Stephen Bryant Rainwater
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The University of Texas at Tyler
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Educational Background

1989	EdD	Texas A&M University-Commerce, Commerce, Texas
		Major: Supervision, Curriculum, and Instruction
		Secondary and Higher Education
		Minor: Computer Science

1987	MS	Texas A&M University-Commerce, Commerce, Texas
		Major: Computer Science

1977	MS	Stephen F. Austin State University, Nacogdoches, Texas
		Major: Mathematics
		Minor: Statistics

1975	BS	Stephen F. Austin State University, Nacogdoches, Texas
		Major: Mathematics
		Minor: French

Professional Experience

2007-2011,
2018-2022   **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. Management included direction of three undergraduate degree programs (CS, CIS, IT) and one graduate program (MSCS). Also budget authority for annual operating budget exceeding $1 million.

1993-present   **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, service 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

Huang, Y., Hou, B., Liu, W., Wu, L., Rainwater, S., & Gao, S. 2021. "On Approximation Algorithm for the Edge Metric Dimension Problem". *Theoretical Computer Science* 853 (A+), pages 2-6.

Villalobos, C., Shenberger-Trujillo, J. M., Gorbett, D. M., Rodriguez, S. E., Arciero, A. V., Dawson, K. Y., Delk, G., Rainwater, S. B., Sifuentes, J., Flores, B. C. 2020. UT System LSAMP: (2019) Planning for remote summer research experience during COVID-19. *The Chronicle of Mentoring and Coaching*, 4(13), 448-451.

Publications (continued)
_____

Huang, Y., Hou, B., Liu, W., Wu, L., Rainwater, S., & Gao, S. 2019.
    On Approximation Algorithm for the Edge Metric Dimension Problem.
    Proceedings of Algorithmic Aspects in Information and Management
    (AAIM) 2019. Beijing, China.

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.

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, pg 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.

<u>Publications</u> (continued)

Rainwater, Stephen B. 2006. "From the TCEA President." *TechEdge*,
Texas Computer Education Association. 25(4), Summer 2006, pg 5.

Rainwater, Stephen B. 2006. "From the TCEA President." *TechEdge*,
Texas Computer Education Association. 25(3), Spring 2006, pg 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 International Network
of Educational Technology (INET) Conference*.

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*.

Publications (continued)

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.

Submitted for Publication

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 39th ACM Technical Symposium on
     Computer Science Education*.

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 37th 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

https://www.uttyler.edu/files/cosc3355/animations/

Computer Science Animations and Web Software Publications (continued)

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.

"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.

Conference Presentations (continued)

"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.

"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.

Conference Presentations (continued)

"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 Program-
    mable 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.

"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.

Conference Presentations (continued)

"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
    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.

"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 $75,000 - 2017-2022

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: S**tudents and **T**eachers **E**ngaged in **L**earning **L**ogic **A**nd **R**easoning in **N**orth**E**ast **T**exas." Proposed funding of $595,060.

Rainwater, Stephen B. and Ronald S. King. 2002. Texas Technology Workforce Development Grant Program (TETC). "Project **STELLAR: S**uccess **T**hrough **E**nhancement of **L**aboratories, **L**ogical thinking, **A**nd **R**ecruitment." 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

<u>Newspaper and Television Interviews</u> (continued)

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

<u>Public Testimony</u>

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

1996 "Developing Logic and Analysis Skills" - Kilgore College

Consulting (continued)

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

Consulting (continued)

Principal Evaluator – Texas Education Agency Grants Program: "Texas High School Completion and Success Grant – Tyler Independent School District – 2005

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

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

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

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

Activities and Leadership in Professional and Community Organizations

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.

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 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.

Activities and Leadership in Professional and Community Organizations

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
Ad Hoc Committee for University Faculty Evaluation
Faculty Representative - Goldwater Scholarship Program
Faculty Representative - Udall Scholarship Program
Faculty Senate – Junior Senator for School and Science and Mathematics
Faculty Senate – Senior Senator for School and Science and Mathematics
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 Chairs Council
University Commencement Committee - *Chair*
University Committee on Status of Women and Minorities
University Council for Educator Preparation Programs
University Council of Chairs, Deans, and Administration
University Faculty Awards Committee

University and Faculty Senate Committees (continued)

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

Soules COB Leadership Council
CBT Student Awards and Scholarship Committee
CBT Tenure and Promotion Committee
CECS Strategic Planning Committee
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*
Soules College of Business Leadership Council

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)
- International Society for Technology in Education (ISTE)
- ISTE Computer Science Network (ISTE CSN) Leadership Team
- Phi Delta Kappa Professional Education Fraternity
- Texas Association of College Teachers (TACT)
- Texas Computer Education Association (TCEA) - Distinguished Life Member and Past President

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.

Faculty Mentor, Louis Stokes LSAMP Summer Bridge Program, 1995-2000.

Campus Co-PI and Director, UT System LSAMP Student Program, 2001-2022.

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

<u>Lower-Division</u>

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 Information Systems Software (MS Office)
Introduction to Modern Mathematics I
Introduction to Modern Mathematics II
Plane Trigonometry
Programming Fundamentals (C/C++)
The Object-Oriented Paradigm (C/C++, Java)

<u>Upper-Division</u>

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
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

Courses Taught from Computer Science and Mathematics Curricula

<u>Graduate</u>

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++