Thinking in Grades 4-8" - TAMU-C

Consulting (continued)

- 2003 "Creating Algebraic Thinking in Grades 4-8" - TAMU-Commerce
- 2003 "Sowing for Success in the Edible Classroom" - Tyler JC
- 2003 "Ecosystem Explorations" - Tyler Junior College
- 2004 "Technology and Problem Solving in the Middle Grades" - Texas A&M University-Commerce
- 2004 "Solution Strategies and Problem Solving in the Middle Grades" - Texas A&M University-Commerce
- 2004 "Mathematical Representation in the Middle Grades" - TAMU-Commerce
- 2005 "Middle School Mathematics, Part I" - TAMU-Commerce
- 2005 "Middle School Mathematics, Part II" - TAMU-Commerce
- 2006 "Algebra I" - Texas A&M University-Commerce
- 2006 "Project MAST: Math Applications Through Science Topics" - JCC
- 2007 "Algebra" - Texas A&M University-Commerce
- 2007 "Probability and Statistics" - Texas A&M University-Commerce
- 2007 "Project MAST: Math Applications Through Science Topics" - JCC
- 2007 "Measurement in Context" - Paris Junior College
- 2008 "Probability and Statistics" - Texas A&M University-Commerce
- 2008 "Project MAST: Math Applications Through Science Topics" - JCC
- 2009 "Probability" - Texas A&M University-Commerce
- 2009 "Project MAST: Math Applications Through Science Topics" - JCC
- Principal Evaluator - Rural Health Care Services Outreach Grant Program - Partners in Health for Cherokee County - 2007-2008
- Principal Evaluator - Texas Education Agency Grants Program: "Texas Grants to Reduce Academic Dropouts" - Tyler ISD - 2005
- Principal Evaluator - Spalding Reading program - Tyler ISD - 1998-2000
- Principal Evaluator - Texas Education Agency Grants Program: "Texas High School Completion and Success Grant - Tyler Independent School District - 2005

Consulting (continued)

Principal Evaluator - LETSnet Texas Technology Infrastructure Fund (TIF) Project - 1997-1998

Principal Evaluator - Model Reading Intervention Grant program - Tyler Independent School District - 2002

External Evaluator - Computer and Information Sciences programs at the University of Texas of the Permian Basin - 2004

External Reviewer of quasi-experimental studies report conducted by SEG Measurement as related to effectiveness of Mentoring Minds *Motivation Math* and *Motivation Reading* products - 2016

Activities and Leadership in Professional and Community Organizations

Regional Co-chair, CS4TX of East Texas; 2016-present

Member, Tyler Junior College Game Development and Simulations Advisory Committee; 2012-present

Computer Science Representative, Board of Directors - International Society for Technology in Education (ISTE); 2007-2009, 2011-2013

Member, ISTE Nominations and Appointments Committee; 2013

Member, ISTE Policies and Procedures Committee; 2011-2013

Member, Trinity Valley Community College Computer Science Advisory Committee; 2010-present

President, International Society for Technology in Education (ISTE) Special Interest Group for Computing Teachers; 2009-2011

Co-chair, ISTE Accreditation and Standards subcommittee (in concert with the Computer Science Teachers Association) for revision of NCATE secondary computer science teaching certification standards; 2010-2012

Editorial Review Board, ISTE *Journal for Computing Teachers*; 2009-present

Member and Board Audit Liaison, ISTE Finance Committee; 2008-2009.

Representative, ISTE Standards and Accreditation Committee; 2007-2011.

Co-Chair, TCEA Educational Technology Research Symposia; 2007-2009.

President, Texas Computer Education Association; 2006-2007.

Secretary, Texas Computer Education Association; 2003-2005.

Activities and Leadership in Professional and Community Organizations

Contest Chair, TCEA Area 7 High School Programming Contest; 2002-2005.

Member, TCEA 2005 Conference Steering Committee; 2003-2005.

Chair, TCEA State High School Programming Contest Committee; 2000-2004.

Contest Chair, TCEA State High School Programming Contest; 2001-2004.

Member, Texas State Board for Educator Certification (SBEC) Computer Science TExES Examination Passing Standards Committee; 2004.

Member, Texas State Board for Educator Certification (SBEC) Computer Science TExES Examination Review Committee; 2004.

Member, TCEA 2004 Conference Program Committee; 2003-2004.

Area 7 Director, Texas Computer Education Association; 2000-2003.

Member, Texas State Board for Educator Certification (SBEC) Technology Applications Standards Committee; 2000.

President, Computer Science SIG of the TCEA; 1999-2000.

Chair, Mathematics Section of Texas Academy of Science; 1998-1999.

State of Texas Computer Science Textbook Review Panel; 1997.

Member, Moore Middle School (TISD) Instructional Computing Advisory Committee; 1997-1998.

Member, Tyler Red Cross Technology Advisory Committee; 1997-1998.

UT Tyler Faculty Representative, Tyler Sister Cities Metz, France, Jelenia Gora, Poland, and Yachiyo City, Japan; 1993-1994.

Chair, Test Scoring-Reporting, Regional Academic Pentathlon; 1991.

Member, Panola College Computer Science Advisory Committee; 1990 to 1993; 1995 to 1996; 2000 to 2004.

Co-chair of the Program Committee for the National Council of Teachers of Mathematics Southwestern Regional Conference; 1988.

Member, Executive Board, East Texas Council of Teachers of Mathematics; 1984 to 1985; 1987 to 1988; 1996 to 2002.

Member, Kilgore College Computer Science Advisory Committee; 1986 to 1988 and 1990 to 1992 (Chair) and 1995.

President, East Texas Council of Teachers of Mathematics; 1985-1987.

University, College, and Department Committee Service and Leadership

University and Faculty Senate Committees

Ad Hoc Committee for Selection of Dean of the CECS
 Ad Hoc Committee for Selection of Dean of the School of Ed and Psych
 Ad Hoc Committee for Selection of Physical Plant Director
 Ad Hoc Committee for Selection of Director of the Cowan Center
 Ad Hoc Committee for Selection of Vice President of Business Affairs
 Ad Hoc Committee for Education and Ethics Standards - IRB
 Ad Hoc Committee for CECS Student Retention in Mathematics Courses
 Ad Hoc Committee for Peer Observation of Teaching
 Faculty Representative - Goldwater Scholarship Program
 Faculty Representative - Udall Scholarship Program
 Faculty Senate - Junior Senator
 Faculty Senate - Senior Senator
 Faculty Senate Academic Affairs Committee - *Chair*
 Faculty Senate Ad Hoc Committee on Instructional Technology
 Faculty Senate Business Affairs Committee
 Faculty Senate Parliamentarian
 Faculty Senate President
 Faculty Senate Secretary
 Faculty Senate Student Affairs Committee
 SACS Educational Support Programs Committee - *Chair*
 SACS Self-Study Financial Resources Subcommittee
 SACS Self-Study Steering Committee
 UT Tyler Texas Association of College Teachers - *Secretary-Treasurer*
 University Academic Affairs Committee
 University Calendar Committee - *Chair*
 University Commencement Committee - *Chair*
 University Committee on Status of Women and Minorities
 University Council for Educator Preparation Programs
 University Faculty Awards Committee
 University Financial Aid and Student Appeals Committee - *Chair* (twice)
 University Fine and Performing Arts Center Fee Committee - *Chair*
 University Greek Life Council
 University Hearing Committee - *Chair*
 University Information Technology Committee
 University Recruitment and Retention Committee - *Vice Chair*
 University Strategic Planning Committee
 University Student Health and Recreation Center Committee
 University Undergraduate Curriculum Committee
 UT System LSAMP Academic Leadership Council - Senior Member
 UT Tyler Representative - Texas Council of Faculty Senates
 UT Tyler Representative - UT System Faculty Advisory Council

College and School Committees

CBT Student Awards and Scholarship Committee
 CBT Tenure and Promotion Committee
 CECS Strategic Planning Committee

College and School Committees (continued)

CECS Tenure and Promotion Committee - *Chair* (twice)
 CECS Faculty Awards Committee
 Chemistry Department Faculty Search Committee
 Sciences and Mathematics Tenure and Promotion Committee
 Sciences and Mathematics Curriculum Committee - *Chair*

Department Committees

Computer Science Undergraduate CS Curriculum Committee - *Chair*
 Computer Science Tenure and Promotion Committee - *Chair*
 Computer Science Faculty Search Committee - *Chair*
 Computer Science Staff Search Committee - *Chair*
 Computer Science Department Chair Search Committee - *Chair*
 Computer Science Department Graduate Admissions Committee
 Computer Science Department Graduate Curriculum Committee

Membership in Professional Organizations

- Association for Computing Machinery (ACM)
- Association for Computing Machinery - SIG for CS Education (SIGCSE)
- Computer Science Teachers Association (CSTA)
- CS4TX - East Texas Regional Co-chair
- International Society for Technology in Education (ISTE)
- International Society for Technology in Education - Computer Science Network (ISTE CSN) Leadership Team
- Phi Delta Kappa Professional Education Fraternity
- Texas Association of College Teachers (TACT)
- Texas Alliance of Computer Science Educators (TASCE)
- Texas Computer Education Association (TCEA) - Distinguished Life Membership

Awards and Honors

Lecil and Barbara Chandler Professor of Computer Science, 2008-2015.

US President's Volunteer Service Award (Silver Medal), 2011.

UT System Chancellor's Council Outstanding Teaching Award, 2005-2006.

Finalist, UT Chancellor's Council Outstanding Teaching Award, 1992.

Alpha Chi Honor Society Outstanding Teaching Award, 1991, 1992, 2000, 2001, 2003, 2004, 2006, 2012.

The University of Texas at Tyler Piper Professor Nominee, 1990.

College of Sciences and Math Piper Professor Nominee, 1989, 1990.

Awards and Honors

Faculty Mentor, Louis Stokes LSAMP Summer Bridge Program, 1995-2000.
Campus Co-PI and Director, UT System LSAMP Student Program, 2001-2016.
Faculty Advisor, Epsilon Delta Pi, UT Tyler, 1989-1991, 1999-2003.
Faculty Co-Advisor, ACM Student Chapter, UT Tyler, 1999-2003.
Commencement Speaker, UT Tyler Summer Graduation, August, 2000.

Certifications or Professional Registrations

Texas Professional Secondary Teaching Certification: Mathematics
Texas Professional Secondary Teaching Certification: French

Courses Taught from Computer Science and Mathematics Curricula

Lower-Division

Advanced College Algebra
Applied Mathematics I and II
Applied Trigonometry
College Algebra
Computer Organization
Data Structures and Algorithms (Pascal, C/C++, Java)
Foundations of Computer Science
Intermediate College Algebra
Introduction to Computer Science
Introduction to Modern Mathematics I
Introduction to Modern Mathematics II
Plane Trigonometry
Programming Fundamentals (C/C++)
The Object-Oriented Paradigm (C/C++, Java)

Upper-Division

Advanced Commercial Applications (Advanced COBOL and IBM JCL)
Assembly Language Programming (IBM System/370)
Computer Organization
Commercial Applications Programming (COBOL)
Comparative Study of Programming Languages (Pascal, C/C++, LISP, Ada)
Compiler Techniques
Computer Architecture
Data Communications and Computer Networks
Data Structures (PL/I, Pascal, C)
Design and Analysis of Algorithms
FORTRAN Applications Programming
Information Systems Design Project
Computer Science Capstone Project

Upper-Division (continued)

Information Systems Software (MS Word, Excel, Access, PowerPoint)
Mathematical Analysis
Object-Oriented Abstraction and Design (C++, Java)
Operating Systems
Personal Computing (BASIC, QBASIC, Visual BASIC)
PL/I Programming Applications
Seminar in Computer Science: Algorithms and Data Structures in C
Statistics
Structured Programming Applications (C, C++, Pascal)
Undergraduate Internship Program
Independent Study in Computer Science

Graduate

Computer Assisted Instruction
Data Communications and Networks
Programming Languages
Independent Study in Computer Science
Operating Systems
Personal Computing
Research Methods/Project
Selected Topics in Mathematics: Using Technology in Secondary Math
Software Engineering
The UNIX Programming Environment
Thesis
Thesis Research
Topics in Computer Science
Workshop in Computer Science: Teaching Computer Science in College
Workshop in Computer Science: Teaching Practices in C/C++