SUSAN A. MENGEL, Ph.D. **CURRICULUM VITAE**
Texas Tech University
Computer Science
211 Engineering Center, Box 43104
Lubbock, TX 79409-3104
Work: (806) 742-3527
Fax: (806) 742-3519
E-Mail: susan.mengel@ttu.edu

RESEARCH INTERESTS
- Information Retrieval
- Computer Security
- K-12 Outreach
- Computer Science Education

DEGREES
- Ph.D., Texas A&M University, Computer Science, 1990, Dissertation: *Using Neural Networks to Predict Student Behavior in Intelligent Tutoring Systems*
- M.S., Oklahoma State University, Computer Science, 1984, Thesis: *Lexicon Design in a German Natural Language System*
- B.S., Central Oklahoma University, Computer Science, 1982

CERTIFICATIONS
- IEEE Certified Software Development Professional

WORK EXPERIENCE
- **Computer Science, Texas Tech University, Box 43104, Lubbock, TX 79409-3104**

Degree Programs	Nonsubstantive Change Degree Program Proposal, Master of Science Degree in Software Engineering, Texas Higher Education Coordinating Board, Led by Donald J. Bagert and with William M. Marcy, Submitted June 16, 1998, Approved January 1, 1999
Courses Developed	CS 5331/5332 Special Problems • Machine Learning and Information Security • Data Mining • Human Computer Interaction – became CS 3366 Human Computer Interaction • Information Retrieval – became CS 5364 Information Retrieval • Information Security • Intelligent Web • Machine Learning and Information Security • Semantic Web • Social Media Mining • Software Metrics – became CS 5364 Software Metrics, changed to Software Quality Assurance and Testing • Swarm Intelligence
	CS 5355 Real Time and Time Sharing Systems CS 5362 Software Specification and Design, changed to CS 5373 Software Modeling and Architecture CS 5363 Software Engineering Systems, changed to Software Project Management CS 5364 Information Retrieval CS 5369 Web-Based Software Systems CS 5392 Reinforcement Learning
Courses Taught (Grad)	CS 5358 Software Studio I CS 5359 Software Studio II CS 5368 Intelligent Systems CS 5381 Analysis of Algorithms
Courses Taught (Undergrad)	CS 2382 Discrete Computational Structures – Now CS 1382 Discrete Computational Structures CS 1462 Fundamentals of Computer Science I (lab) – Now CS 1411 Programming Principles I CS 1412 Programming Principles II CS 2413 Data Structures CS 2365 Object-Oriented Programming

	CS 3365 Software Engineering I CS 3368 Introduction to Artificial Intelligence CS 4365 Software Engineering II CS 4000 Special Topics on Human Computer Interaction CS 4000 Special Topics on the Intelligent Web CS 4331 Special Topics on Data Mining CS 4331 Special Topics on Deep Learning CS 4331 Special Topics on Information Security CS 4331 Special Topics on Machine Learning and Information Security CS 4331 Special Topics on Social Media Mining
Courses Taught (Non-CS)	IS 1100 Tech Transition: Freshman Seminar ENGR 1315 Introduction to Engineering
Positions	Associate Professor, September 2002 – Present Undergraduate Program Coordinator, January 2025 - Present MSSE Program Coordinator, June 2013 – August 2016 Associate Chair of Graduate Studies, January 2009 – February 2012 Assistant Professor, September 1996 – August 2002

- **Computer Systems Engineering Dept., University of Arkansas, Fayetteville, AR 72701-1201**

Courses Developed	CSEG 4323 Object Oriented Design with Applications CSEG 5083 Computer Communications Networks CSEG 501V Cooperative Robotics
Courses Taught (Grad)	CSEG 5003 Introduction to Artificial Intelligence CSEG 5023 Software Engineering I CSEG 5801 Seminar
Courses Taught (Undergrad)	CSEG 2753 Computational Algorithms CSEG 3543 Data Structures Applications CSEG 3933 A Programmer's Introduction to C CSEG 3943 Engineering Applications of C Programming CSEG 4513 Mini-Micro Operating Systems CSEG 4553 Computer Organization and File Structure CSEG 4573 Senior Design Project
Positions	Assistant Professor, August 1991 – May 1996 Adjunct Assistant Professor, Electrical Engineering, February 1993 - December 1996

- **Dept. of Computer Science, Texas A&M University, College Station, TX 77843-3112**

Courses Taught (Undergrad)	CPSC 120H Programming II (Honors) CPSC 203C Introduction to Computing CPSC 210 Data Structures CPSC 311 Analysis of Algorithms CPSC 320 Artificial Intelligence CPSC 410 Operating Systems CPSC 432 Programming Language Design CPSC 434 Compiler Design
Positions	Lecturer, January 1989 - August 1991 Research Associate, February 1988 - January 1989 Lecturer, September 1986 - May 88 Graduate Assistant Research, June 1986 - August 1986 Graduate Assistant Teaching, August 1984 - May 1986

- **Dept. of Computer Science, Oklahoma State University, Stillwater, OK 74078**

Courses Taught (Undergrad)	COMSC 2113 Computer Programming I Lab COMSC 2123 Computer Programming II COMSC 3334 Procedures and Algorithmic Processes
Positions	Teaching Assistant, August 1982 - July 1984

- **Dept. of Institutional Research, Central State University (now Central Oklahoma University), Edmond, OK 73034**

Positions	Computer Programmer, May 1980 - December 1980 Research Analyst, May 1979 - May 1980

FELLOWSHIPS

- **E-Learning Faculty Fellowship, E-Learning, Texas Tech University, September 1, 2022 – May 31, 2023.** Investigated and recommended autograding platforms for programming at the undergraduate and graduate levels, developed example assignments and tutorials for undergraduate introductory programming, wrote a proposal to TTU E-Learning to offer the TTU Department of Computer Science Master of Computer Science, Master of Secure and Software Engineering, Security Certificate, and Software Engineering Certificate at the new Dallas/Fort Worth TTU E-Learning Center with three Professor-of-Practice new hires.
- **Army Summer Research Program, Training Doctrine Analysis Center (TRAC), White Sands Missile Range, New Mexico, May 11, 1998 – July 31, 1998.** Worked in TRAC under Carrol Denney, Chief of the Models Support Division in the Brigade Models and Simulations Directorate, on building an object model for COMBATXXI, the successor to CASTFOREM, a discrete stochastic simulation for analytical evaluation of combat from the brigade level to the individual soldier level.
- **NASA Summer Faculty Fellowship, Jet Propulsion Laboratory, Pasadena, CA, June 9, 1997 - August 15, 1997**. Worked in the Software Assurance Group under Tuyet-Lan Tran on cost prediction, reliability analysis, and risk analysis metrics for spacecraft software.
- **NASA Summer Faculty Fellowship, Jet Propulsion Laboratory, Pasadena, CA, June 10, 1996 - August 16, 1996**. Worked in the Software Assurance Group under the direction of Tuyet-Lan Tran to model and validate spacecraft systems.

CONSULTING

- **Scott Laboratories, 3414 22nd, Lubbock, TX 79410.** Helping to establish a software process for FDA pre-market approval of a Class III medical device and working on the software implementation of the Vigilant Care System for patient pain and fear management, April 1999 – August 1999.

SELECT GRANTS

- **Principal Investigator**
  - PI with Co-PI Lisa Gittner (Public Health, TTU), Hafiz Khan (Public Health, TTU), Ravi Vadapalli (HPCC, TTU), "Virtual Secure Big Data Analysis Prototype System", NSF CAC Award # 1238338, Proposal 2017-TTU-4, submitted 4/23/2018, grant of $10,000, May 1, 2018 to December 31, 2021.
  - PI with Co-PI Lisa Gittner (Political Science, TTU), Hafiz Khan (Public Health, TTU), Ravi Vadapalli (HPCC, TTU), "Secure Big Data Prototype", NSF CAC Award # 1238338, Proposal 2017-TTU-4, submitted 4/24/2017, grant of $10,000, May 1, 2017 to April 30, 2018.
  - PI, "Promoting Female Diversity in Computer Science", Haliburton Foundation, 2015, $10,000, submitted 6/11/2015, unfunded.
  - PI, "Energizing Outreach in Computational Thinking for Middle School Students", Haliburton Foundation, 2015-2016, $20,750, submitted 6/11/2015, unfunded.
  - PI with CO-PI's Tanya Karp (Electrical & Computer Engineering, TTU), Brock Williams (Mathematics & Statistics, TTU), Jeremiah Dwyer (STEM-CORE, TTU), Tyler Davis (Psychology, TTU). "Computational Thinking Assessment in STEM Variants of the MyCS Curriculum", National Science Foundation, STEM+C, 2015-2017, $1,105,729, submitted 04/14/2015, unfunded.
  - PI with Co-PI's Noe Lopez-Benitez (Computer Science, TTU), Yong Chen (Computer Science, TTU), Dean Fontenot (T-STEM Center, TTU), and Ravi Vadapalli (High Performance Computing Center, TTU). "CS 10K: Enhancing Computational Thinking through CS Principles for Secondary School Teachers", National Science Foundation, 2013-2015, $1,000,000, unfunded.
  - Graduate School Recruitment Funds, 2010 (1 assistant spring/summer 2011), 2011 ($42,246, unfunded).
  - Mekong 1000 Fellowship, Can Tho University, Viet Nam, $54,000, 2009-2013.
  - 2010 Doctoral and Master's Initiatives, TTU Graduate School, $59,200, 2010-2014.
  - Dean's Fellowship, TTU College of Engineering, 3 in 2009-2014, 1 in 2011-2016.
  - Texas Tech University, "COMBATXXI Design", Training Doctrine Analysis Center, White Sands Missile Range, grant of $56,279, Account #1453-44-0146, September 1998 – May 1999.
- **Co-Principal Investigator**
  - Co-PI with Abdul Serwadda (Computer Science, TTU), Build Back Better Regional Challenge – Cybersecurity Training, U.S. Economic Development Administration, grant of $2,060,000 in two phases as part of a larger overall submission for Texas Tech University, submitted 10/31/2021, unfunded.
  - Co-PI with Sumaiya Shomaji (Computer Science, TTU), Collaborative Research: IUSE:HER: AI Education for All through Coherent Integration of Foundational Concepts into Core Courses, National Science Foundation, grant of $200,000, submitted 7/21/2021, unfunded.

- Co-PI with Yong Chen (Computer Science, TTU), Brian Ancell (Geosciences, TTU), Alan Sill (HPCC, TTU), Tommy Dang (Computer Science, TTU), Lisa Gittner (Public Health, TTU), Dy Le (IMMS, TTU), Phase II IUCRC Texas Tech University: Center for Cloud and Autonomic Computing, NSF Award CNS-1939140, grant of $500,000, 2020-2025.
- Co-PI with Abdul Serwadda (Computer Science, TTU), Fang Jin (Computer Science, TTU), Faith Maina (Curriculum & Instruction, TTU), Julie Smit (Curriculum & Instruction, TTU), RET Site: Applied Data Science for Cyber Security, National Science Foundation, NSF Award #1801734, grant of $600,000, 2/15/2018 – 1/31/2021.
- Co-PI with Atila Ertas (Mechanical Engineering, TTU), Aliakbar Arvandi (internal medicine, TTUHSC), Turgut B. Baturalp (Mechanical Engineering, TTU), Design and Development of Cardiovascular Performance Simulation Platform (CPSP), National Science Foundation, grant of $600,000, submitted 12/17/2018, unfunded.
- Co-PI with Lisa Gittner (Political Science, TTU), Guofeng Cao (Geosciences, TTU), Conrad Lyford (Agricultural & Applied Economics, TTU), Robert Forbis (Political Science, TTU), Katharine Hayhoe (Political Science, TTU), Heat mitigation policies effect on elderly diabetics outcomes, National Institutes of Health (R01-Series), grant of $1,850,295, submitted 10/5/2018, unfunded.
- Co-PI with PI Atila Ertas (Mechanical Engineering, TTU), Elizabeth Karam (Management, TTU), Patricia Maloney (Sociology, Anthropology, and Social Work), Heather Greenhalgh-Spencer (Curriculum and Instruction, TTU), DCL INCLUDES: Transforming Graduate STEAM-H Education for the 21st Century Transdisciplinary Integrated Graduate Training Program (TD-IGTP) in Science, Engineering, and Business, National Science Foundation, grant of $299,584, submitted 4/16/2018, unfunded.
- Co-PI with Lisa Gittner (Political Science, TTU), Guofeng Cao (Geosciences, TTU), Conrad Lyford (Agricultural & Applied Economics, TTU), Robert Forbis (Political Science, TTU), Heat mitigation policies effect on elderly diabetics outcomes, National Institutes of Health, grant of $688,431, submitted 3/1/2018, unfunded.
- Co-PI with Conrad Lyford (Agricultural & Applied Economics, TTU), Lisa Gittner (Political Science, TTU), Wilna Oldewage-Theron (Nutritional Sciences, TTU), Hafiz Khan (Public Health, TTU), Wonjung Oh (Human Development & Family Studies, TTU), Developing Serious Games for Early Childhood Obesity Prevention, President's Collaborative Research Initiative, Texas Tech University, $50,000, submitted 6/21/2017, unfunded.
- Co-PI with PI Atila Ertas (Mechanical Engineering, TTU), Alan A. Barhorst (Mechanical Engineering, TTU), Fethi A. Inan (Educational Instructional Technology, TTU), Patricia Maloney (Sociology, Anthropology, and Social Work), Convergence HTF: Social Innovation in the Era of Career Displacement: A Paradigm Shift in Engineering Education for the Convergent Future, NSF 17-1 IIS Cyber-Human Systems (CHS), $73,833, submitted 5/15/2017, unfunded.
- Co-PI with PI Lisa Gittner (Political Science, TTU), Hafiz Khan (Public Health, TTU), Ravi Vadapalli (HPCC, TTU), "Data Aware Risk Modeling", NSF CAC Award # 1238338, Proposal 2017-TTU-5, submitted 4/24/2017, grant of $10,000, May 1, 2017 to April 30, 2018.
- Co-PI with Conrad Lyford (Agricultural & Applied Economics, TTU), Lisa Gittner (Political Science, TTU), Wilna Oldewage-Theron (Nutritional Sciences, TTU), Carlos Carpio (Agricultural & Applied Economics, TTU), Wonjung Oh (Human Development & Family Studies, TTU), Developing Serious Games for Early Childhood Obesity Prevention, Shriver National Institute of Child Health and Human Development, NIH, $439,802, submitted 2-25-2017.
- Co-PI with Conrad Lyford (Agricultural & Applied Economics, TTU), Lisa Gittner (Political Science, TTU), Wilna Oldewage-Theron (Nutritional Sciences, TTU), Carlos Carpio (Agricultural & Applied Economics, TTU), Wonjung Oh (Human Development & Family Studies, TTU), Developing Serious Games for Early Childhood Obesity Prevention, Seed Grant for Interdisciplinary Research, Round 2, Texas Tech University, $147,697, submitted 12-20-2016, unfunded.
- Co-PI with Sueann Lee (Speech & Hearing Science, TTU), The Effect of Animation-Based Learning in Speech Therapy via Telepractice, TTU Presidents' Collaborative Research Initiative, 2015-2016, $50,000, submitted 7-24-2015, funded for $30,000.
- Co-PI with Tanja Karp (Electrical & Computer Engineering, TTU), Zenaida Aguirre-Munoz (Curriculum & Instruction, TTU), Jonathan Ulmer (Agricultural Education and Communications, TTU), Computational Thinking, Computer Science, Robotics, and Other STEM Programs (CCRS), American Honda Foundation, $46,392, submitted 10/2015, unfunded.
- Co-PI with Chiquito Crasto (Biotechnology & Genomics, TTU) and Patrick Reynolds (Pharmacology & Neuroscience, TTU), "Cancer-DGP: A Web Resource of Gene-Drug-Pathway Knowledge of Cancer", TTU Presidents' Collaborative Research Initiative, 2015-2016, $50,000, submitted 7-24-2015, unfunded.
- Co-PI with Autumn Shafer (Public Relations, TTU), Jason Van Allen (Psychology, TTU), Debra Reed (Nutrition, Hospitality, & Retailing (NHR), TTU), Julie Chang (,TTU), Barry McCool (NHR, TTU), "Preventing Obesity in Military Families with Preschool Children: Testing the Operation Jump2Health Intervention Website Using Eye-tracking and Theory-based Psychological Measures", TTU Obesity Research Cluster Grant, 2014-2015, $3,500, submitted 10/27/2014, funded.

- Co-PI with Brock Williams (Mathematics & Statistics, TTU), Jeremiah Dwyer (STEM-CORE, TTU), Bre Harris (Biological Sciences, TTU), Partricia Solis (VP Research, TTU), Raegan Siwatu (Mathematics & Statistics, TTU), Levi Johson (STEM-CORE, TTU), "ITEST Strategies – Computers and Zombies Motivating Students", National Science Foundation, $1,197,117, submitted 11/6/2014, unfunded.
- Co-PI with Ram Iyer (Mathematics & Statistics, TTU), Vittal Rao (Electrical & Computer Engineering, TTU), Brian Nutter (Electrical & Computer Engineering, TTU), Misak Avetisyan (Economics, TTU), Surya Yadav (Information Systems & Quantitative Sciences, TTU), Qing Hui (Mechanical Engineering, TTU), Beibei Ren (Mechanical Engineering, TTU), "Scholarship for Service: CyberDefense of Networked Critical Infrastructure", National Science Foundation, 2015-2020, $2,803,758, unfunded.
- Co-PI with Debra Reed (Nutrition, Hospitality, & Retailing (NHR), TTU), Barry McCool (NHR, TTU), Catherine Jai (NHR, TTU), Jason Van Allen (Psychology, TTU), Hyo Chang (NHR, TTU), Malinda Colwell (Human Development & Family Studies, TTU), Melanie Hart (Health, Exercise, & Sport Science, TTU), Academy of Nutrition & Dietetics Foundation, "Operation Jump2Health: A Web-based Education Intervention with Military Parents", 2014-2016, $58,700, submitted 7/1/2014, unfunded).
- Co-PI with Debra Reed (Nutrition, Hospitality, & Retailing (NHR), TTU), Barry McCool (NHR, TTU), Catherine Jai (NHR, TTU), Jason Van Allen (Psychology, TTU), Hyo Chang (NHR, TTU), Malinda Colwell (Human Development & Family Studies, TTU), Melanie Hart (Health, Exercise, & Sport Science, TTU), General Mills Foundation, $20,000, 2014-2015, submitted 3/14/2014, unfunded.
- Co-PI with Ram Iyer (Mathematics & Statistics, TTU), Brian Nutter (Electrical & Computer Engineering, TTU), Misak Avetisyan (Economics, TTU), Vittal Rao (Electrical & Computer Engineering, TTU), Beibei Ren (Mechanical Engineering, TTU), Qing Hui (Mechanical Engineering, TTU), David Lewis (Political Science, TTU), "SFS:CyberDefenders of National Critical Infrastructure", National Science Foundation, 2014-2019, $3,088,269, submitted 2/11/2014, unfunded.
- Co-PI with Lourdes Juan (Mathematics & Statistics, TTU), Souparno Ghosh (Mathematics & Statistics, TTU), Victoria Howle (Mathematics & Statistics, TTU), and Kent Pearce (Mathematics & Statistics, TTU), "Large-data analysis for STEM undergraduates via hands-on research in machine learning", National Science Foundation, 2013-2018, $1,230,096, submitted 1/31/2013, unfunded.
- Co-PI with Debra Reed (Nutrition, Hospitality, and Retailing (NHR, TTU), Malinda Colwell (NHR, TTU), Barry McCool (NHR, TTU), Catherine Jai (NHR, TTU), "Head Start to Health - A Web-based Approach for Preschool Parents, Teachers, and Children", The Sackler Institute for Nutritional Sciences, 2013, $50,000, unfunded.
- Co-PI with Yong Chen (Computer Science, TTU), "Faculty Diversity Grant: Broadening Diversity in Computing at Texas Tech University", TTU Division of Diversity, Equity, & Community Engagement, 2013, $2000, unfunded.
- Co-PI with PI Debra Reed (Nutritional Sciences, TTU) and Co-PI's Mallory Boylan (Nutrition, Hospitality, and Retailing, TTU), Malinda Colwell (Human Development and Family Studies, TTU), Barry McCool (Nutritional Sciences), Du Feng (Human Development and Family Studies, TTU), Della Frye (LISD). "Head Start to Health: A Web-based Approach", Texas Department of Agriculture, $50,000, unfunded. (even though unfunded, Dr. Reed paid 2 computer science students to develop the nutrition web site and games for children to learn nutrition and some about computational thinking during Summer 2012)
- Co-PI with Tim Dallas (Electrical Engineering, TTU). "TUES Phase II: MEMS in the Cloud: An Internet Accessible Educational Laboratory", National Science Foundation, 2012-2015, $599,927, unfunded.
- Co-PI with Noe Lopez-Benitez (Computer Science, TTU), Yong Chen (Computer Science, TTU), Andrea D. Fontenot (T-STEM Center, College of Engineering, TTU), Ravi Vadapalli (High Performance Computing Center, TTU). "CNS Planning Grant: Scalable Pathways to Increase Computational Competencies in High School and Early Undergraduate Programs", National Science Foundation, 2012, $169,173, unfunded.
- Co-PI with James M. Gregory (Associate Dean, College of Engineering, TTU). "Integrated, Seamless, Education System to Recruit and Retain Students", Technology Workforce Development Grant Program, Texas Higher Education Coordinating Board, grant of $174,146, partially funded and awaiting additional funds, January 2004 – March 2007.
- Became Co-PI after Dr. Bagert left (August 2002), with PI James M. Gregory (College of Engineering, TTU), Co-PI Donald Bagert (Computer Science, TTU), Lloyd Heinze (Petroleum Engineering, TTU). "Efficient, Cost-Effective, Seamless, Advising Process to Increase CS Graduates"; Technology Workforce Development Grant Program, Texas Higher Education Coordinating Board; grant of $285,474 over 1 year and 8 months, January 2002 - August 2003.
- With Principal Investigator Michael J. Lutz (SE, Rochester Institute of Technology), Co-PI Michael McCracken (CS, Georgia Institute of Technology), Investigator Tom Hilburn (CS, Embry Riddle Aeronautical University), Investigator Greg Hislop (Assoc. Dean, Drexel University), and Mike Sebern (CS, University of Milwaukee), "SWENET – The Network Community for Software Engineering Education", National Science Foundation, Division of Engineering Education and Centers, grant of nearly $500,000 over 3 years, $55,745 to Texas Tech,

$46,260 in cost sharing from Texas Tech, total of $102,005 for the Texas Tech work, December 2000 – November 2002.
    - With Principal Investigators Don Bagert (CS, TTU) and Surya Yadav (ISQS, TTU) and Co-Principal Investigators John Antonio (CS, TTU), Bharti Temkin (CS, TTU), Bill Marcy (CS, TTU), James Burns (ISQS, TTU), and Dena Johnson (ACCT, TTU), "Software Engineering Research, Training, and Education Center", Texas Tech University, $50,000 from Texas Tech University, approved July 1998, funding began Fall 2000/Spring 2001.
- **Other**
    - Senior Personnel with Yong Chen (Computer Science, TTU), Alan Sill (Managing Director, High Performance Computing Center, Physics, TTU), Stephen Bayne (Electrical and Computer Engineering, Vice Chancellor for Innovation and Collaboration, TTU), Yu Zhuang (Computer Science, TTU), Tommy Dang (Computer Science, TTU), Argenis Bilbao (Senior Director of the GLEAMM Center, Electrical and Computer Engineering, TTU), Category II: REPACSS: Empowering Scientific Discovery through Renewable Energy Powered Advanced Computing Systems and Services, NSF Award Number 2404438, $500,000 out of $12,000,000, 2024-2029.
    - Senior Personnel with Akbar Siami Namin (Computer Science, TTU), Abdul Serwadda (Computer Science, TTU), Sunho Lim (Computer Science, TTU), Changzhi Li (Electrical and Computer Engineering, TTU), Ali Nejat (Civil, Environmental, and Construction Engineering, TTU), Bashir Morshed (Computer Science, TTU), Yu Zhuang (Computer Science, TTU), Victor Sheng (Computer Science, TTU), "Center for CyberSecurity of Integrated Exposure Sensing and Response Technologies (CIERTO), HBCU/MSI, United States Department of Defense, $10,000,000, 2023-2028, unfunded.
    - Senior Personnel with Tim Dallas (Electrical & Computer Engineering, TTU), Kelli Frias (Marketing, TTU), Heather Greenhalgh-Spencer (Curriculum & Instruction, TTU), Victoria Coverstone (Mechanical Engineering, TTU), Stephen Bayne (Electrical & Computer Engineering, TTU), Richard Gale (Electrical & Computer Engineering, TTU), Michelle Pantoya (Mechanical Engineering, TTU), Brian Nutter (Electrical & Computer Engineering, TTU), Argyres Pitsilides (Rawls College of Business, TTU), Carla Lacerda (Chemical Engineering, TTU), Changzhi, Li (Electrical & Computer Engineering, TTU), Beibei Ren (Mechanical Engineering, TTU), Audra Morse (Civil Engineering, TTU), S-STEM Track 2: Tech Innovators and Entrepreneurs Scholarship Program, National Science Foundation, $999,995, submitted 3/29/2017, unfunded.
    - Senior Personnel with Tim Dallas (Electrical & Computer Engineering, TTU), Audra Morse (Civil Engineering, TTU), Jennifer Wilhelm (STEM Education, Univ. of Kentucky), Stephen Bayne (Electrical & Computer Engineering, TTU), Richard Gale (Electrical & Computer Engineering, TTU), Tanja Karp (Electrical & Computer Engineering, TTU), Carla Lacerda (Chemical Engineering, TTU), Michelle Pantoya (Mechanical Engineering, TTU), Brian Nutter (Electrical & Computer Engineering, TTU), Beibei Ren (Mechanical Engineering, TTU), Argyres Pitsilides (Rawls College of Business, TTU), Jennifer (Farris) Cross (Industrial Engineering, TTU), Changzhi, Li (Electrical & Computer Engineering, TTU), Mackenzie Hamilton (Engineering Opportunities Center, TTU), Jamie Perez (Engineering Opportunities Center, TTU), S-STEM: Scholarships to Prepare Students for Careers in Semiconductors, Transportation, Energy, and Manufacturing, National Science Foundation, $1,000,000, submitted 9/22/2015, unfunded.
    - With PI Debra Reed (Nutrition, Hospitality, and Retailing (NHR, TTU), Malinda Colwell (NHR, TTU), Barry McCool (NHR, TTU), Co-PI Catherine Jai (NHR, TTU), " Jump2Health: A Web-based Approach ", TTU Internal Competition for CPRIT High Impact, 2013, unfunded.
    - With PI Debra Reed (Nutrition, Hospitality, and Retailing (NHR, TTU), Malinda Colwell (NHR, TTU), Barry McCool (NHR, TTU), Co-PI Catherine Jai (NHR, TTU), " Jump2Health: A Web-based Approach ", RGK Foundation, 2013, unfunded.
    - Evaluator, with PI Tim Dallas (EE, TTU). "The 18mm2 Laboratory", National Science Foundation, CCLI, $150,000, January 2009 to December 2010.
    - With James Gregory, Donald Bagert, and Lloyd Heinze. Servers for the Development of Innovative Software Tools for Engineering Education. Texas Higher Education Coordinating Board Texas Infrastructure Program (part of a larger grant obtained by Texas Tech University), $24,000, 1 September 2001 to 31 August 2002.
    - Senior Associate, with PI Stephan J. Maas (Plant & Soil Science, TTU), Co-PI Robert J. Lascano (Texas Agriculture Experiment Station), Co-PI Daniel E. Cooke (CS, TTU), Senior Associates Clarence W. Richardson (USDA-ARS), Dan R. Upchurch (USDA-ARS), Daniel R. Krieg (TTU), Kevin Bronson (TAES), William A. Payne (TAES), Charles M. Rush (TAES), Donald Wanjura (USDA-ARS), Donald J. Bagert (CS, TTU). "YieldTracker: A Yield Mapping and Prediction Information Delivery System"; Initiative for Future Agriculture and Food Systems (IFAFS); Application of Precision Technologies 14.4; United States Department of Agriculture Cooperative State Research, Education, and Extension Service; grant of $800,606 over 4 years, approximately $250,000 for the Computer Science work, September 2000 – August 2003.

PUBLICATIONS

BOOK

- S. Mengel and Peter J. Knoke, eds. *Proceedings of the 13th Conference on Software Engineering Education and Training*. Los Alamitos, CA: IEEE Computer Society, 2000.

BOOK CHAPTER

- S. Mengel, James M. Conrad, *Lance Hankins*, and *Roger Moore*. "Getting Robots to Cooperate so They can Teach Students," in James M. Conrad and Jonathan Mills, eds. *Stiquito: Advanced Experiments with a Simple and Inexpensive Robot*. Los Alamitos, CA: IEEE Computer Society Press, Chapter 14, pp. 227-255, 1998 (ISBN 0-8186-7408-3).

JOURNAL PUBLICATIONS

- Hojati, Elham, Alan Sill, Susan Mengel, Sayed Mohammad Bagher Sayedi, Argenis Bilbao, and Konrad Schmitt. "A Comprehensive Monitoring, Visualization, and Management System for Green Data Centers." *IEEE Systems Journal* (2025).
- Cook, P., Mengel, S., Parameswaran, S. (2024). Navigating" Wicked Problems" in Public Policy: The Power and Promise of Using SHAMROQ's Transdisciplinary Approach to Find Regulatory Text Patterns–A Mixed Method Study. Transdisciplinary Journal of Engineering & Science, 15, 153-175.
- Chhetri, Sagar, Dongping Du, and Susan Mengel. "Project portfolio reliability: a Bayesian approach for LeAgile projects." Engineering Management Journal 35, no. 3 (2023): 223-236.
- Cook, P., Mengel, S., Parameswaran, S. (2023). SHAMROQ: A Software Engineering Methodology to Extract Deontic Expressions from the Code of Federal Regulations-A Single-Case, Embedded Case Study. International Journal of Software Engineering and Knowledge Engineering, 33(11 & 12), 1787-1812.
- Mailewa, Akalanka, Susan Mengel, Lisa Gittner, and Hafiz Khan. "Mechanisms and Techniques to Enhance the Security of Big Data Analytic Framework with MongoDB and Linux Containers." Array 15 (2022), 100236 (pp. 1-18).
- Woolley, B., Mengel, S. "Controlling the Complexity of Hierarchical Scheduling Frameworks – An MBSE Approach." Transdisciplinary Journal of Engineering & Science, 12 (2021), 119-135.
- Denard, Samuel, Atila Ertas, Susan Mengel, and Stephen Ekwaro-Osire. "Development Cycle Modeling: Process Risk." Applied Sciences 10, no. 15 (2020): 5082.
- Denard, Samuel, Atila Ertas, Susan Mengel, and Stephen Ekwaro-Osire. "Development Cycle Modeling: Resource Estimation." Applied Sciences 10, no. 14 (2020): 5013.
- Woolley, Brandon, Susan Mengel, and Atila Ertas. "An Evolutionary Approach for the Hierarchical Scheduling of Safety- and Security-Critical Multicore Architectures." Computers 9.3 (2020): 71.
- Dissanayaka, Akalanka Mailewa, Susan Mengel, Lisa Gittner, and Hafiz Khan. "Security assurance of MongoDB in singularity LXCs: an elastic and convenient testbed using Linux containers to explore vulnerabilities." Cluster Computing 23.3 (2020): 1955-1971.
- Stroud, R., Ertas, A., Mengel, S. (2019). Application of Cyclomatic Complexity in Enterprise Architecture Frameworks. IEEE Systems Journal, 13 (3), 2166-2176.
- Cloutier, A., Yew, G. Z., Gupta, S., Dissanayake, C., Monaco, P., Mengel, S., Morse, A. (2018). Modification and Assessment of a Residential Summer Program for High School Women. Journal of Pre-College Engineering Education Research (J-PEER), 8(2), 10-21.
- *Soma Datta* and Susan Mengel. "Adaptable Multi-Phase Rules Over the Infrequent Class", Springer Soft Computing, 22 (18), 2018, pp. 6067-6076.
    - Invited due to good reviews from 2016 3rd International Conference on Soft Computing and Machine Intelligence.
- *Soma Datta* and Susan Mengel. "Multi-Stage Decision Method to Generate Rules for Student Retention", 24th Annual ACM Consortium for Computing Sciences in Colleges Rocky Mountain Conference, Southern Utah University, Cedar City, Utah, October 2-3, 2015, published in Journal of Computing Sciences in Colleges, 31(2), December 2015, pp 65-71.
- James M. Gregory, *Xuepeng Xie*, and Susan A. Mengel. "SLEEP (Sleep Loss Effects on Everyday Performance) Model." Aviation, Space, and Environmental Medicine, vol. 75, no. 3, Section II, pp. A125-A133, 2004.
- Donald J. Bagert and Susan A. Mengel. Developing and Using a Web-Based Project Process Throughout the Software Engineering Curriculum. The Journal of Systems and Software, Special issue on the new context for software engineering education and training, edited by H. Saiedian and B.W. Weide, vol. 74, no. 2, November 2004, pp. 113-120.
- S. Mengel. "Preface to the Special Section on Software Engineering Education and Training," IEEE Transactions on Education, vol. 43, no. 4, November 2000, pp. 370-371.
    - This special section had five papers from the 2000 Conference on Software Engineering Education and Training as recommended by the reviewers. The papers were rewritten for the Journal and reviewed again before publication. I coordinated the entire section and review process.
    - J.H. Andrews and H.L. Lutfiyya. "Experiences with a Software Maintenance Project Course", pp. 383-388.

    - O.P. Brereton, S. Lees, R. Bedson, C. Boldyreff, S. Drummond, P.J. Layzell, L.A. Macaulay, and R. Young. "Student Group Working across Universities: A Case Study in Software Engineering", pp. 394-399.
    - J.S. Collofello. "University/Industry Collaboration in Developing a Simulation Based Software Project Management Training Course", pp. 389-393.
    - J.L. Cybulski and T. Linden. "Learning Systems Design with UML and Patterns", pp. 372-376.
    - G. Tremblay. "Formal Methods: Mathematics, Computer Science, or Software Engineering?", pp. 377-382.
- Tom B. Hilburn, Donald J. Bagert, S. Mengel, Gregory Hislop, Michael Lutz, and Michael McCracken. "Guidance for the Development of Software Engineering Education Programs," *Journal of Systems and Software*, vol. 49, no. 2-3, December 1999, pp. 163-169.
- S. Mengel and William J. Adams. "The need for a hypertext instructional design methodology." *IEEE Transactions on Education,* Special issue on Applications of Information Technologies to Engineering and Science Education, vol. 39, no. 3, August 1996, pp. 375-380.
- S. Mengel and William Lively. "On the use of neural networks in intelligent tutoring systems." *Journal of Artificial Intelligence in Education*, vol. 2, no. 2, Winter 1990/91, pp. 43-56.

REFEREED MAGAZINE PUBLICATIONS

- S. Mengel. "Bumps on the Information Superhighway for K-12 Education." *IEEE Technology and Society Magazine*, vol. 17, no. 4, Winter 1998/1999, pp. 25-28, 44.

REFEREED CONFERENCE PUBLICATIONS

- Tran, Ban Q., Chuong K. Luong, and Susan Mengel, "Quantum Patches for Efficient Learning", The 18th International Conference on Multi-disciplinary Trends in Artificial Intelligence, 2025, accepted.
- Dehaghani, Nahid Binandeh, Ban Tran, A. Pedro Aguiar, Rafal Wisniewski, and Susan Mengel. "Quantum-Assisted Learning of Time-Dependent Parabolic PDEs."
    - IEEE International Conference on Quantum Computing and Engineering, 2025, poster 1288.
    - *arXiv preprint arXiv:2508.17553* (2025).
- Abiola, S., Mengel, S., Sill, A. (2024). Use of low-end single board computer clusters to prototype cluster administration and benchmarking. PEARC 2024 - Practice and Experience in Advanced Research Computing 2024: Human Powered Computing (pp. 3), poster.
- Dissanayaka, Akalanka Mailewa, et al. "Vulnerability Prioritization, Root Cause Analysis, and Mitigation of Secure Data Analytic Framework Implemented with MongoDB on Singularity Linux Containers." Proceedings of the 2020 the 4th International Conference on Compute and Data Analysis, 2020, pp. 58-66.
- Cook, Patrick D., Susan A. Mengal (should be Mengel), and Siva Parameswaran. "SHAMROQ: Towards Semantic Models of Regulations". Proceedings of the 32nd International Conference on Software Engineering and Knowledge Engineering, 2020, pp. 93-100.
- Denard, S., Mengel, S., Ertas, A., Ekwaro-Osire, S. (2019). Development cycle estimation modeling. Proceedings - 2019 IEEE Secure Development, SecDev 2019 (pp. 146).
- Pitalua-Rodriguez, M., Mengel, S., Gittner, L., Khan, H. (2019). Automated Hot-spot Identification for Spatial Investigation of Disease Indicators (pp. 10). IEEE Big Data Service 2019.
- Maina, F., Serwadda, A., Mengel, S., Wairungu, J., Obiero, N. (2019). Introducing Data Science-Cybersecurity Concepts to High School STEM Teachers during an Intensive Six Week Summer Research Experience. Association for the Advancement of Computing in Education (AACE).
- Dissanayaka Mohottalalaga, A. B. M., Mengel, S., Gittner, L., Khan, H. (2018). Dynamic & portable vulnerability assessment testbed with Linux containers to ensure the security of MongoDB in Singularity LXCs (pp. 5). The 2nd International Industry/University Workshop on Data-center Automation, Analytics, and Control.
- Akalanka Mailwea Dissanayaka, Roshan Ramprasad Shetty, Samip Kothari, Susan Mengel, Lisa Gittner, Ravi Vadapalli, "A Review of MongoDB and Singularity Container Security in regards to HIPAA Regulations", Tenth IEEE/ACM International Conference on Utility and Cloud Computing, First International Industry/University Workshop on Data-center Automation, Analytics, and Control, Austin, Texas, 2017, pp. 91-97.
- Roshan Ramprasad Shetty, Akalanka Mailewa Dissanayaka, Susan Mengel, Lisa Gittner, Ravi Vadapalli, Hafiz Khan, "Secure NoSQL Based Medical Data Processing and Retrieval: The Exposome Project", Tenth IEEE/ACM International Conference on Utility and Cloud Computing, First International Industry/University Workshop on Data-center Automation, Analytics, and Control, Austin, Texas, 2017, pp. 99-105.
- Daniel Medina Sada, Susan Mengel, Lisaann Gittner, Hafiz Khan, Mario A. Pitalua Rodriguez, Ravi Vadapalli, "A Preliminary Investigation with Twitter to Augment CVD Exposome Research", Fourth IEEE/ACM International Conference on Big Data Computing, Applications, and Technologies, Austin, Texas, 2017, pp. 169-178.
- Aimee Cloutier, Guo Zheng Yew, Paula Monaco, Chamila Dissanayake, Siddhartha Gupta, Susan Mengel, and Audra Morse, "Modification and Assessment of a Residential Summer Program for High School Women (Evaluation)", 2017 ASEE Annual Conference & Exposition, Columbus, OH, June 25-28, 2017, paper id #20048.

- Soma Datta and Susan Mengel. "Elastic Multi-Stage Decision Rules for Infrequent Class", 2016 3rd International Conference on Soft Computing and Machine Intelligence, Dubai, November 23-25, 2016.
- *Mohammed Feroz* and Susan Mengel. "Phishing URL Detection Using URL Ranking", IEEE Fourth International Congress on Big Data 2015, New York, NY, June 27 – July 2, 2015, pp. 635-638.
- *Raymond Scott Pettit*, John D. Homer, Kayla Michelle Holcomb, Nevan Simone, and Susan Mengel. "Are Automated Assessment Tools Helpful in Programming Courses?", 122nd ASEE Annual Conference & Exposition, June 14-17, 2015, Seattle, WA, 26.230.1-26.230.20.
- *Raymond Pettit*, John Homer, Roger Gee, Susan Mengel, and Adam Starbuck. 2015. "An Empirical Study of Iterative Improvement in Programming Assignments", In Proceedings of the 46th ACM Technical Symposium on Computer Science Education (SIGCSE '15), ACM, New York, NY, USA, 410-415 (105 accepted papers of 289 submitted (36% acceptance rate)).
- *Mohammed Feroz* and Susan Mengel. "Examination of Data, Rule Generation and Detection of Phishing URLs using Online Logistic Regression", IEEE International Conference on Big Data 2014, Washington, DC, October 27-30, 2014, pp. 241-250.
    - 18.5% regular paper acceptance rate
    - 46 regular papers out of 264 submissions
    - IEEE Big Data Student Travel Grant of $800
    - TTU Graduate School Student Travel Grant of $400
- *Randy Ransom* and Susan Mengel. "Direct-Link Crawling Using Similarity Measurements", 13th International Conference on Internet Computing 2012, Las Vegas, NV, July 16-19, 2012, pp. 118-124.
    - TTU Graduate School Student Travel Grant of $200
- *Raymond Pettit*, Ryan Clements, Susan Mengel. "A Process for Collecting and Analyzing Chronological Data for CS1 Programming Assignments", Frontiers in Education 2012, Las Vegas, NV, July 16-19, 2012, pp. 300-306.
- Susan D. Urban, Joseph E. Urban, Susan Mengel, William Marcy, and Patrick Patterson. "The Software and Systems Engineering Master's Program at Texas Tech University: A Computer Science and Industrial Engineering Collaborative Effort ", American Society for Engineering Education 2012, San Antonio, TX, June 10-13, 2012, 25.1346.1 - 25.1346.13.
- *Philip Huffman*, Susan Mengel. "Using Trusted Web Services for Higher Integrity Instrument Control", International Conference on Software and Data Technologies, 2010, 151-156.
- Susan Mengel, *Yaoquin Jing*. "Extracting Structured Data from Web Pages with Maximum Entropy Segmental Markov Model", WISE 2009, pp. 219-226.
- Per Andersen and Susan Mengel. "A Quantitative Study of GUI versus Text-based Object-Oriented Instruction", 2008 38th Annual Frontiers in Education, 2008, S1F-11 - S1F-16.
- James M. Gregory, *Andrew B. Schenck*, and Susan A. Mengel. "Depression: Risk and Management for all Ages." Third Biannual Conference, The Clock is Ticking for Rural America: Behavioral Health and Safety Conference, Sioux Falls, South Dakota, February 12-14, 2007.
- James M. Gregory, *Santhosh Swaminathan*, and Susan A. Mengel. "Avoiding Delays in Graduation: Efficient Education Planner." 2006 ASEE Gulf-Southwest Annual Conference Proceedings, Session T1B2, http://engr.louisiana.edu/asee/Proceedings/37.pdf.
- Per Andersen, Susan Mengel, Ian Scott-Fleming. "A Qualitative Study of GUI versus Text-based Object-Oriented Instruction", Frontiers in Education 2006, Work in Progress Paper, M4E-14 to M4E-15, http:// fie-conference.org /fie2006/index.html.
- *E.P. Morris*, S. Mengel, W. Marcy, and M.G. Beruvides. "Automation and Classification of Literature in a SAM Research Database: A Machine Learning Approach," ASEM Annual Conference Proceedings, CD-ROM, Washington D.C., 2004, 481-487.
- Donald J. Bagert and Susan A. Mengel. "Using a Web-Based Project Process throughout the Software Engineering Curriculum," 25th International Conference on Software Engineering, 2003, pp. 634-640.
- James M. Gregory, *Xupeng Xie*, and Susan Mengel. "Sleep Management: A Frontier for Improved Academic Performance," Proceedings of the 2003 ASEE Gulf-Southwest Annual Conference.
- James M. Gregory, *Xupeng Xie*, and Susan A. Mengel. "Active and Passive Learning Connections to Sleep Management," 33rd Annual Frontiers in Education 2003, T3A-1 to T3A-7.
- James M. Gregory, Lloyd R. Heinze, Donald J. Bagert, and S. Mengel. "E-COACH: A Paradigm Shift for Efficient Advising," 2002 Frontiers in Education, http:// fie-conference.org /fie2002/papers/1263.pdf.
- Donald J. Bagert, James M. Gregory, S. Mengel, and Lloyd Heinze. "Engineering Education Innovation with Software Engineering Projects," 2002 Frontiers in Education, http:// fie-conference.org /fie2002/papers/1475.pdf.
- S. Mengel, Locke Carter, and Joyce Falkenberg. "A Perspective on Three Cooperating Courses," *CSEE&T 2000*, Los Alamitos, CA: IEEE Computer Society, pp. 265-272.
- S. Mengel and Locke Carter. "Multidisciplinary Education through Software Engineering", 1999 Frontiers in Education, November 1999, http://fie-conference.org/fie99/papers/1390.pdf.

- S. Mengel and *Vinay Yerramilli*. "A Case Study of the Static Analysis of the Quality of Novice Student Programs", *Proceedings of the Thirtieth SIGCSE Technical Symposium on Computer Science Education*, New York, NY: ACM, 1999, pp. 78-82.
- S. Mengel and *Joseph Ulans*. "A Case Study of the Analysis of Novice Student Programs", *Proceedings of the Twelfth Conference on Software Engineering Education and Training*, Los Alamitos, CA: IEEE Computer Society, 1999, pp. 40-49.
- Donald J. Bagert, Thomas B. Hilburn, Gregory W. Hislop, and S. Mengel. "Guidelines for Software Education: Meeting the Needs of the 21st Century", 1998 Frontiers in Education, November 4-7, 1998, http://fie-conference.org/fie98/papers/1307.pdf.
- S. Mengel. "Guidelines Proposal For Undergraduate Software Engineering Education", *1998 Frontiers in Education*, November 4-7, 1998, http://fie-conference.org/fie98/papers/1307b.pdf.
- S. Mengel and *Joseph Ulans*. "Using Verilog Logiscope To Analyze Student Programs", *1998 Frontiers in Education*, November 4-7, 1998, http://fie-conference.org/fie98/papers/1168.pdf.
- Thomas B. Hilburn, Donald J. Bagert, S. Mengel, and Dale Oexmann. "Software Engineering Across Computing Curricula", *ITiCSE 98*, New York, NY: ACM, 1998, pp. 117-121.
- S. Mengel, William J. Adams, and Marion O. Hagler. "Using a Hypertext Instructional Design Methodology in Engineering Education", *1997 Frontiers in Education*, November 5-8, 1997, http://fie-conference.org/fie97/papers/1095.pdf.
- S. Mengel. "K12 and the World Wide Web", *1997 Frontiers in Education*, November 5-8, 1997, http://fie-conference.org/fie97/papers/1094.pdf.
- S. Mengel and *Jay Parikh*. "Design and Implementation of a Videoconferencing Tutorial", *1997 Frontiers in Education,* November 5-8, 1997, http://fie-conference.org/fie97/papers/1093.pdf.
- S. Mengel and *Salman Ali*. "A network protocol analyzer with tutorial." *1996 Symposium on Applied Computing*, Philadelphia, PA, February 17-19, 1996, New York, NY: ACM, pp. 115-119.
- S. Mengel and Carl Bowling. "Supporting networking courses with a hands-on laboratory." *Frontiers in Education 1995,* Atlanta, GA, November 1-4, 1995, http://fairway.ecn.purdue.edu/fre/asee/fie95/.
- S. Mengel and *Dan Tappan*. "Program design in file structures." *Frontiers in Education 1995*, Atlanta, GA, November 1-4, 1995, http://fairway.ecn.purdue.edu/fre/asee/fie95/.
- *Trey Grubbs*, *Bill Herring*, *Richard Tan*, and S. Mengel. "Motorola 68040 microprocessor simulation for the SUN Workstation™." *Applied Computing 1994, Proceedings of the 1994 Symposium on Applied Computing*, ACM Press, New York, NY, 1994, pp. 25-30.
- S. Mengel and William Lively. "Using a neural network to predict student responses." *Proceedings of the 1992 ACM/SIGAPP Symposium on Applied Computing: Volume II,* ACM Press, New York, NY, 1992, pp. 669-676.

REFEREED ABSTRACT CONFERENCE PUBLICATIONS

- Mario Pitalua, Susan Mengel, LisaAnn Gittner, Kevin Gittner, Vibhuti Gupta, Aakriti Pyakurel, Yuan Li, Ravi Vadapalli, and Hafiz M. R. Khan, Visualizing Disease Patterns Along I-20 from El Paso to Shreveport. American Public Health Association 2017 Annual Meeting & Expo, November 4-8, 2017, Atlanta, GA.
- Yuan Li, Susan Mengel, LisaAnn Gittner, Mario Pitalua, Vibhuti Gupta, Hafiz M. R. Khan, Kevin Gittner, and Aakriti Pyakurel, Relational Analysis through Graph Data Reduction Technique. American Public Health Association 2017 Annual Meeting & Expo, November 4-8, 2017, Atlanta, GA.
- Aakriti Pyakurel, Vibhuti Gupta, Yuan Li, Bukunmi Oyedeji, Kevin Gittner, Mario Pitalua, Heather Guthrie, Roshan Ramprasad Shetty, Susan Mengel, Hafiz M. R. Khan, and LisaAnn Gittner, Multidisciplinary Preliminary Approach to Systems Thinking for CVD Risk Prevention. American Public Health Association 2017 Annual Meeting & Expo, November 4-8, 2017, Atlanta, GA.
- Kevin Gittner, LisaAnn Gittner, Hafiz M. R. Khan, Mario Pitalua, Susan Mengel, Aakriti Pyakurel, Vibhuti Gupta, and Yuan Li, Contrasting Models of Cardiovascular Disease Prediction: Reevaluating Age Adjusted Variables. American Public Health Association 2017 Annual Meeting & Expo, November 4-8, 2017, Atlanta, GA.
- Yuan Li, Susan Mengel, LisaAnn Gittner, Mario Pitalua, Vibhuti Gupta, Hafiz M. R. Khan, Kevin Gittner, and Aakriti Pyakurel, Relational Analysis through Graph Data Reduction Technique. 2017 AcademyHealth National Health Policy Conference, June 25-27, 2017, New Orleans, LA.
- Aakriti Pyakurel, Vibhuti Gupta, Yuan Li, Bukunmi Oyedeji, Kevin Gittner, Mario Pitalua, Heather Guthrie, Roshan Ramprasad Shetty, Susan Mengel, Hafiz M. R. Khan, and LisaAnn Gittner, Multidisciplinary Preliminary Approach to Systems Thinking for CVD Risk Prevention. 2017 AcademyHealth National Health Policy Conference, June 25-27, 2017, New Orleans, LA.
- Kevin Gittner, LisaAnn Gittner, Hafiz M. R. Khan, Mario Pitalua, Susan Mengel, Aakriti Pyakurel, Vibhuti Gupta, and Yuan Li, Contrasting Models of Cardiovascular Disease Prediction: Reevaluating Age Adjusted Variables. 2017 AcademyHealth National Health Policy Conference, June 25-27, 2017, New Orleans, LA.

- *Gurajada, N.* (Author Only), Reed, D. (Presenter & Author), Colwell, M. (Author Only), Mengel, S. (Author Only), Cholarajan, R. (Author Only), Academy of Nutrition and Dietetics FNCE, Academy of Nutrition and Dietetics, Houston, Texas, "Jump2health- a Web-Based Approach for Preschool Parents," National, peer-reviewed/refereed, published in proceedings. (October 22, 2013)
- Donald J. Bagert, S. Mengel, and James M. Gregory. "Web-Based Software Engineering Student Projects." ASEE Gulf-Southwest Conference, April 2000.
- S. Mengel. "Providing a welcome environment to make mistakes." *Proceedings Frontiers in Education 1994*, IEEE Press, Piscataway, NJ, 1994, pp. 307-308.
- S. Mengel and James M. Conrad. "Motorola™ 68000 family simulators in education." *Proceedings Frontiers in Education 1994,* IEEE Press, Piscataway, NJ, 1994, pp. 106-110.
- David L. Andrews, James M. Conrad, Leonard Schaper, S. Mengel, and Daniel J. Berleant. "Design of a High Speed MIMD Distributed Processor Node Using MCM Technology," *Proceedings of the 1993 International Electronics Packaging Conference,* International Electronics Packaging Society, Wheaton, IL, 1993, pp. 132-139

TECHNICAL REPORTS

- Donald J. Bagert, Thomas B. Hilburn, Greg Hislop, Michael Lutz, Michael McCracken, Susan Mengel. "Guidelines for Software Engineering Education Version 1.0." CMU/SEI-99-TR-032, Software Engineering Institute, Carnegie Mellon University, November 1999.
- *Salman Ali* and S. Mengel. "High-speed network protocols." Technical Report 1995-2, Computer Systems Engineering, University of Arkansas, Fayetteville, AR, 1995.
- James M. Conrad, David L. Andrews, Daniel Berleant, and S. Mengel. "Architectural issues for the University of Arkansas multichip module-based multiprocessor." Technical Report 1993-3, Computer Systems Engineering, University of Arkansas, Fayetteville, AR, 1993.
- *Christopher Smith*, *Cris Jansson*, and S. Mengel. "Addressing the data scaling problem in neural networks." Technical Report 1992-3, Computer Systems Engineering, University of Arkansas, Fayetteville, AR, 1992.
- S. Mengel. "Using LaTeX to write your technical report." Technical Report 1991-1, Department of Computer Systems Engineering, University of Arkansas, Fayetteville, AR, 1991.

REPORTS

- Susan A. Mengel, Margarita A Chi Miranda, Marika Crider, Brittney Cummins, Emily Fritsch, Lisa Gilman, Neetu Jain, Melissa Jones, Amelia King, Kartina Paolini, Darcy Andersen, Assessment Workgroup Monthly Newsletter: SWE COUNTS, SWE Outreach Committee, July 2017-June 2018.
- Susan A. Mengel, Margarita A Chi Miranda, Marika Crider, Brittney Cummins, Emily Fritsch, Lisa Gilman, Neetu Jain, Melissa Jones, Amelia King, Kartina Paolini, Darcy Andersen, Assessment Workgroup Monthly Report, SWE Outreach Committee, July 2017-June 2018.
- Susan A. Mengel, Margarita Chi Miranda, Sowmya Nagesh, Darcy Andersen, Assessment Workgroup Monthly Report, SWE Outreach Committee, July 2016-June 2017.
- Susan A. Mengel, "SWE Needs Analysis for the Outreach Assessment Phone Application and Website", SWE Outreach Assessment Subcommittee, SWE Outreach Committee, 2015.
- Susan A. Mengel, "Jump 2 Health Mobile Website Needs Assessment", Texas Tech University, Nutrition Department, 2015.
- Susan A. Mengel, "Jump 2 Health Mobile Game App Needs Assessment", Texas Tech University, Nutrition Department, 2015.
- James M. Gregory, Susan A. Mengel. "Integrated, Seamless, Education System to Recruit and Retain Students", TWD 2003 Final Report, Texas State Coordinating Board, January 2008.
- James M. Gregory, Susan A. Mengel. "Efficient, Cost-Effective, Seamless, Advising Process to Increase CS Graduates", TWD 2002 Final Report, Texas State Coordinating Board, October 2007.
- James M. Gregory, Susan A. Mengel. "Integrated, Seamless, Education System to Recruit and Retain Students", TWD 2003 or TWD 2005 Annual Report, Texas State Coordinating Board, October 2007.
- S. Mengel, Sue Fitzgerald, Peter Knoke, Andrew McGettrick, and Michael Murphy. "Pedagogy Focus Group 4: Professional Practices Report." Association for Computing Machinery Curriculum 2001, Summer 1999 and December 2000.
    - Used the report to write Chapter 10 on Professional Practice for the IEEE-CS/ACM Computing Curriculum 2001 Computer Science Volume.
- S. Mengel. "CASTFOREM Object Model." U.S. Army Training and Doctrine Command Analysis Center, White Sands Missile Range, New Mexico, May 1999.
- S. Mengel. "COMBATXXI Design." U.S. Army Training and Doctrine Command Analysis Center under the auspices of the U.S. Army Research Office Scientific Services Program administrated by Batelle, TCN 98048, October 1998.

OTHER PUBLICATIONS

- S. Mengel and Peter Knoke, "CSEE&T 2000 - Three Days in March", *Forum for Advancing Software Engineering Education*, vol. 10, no. 5, May 15, 2000.
- S. Mengel, Guest Editor for Clients, Students, and Projects, *Forum for Advancing Software Engineering Education*, vol. 9, no. 8, August 15, 1999.

WORKSHOPS

- S. Mengel, "Building an Assessment Program for K-12 Outreach", Women in Engineering 2017, Society of Women Engineers, Austin, TX, October 26-28, 2017.
- S. Mengel, "Patching Together a Quilt of Short Computer Science Activities for K-12 Outreach", Women in Engineering 2016, Society of Women Engineers, Philadelphia, PA, October 27, 2016.
- S. Mengel (organizer). "Software Metrics: Views from Education, Research, and Training", Twelfth Conference on Software Engineering Education and Training, New Orleans, LA, Wednesday, March 24, 1999. *Proceedings of the Twelfth Conference on Software Engineering Education and Training*, Los Alamitos, CA: IEEE Computer Society, pp. 126-128.

PANELS

- Susan Mengel (panelist), "Cybersecurity: Privacy versus Protection", TTU Division of Institutional Diversity, Equity & Community Engagement, Cross-Cultural Academic Advancement Center, Lubbock, TX, 11-15-2016.

⇒ Ruben Lopez (host)
⇒ Brian Nutter (moderator, Electrical & Computer Engineering, TTU)
⇒ Students: Akalanka Mailewa, Isaac Griswold-Steiner, Ciney Tzapin, David Maldonado, Grant Bowman, Isaiah Allen, Sabrina Benge, Aaron Kite, Eric Ahmadi

- Yuanlin Zhang, Susan Mengel, Alan Mi, Bin Gu, Research Panel Session: Deep Learning, Texas Tech University 2016 Symposium on Big Data, TTU Rawls College of Business, Lubbock, TX, April 29, 2017.
- Renee McCauley, Nell Dale, Thomas Hilburn, S. Mengel, and Branson W. Murrill. "The Assimilation of Software Engineering Into the Undergraduate Computer Science Curriculum", Thirty-First SIGCSE Symposium, Austin, TX, March 2000.
- Donald J. Bagert (moderator), Thomas B. Hilburn, Gregory W. Hislop, Nancy R. Mead, S. Mengel, and Hossein Saiedian. "A Report on the 1999 Conference on Software Engineering and Training." Thirtieth SIGCSE Symposium, New Orleans, LA, Thursday, March 25, 1999. *Proceedings of the Thirtieth SIGCSE Technical Symposium on Computer Science Education*, New York, NY: ACM, 1999, pp. 346-347.

SPECIAL SESSIONS

- Donald J. Bagert, Thomas B. Hilburn, Gregory W. Hislop, and S. Mengel. "Guidelines for Software Education: Meeting the Needs of the 21st Century", 1998 Frontiers in Education, November 4-7, 1998, http://fairway.ecn.purdue.edu/~fie/fie98/papers/1307.pdf.

MEETINGS

- NSF Cloud and Autonomic Computing Center, Semi-Annual Advisory Board Meeting, October 22-24, 2017
  - Proposal Status Update, Virtual Secure Big Data Analysis Prototype System, October 23, 2017
- NSF Cloud and Autonomic Computing Center, Semi-Annual Advisory Board Meeting, April 23-25, 2017
  - Cybersecurity Workshop, April 23, 2017
  - Proposal Presentation, Virtual Secure Big Data Analysis Prototype System, April 24, 2017 (funded for $10,000)

OUTREACH

- Other efforts listed under Professional Service
- Mengel, S., SWENext Meeting, Texas Tech University Society of Women Engineers Collegiate Section, Lubbock, Texas, "MIT Scratch Outreach Presentation and Activity," Local. (January 26, 2019).
- Mengel, S., SWE Future Leaders, Society of Women Engineers, Webinar, "K-12 Outreach Committee," International. (January 23, 2019).
- Mengel, S. Society of Women Engineers and Resources for Computer Science, Dallas ISD All Girls Middle School Teachers, July 11, 2017.
- Mengel, S. IDEAL Summer Camp – Computer Science, 7th-12th grade, Science It's a Girl Thing, June 19-22, 2017.
- Mengel, S. IDEAL Summer Camp – Computer Science, 5th-6th grade, Science It's a Girl Thing, June 12-15, 2017.
- Mengel, S. Explore Engineering Summer Camp, July 25-29, 2016, Texas Tech University, College of Engineering, EE: Computer Science, Lubbock, TX. (July 25, 2016).
- Mengel, S. eGIRL Summer Camp, June 20-24, 2016, Texas Tech University, College of Engineering, eGIRL: Computer Science, Lubbock, TX. (June 22, 2016).

- Mengel, S. High Tech U, September 15-16, 2015, Texas Tech University, College of Engineering, "What is Computer Science" & "Jump 2 Health Game", Local. (September 16, 2015).
- Mengel, S. Explore Engineering Camp, July 27-31, 2015, Texas Tech University, College of Engineering, Sponsored by the Texas Coordinating Board, "What is Computer Science" & "Jump 2 Health Game", Local. (July 28, 2015).
- Mengel, S. eGirl Summer Camp, June 15-19, 2015, Texas Tech University, College of Engineering, Sponsored by the Haliburton Foundation, "A-Maze-ing Scratch for Finding Energy" & "What is Computer Science", Local. (June 16/17/18, 2015).
- Mengel, S., David Nolte, & Cale Shoemaker. Outreach to Snyder Middle School Students, Texas Tech University, College of Engineering, "Flappy Bird Game", Local. (May 21, 2015).
- Mengel, S., Trevor Stroud, & David Nolte. Explore TTU, April 17, 2015, Texas Tech University, "What is Computer Science" & "Flappy Bird Game", Local. (April 17, 2015).
- Mengel, S., Family Fun Night Outreach Event, Overton Elementary School, "MIT Scratch Programming and Games Jump 2 Health Style," Local. (February 20, 2013).
- Mengel, S., Family Fun Night Outreach Event, Maedgen Elementary School, "MIT Scratch Programming and Games Jump 2 Health Style," Local. (February 19, 2013).

FOCUS GROUP

- Susan Mengel, Lisa Gittner, Calvin Fair, Marika Perlmutter, Deana Sageser, Wonjung Oh, Conrad Lyford, informal focus group of preschoolers and parents for serious game design for obesity prevention, Wee Care Child Care Center, Plainview, TX, July 24, 2017.

PROFESSIONAL SERVICE

- American Society for Engineering Education
  - Newsletter Editor, Educational Research and Methods Division (December 1995 – July 1998)
  - Reviewer, FIE 94, 95, 97, 98
- Arkansas
  - Arkansas Science and Technology Authority
    - Reviewer, Basic Research Grant Program
  - Northwest Arkansas Chapter of the Association for Computing Machinery
    - Local Activities Chair
    - Treasurer
    - Member, Executive Council
  - Arkansas Society for Computer and Information Technology
    - Technical Program Committee, Educational Paper Submissions, 1995 Arkansas Computer Conference, Conway, AR, March 9-10, 1995.
    - Session Chair for Session 1A, Education, 1995 Arkansas Computer Conference, Conway, AR, March 9, 1995.
    - Session Chair for Session 2, 1991 Arkansas Computer Conference, Little Rock, AR, October 17, 1991.
- Artificial Intelligence in Education Society
  - Member, Steering Committee, October 1991 - August 1994
  - Member, Board of Reviewers
  - Reviewer, AIED 93, 95
  - Reviewer, 1993 International Conference on Computers in Education
- Association for Computing Machinery
  - K12 Representative, SIGCSE 2020, 2021, & 2022 Conference Committees
  - Chair, Pedagogy Focus Group 4: Professional Practices, IEEE-CS/ACM Curriculum 2001
    - Led the development of a report detailing professional practices in computer science curricula with detailed listings of related courses and modules
  - Nominated, Special Interest Group on Applied Computing, Treasurer, 1996
  - Reviewer, *Communications of the ACM, Transactions on Computing Education*
  - Reviewer, Symposium on Applied Computing
  - Associate Program Chair & Reviewer, SIGCSE Technical Symposium
  - Reviewer ITiCSE
- Institute of Electrical and Electronics Engineers
  - Computer Society
    - Audit Committee, 2003
    - Board of Governors
      - First Term, January 2001 – December 2003
      - Second Term, January 2004 – December 2005
    - Conference and Tutorials Board, 2001 – 2004

        - Operations Committee, 2001 – 2004
    - Education Activities Board, 2001-2002
        - Steering Committee, IEEE-CS/ACM Curriculum 2001, (April 2001 – December 2002)
            - Wrote Chapter 10 on Professional Practices in the Computer Science Volume
        - Chair, The Total Curriculum Information Provider Committee, IEEE Computer Society Education Activities Board (2001-2002)
        - Co-Chair for the Steering Committee for the Computing Curriculum Software Engineering Volume (February 2001 – December 2002)
    - Member Activities Board, 2001
    - Nominations Committee, 2002
    - Ombudsman, 2002
    - Software Engineering Standards Committee
        - Software Engineering Professional Item Writing Workshop, April 7-9, 2000, Houston, TX.
        - Test Specification Workshop for the Development of Capability-Based Tests for Software Engineering Professionals, October 22-23, 1999, Las Vegas, NV.
    - Web Redesign Committee
        - Secretary, 2003 - 2005
- Conference on Software Engineering, Education, and Training
    - Conference Chair, CSEE&T 2000, March 6-8, 2000
        - Negotiated the hotel contract
        - Advertised the conference in IEEE Computer, IEEE Software, SIGCSE listserv, SEWORLD listserv, FASE as well as by postcard
        - Assisted with the conference program
        - Edited the Conference Proceedings with Peter Knoke
        - Led the establishment of a poster session, conference lunch, and exhibitor session
        - Obtained a $3000 donation from Motorola for the conference lunch
        - Obtained a $2000 donation from the Franklin W. Olin College of Engineering for the conference reception
        - Held the conference March 6-8, 2000
    - Program Committee, CSEE&T 2002
    - Program Committee, Birds of a Feather Coordinator, CSEE&T 99
    - Reviewer, CSEE&T 99, 01
    - Steering Committee, CSEE&T 2001 (March 2001 – 2003)
- International Conference on IT Convergence and Security
    - Program Committee 2013, 2014, 2015
- International Conference on Information Science and Security
    - Program Committee 2015
- International Conference on Information Science and Applications
    - Program Committee 2014, 2015
- International Conference on Mobile and Wireless Technology
    - Program Committee 2015
- Software Magazine
    - Reviewer
- Transactions on Education Journal
    - Associate Editor for Computer Science/Engineering Education, Fall 2000 – Fall 2020
    - Associate Editor for Software Engineering, November 1997 – Fall 2000
    - Review Committee, Special Issue on the Application of Information Technologies to Engineering and Science Education
    - Best Paper Award
    - Reviewer
- Transactions on Swarm Intelligence Journal
    - Reviewer
- Transactions on Evolutionary Computation
    - Reviewer
- Frontiers in Education Conference
    - 2008 - Reviewer

- Society of Women Engineers
    - Outreach Committee, May 2014 – July 2019
        - FY18 Chair Elect
        - Judge for outreach section awards, summer 2014 - Present.

        - Assessment Workgroup Lead (co-lead with Mary Zeis from 2014-2015), August 2014 – June 2018
            - Assisting with collecting and analyzing outreach metric data and designing software to automate the process, monthly reporting of outreach data, monthly newsletter
            - WE 2014 – October 22-25, 2014, Los Angeles, CA
                - Assisted Mary Zeiss on presenting "Outreach Assessment Made Easy" as SWE 2014 on October 23, 2014.
                - Invent It Build It Outreach event at WE 2014 with over 600 children and 200 parents where I assisted with assessment of the event, October 25, 2014.
            - Region C Conference – February 6-8, 2014, Austin, TX
                - Interviewed SWE Region C officers on their needs for automated assessment
            - Region C Leadership Summit
                - September 12, 2015, Houston, TX
                - August 27, 2016, Grapevine, TX
            - WE 2015 – October 21-24, 2015, Nashville, TN
                - Invent It Build It Outreach event at WE 2015 with over 400 children and 200 parents and educators where I assisted with assessment of the event, October 24, 2015.
            - WE 2016 – October 26-29, 2016, Philadelphia, PA
                - Invent It Build It Outreach event at WE 2016 with 412 middle school girls, 96 high school girls, and 148 parents and educators where I led assessment of the event, October 29, 2016.
            - WE 2017 – October 26-28, 2017, Austin, TX
                - Invent It Build It Outreach event at WE 2017 where I led assessment of the event, October 28, 2017.
            - WE 2018 – October 18-20, 2018, Minneapolis, MN
                - Invent It Build It Outreach event at WE 2018 where I led assessment of the event, October 20, 2018
            - WE 2019 – November 7-9, 2019, Anaheim, CA
                - Invent It Build It Outreach event at WE 2019 where I led assessment of the event, November 9, 2019.
    - Texas Tech Faculty Advisor, August 2012 – Present
    - Catch the Engineering Bug Outreach Workshop, Software Development Club Computer Science Outreach Activity, October 26, 2019
    - Catch the Engineering Bug Outreach Workshop, Software Development Club Computer Science Outreach Activity, November 10, 2018
    - Catch the Engineering Bug Outreach Workshop, Software Development Club Computer Science Outreach Activity, November 11, 2017
    - Catch the Engineering Bug Outreach Workshop, Software Development Club Computer Science Outreach Activity using the MIT Scratch Programming Environment, November 12, 2016
    - Catch the Engineering Bug Outreach Workshop, Software Development Club Computer Science Outreach Activity using the MIT Scratch Programming Environment, November 7, 2015
    - Catch the Engineering Bug Outreach Workshop, Software Development Club Computer Science Outreach Activity using the MIT Scratch Programming Environment, November 8, 2014
    - Catch the Engineering Bug Outreach Workshop, Presentation on "What is Engineering?", October 27, 2012
- CE2005: The 12th ISPE International Conference on Concurrent Engineering: Research and Applications
    - International Program Committee
- Software Engineering Education and Training Working Group
    - Member, Education Committee – Working on Guidelines for Software Engineering Undergraduate Education, helped to write and get funded an NSF grant on establishing SWENET – Software Engineering Education Internet Community
- National Science Foundation
    - Attended, NSF Day, Lubbock, TX, May 20, 2015
    - Review Panel, Directorate for Education and Human Resources, DUE, Instrumentation and Laboratory Improvement Program, Arlington, VA, January 24-27, 1996.
    - Review Panel, Directorate for Education and Human Resources, DUE, Undergraduate Course and Curriculum Development and Faculty Enhancement Programs, Arlington, VA, July 17-20, 1995.
    - Review Panel, Directorate for Education and Human Resources, DUE, Instrumentation and Laboratory Improvement Program, Arlington, VA, January 25-28, 1995.
    - Reviewer, Directorate for Computer and Information Science and Engineering, Division of Microelectronic Information Processing Systems
- Pergamon Press LTD

    - Reviewer
- McGraw-Hill/Irwin
    - Reviewer
- Pearson
    - Reviewer
- John Wiley
    - Reviewer
- Advances in Artificial Intelligence Journal
    - Reviewer
- International Journal of Epistecybernetics
    - Reviewer
- The 8th International Multi-Conference on Society, Cybernetics and Informatics 2014
    - Reviewer
- Spinger Nature
    - Reviewer

TEXAS TECH UNIVERSITY SERVICE

- University
    - Women in High Performance Computing, Spring 2019 - present
    - Library Committee, COE Representative, Fall 2014 – Summer 2017
    - Center for Active Learning & Undergraduate Engagement
        - TTU Undergraduate Research Conference, Judge, 2015 - present
    - Center for the Integration of STEM Education & Research (CISER)
        - Member, Advisory Board, 2017-present
    - Internal Review Board, 2009 - present
        - Review proposals on human subjects' research
        - Associate Chair – 2024 - present
    - Graduate School
        - Dean's representative for doctoral defenses, 2009 – present
        - Poster Competition, Judge, 2013 - present
    - Faculty Senate
        - COE representative, Fall 2007 – Spring 2010
        - Vice-President, Summer 2008 – Spring 2009
- College of Engineering
    - Society of Women Engineers Student Chapter, Faculty Advisor, August 2012 – present
    - Committee for Butler Distinguished Educator Fellow, November 2024
    - Electrical and Computer Engineering Faculty Search, September 2022 – May 31, 2023
    - Distance Committee, September 2013 – August 2019
    - Departmental Representative, Common First Year Curriculum, 6/6/2018 – 8/31/2020.
    - Judge, 3rd Annual Appathon, February 27-28, 2015
    - Faculty Service and Teaching Awards, Fall 2013
    - Multidisciplinary MSSE in Systems and Software Engineering, Spring 2011 – May 31, 2013
    - COE Awards Committee, Fall 2005 – Spring 2005
    - Member, Software Engineering Research, Training, and Education Center, July 1998 – 2002
    - Participated in writing the SERTEC Strategic Plan, Summer 2001.
    - Member, Affirmative Action Committee, September 1998 - 1999
    - Joint Faculty Sponsor with Dr. Nancy Van Cleave, Society of Women Engineers, Fall 1996 – Fall 1998
    - Member, College of Engineering Dean Search Committee, July 1998 – May 1999
    - Women in Engineering Day, April 17, 1998 - Led the development and helped in bringing the main speaker, Dr. Robin Vaughan from the Jet Propulsion Laboratory
    - Engineering Key Beautification/Landscape Project volunteer, September 27, 1997
- Department
    - Member, Tenure Committee, Fall 2002 – present
    - Undergraduate Program Coordinator, January 1, 2025 - present
    - Chair, Undergraduate Program & Recruitment, September 1, 2025 – present
    - Chair, Endowed Scholarships and Alumni Relationships, September 1, 2024 - present
    - Chair, Autograder Ad Hoc Committee, March 1, 2024 - present
    - Co_Chair, Broadening Participation in Computing, September 1, 2023 – present
    - Member, Undergraduate Program & Recruitment, September 1, 2023 – August 31, 2025
    - Member, ABET & Program Assessment, September 1, 2021 – August 31, 2024

- Member, Operation & Optimization Committee, January 1, 2023 – August 31, 2023
- Delegate and Liaison, Centennial Celebration Activities, January 1, 2023 – December 31, 2023
- Member, Undergraduate Committee, September 1, 2019 – December 31, 2022
- Chair, Student Affairs & Recruitment, September 1, 2021 – August 31, 2022
- Member, Professor of Practice Position Search, May 2022 – August 2022
- Member, Faculty Search for the Costa Rica Campus, 2021, 2022
- Chair, Graduate Admissions Committee, September 1, 2019 – August 30, 2021
- Member, Faculty Search Committee, September 1, 2020 – August 30, 2021
- Chair, Faculty Search Committee, November 1, 2018 – August 31, 2019
- Chair, Strategic Planning Committee, September 1, 2018 – August 31, 2019
- Advisor, Software Development Club, August 2014 – May 2018
- Chair, GA Financial Support, September 1, 2017 – August 31, 2018
- Member, Strategic Planning Committee, September 1, 2017 – August 31, 2018
- Laboratory Safety Captain, July 2013 – August 31, 2019
- Member, Graduate Admissions Committee, January 1, 2017 – August 31, 2017
- Chair, Departmental Relations Committee, September 1, 2016 – August 31, 2017
- MSSE Advisor, Spring 2014 – Summer 2016
- Chair, MSSE Curriculum Committee, September 1, 2013 – August 31, 2016
- Member, Strategic Planning Committee, September 1, 2013 – August 31, 2014, September 1, 2015 – August 31, 2016
- Member, Graduate Curriculum Committee, Fall 2007 – March 2012, September 1, 2015 – August 31, 2016
- Member, Undergraduate Scholarship Committee, 2008 – February 2012, 2015 – August 31, 2017
- Member, Faculty Search, Center for Biotechnology and Genomics, March 2016 – June 2016
- Member, Graduate Admissions Committee, April 2014 – August 2014
- Member, Departmental Relations Committee, January 22, 2014 – December 31, 2014
- Chair, Strategic Planning Committee, September 1, 2014 – August 31, 2015
- Chair, Student Affair and Undergraduate Scholarship Committee, September 1, 2013 – August 31, 2014
- Member, Faculty Search Committee, June 26, 2012 - May 31, 2013
- Chair, Departmental Relations Committee, March 2012 – August 31, 2013
- Member, Student Affair and Undergraduate Scholarship Committee, March 2012 – August 31, 2013
- Member, Undergraduate Scholarship Committee, 2008 – February 2012
- Graduate Advisor, Fall 2007 – February 2012
- Member, Graduate Admissions Committee, Fall 2008 – March 2012
- Member, Computer Use Committee, Fall 2007 – Summer 2008
- Chair, Undergraduate Curriculum Committee, Spring 2006 – Summer 2007
- MSSE advisor, Fall 2002 – Summer 2007
- Chair, Computer Science Abilene Faculty Search Committee, Fall 2003 – Spring 2004
- Library Representative, Spring 1997 – 2002
- Member, Computer Science Faculty Search Committee, Fall 2001 – Spring 2002
- Participated in writing the Software Engineering Strategic Plan, Summer 2001.
- Member, Computer Science Chair Search Committee, Spring 1998 – Summer 1998
- Graduate Curriculum Committee, Chair, Fall 1997 – Spring 1998
- Designed and implemented Departmental Placement Examination
- Wrote recommendation for equipping an upper division computer lab
- Member, committee to seek CSAB/ABET accreditation - wrote two reports, one each for CSAB and ABET, on what the Computer Science Department needed to do to achieve accreditation
- Joint Faculty Sponsor with Dr. Donald Bagert, Big Brothers Big Sisters, Fall 1996 – Spring 1996
- Wrote and graded questions for the Master's Comprehensive Exam
- Wrote and graded questions for Ph.D. Qualifying Exam

PROFESSIONAL HONORS

- Asian Pacific Islander Desi American Graduation Ceremony (student: Saloni Majumdar), Texas Tech University, May 2, 2023.
- A Most Influential Faculty Member (student: Gaby Vasquez Zuniga), Honors Convocation, Texas Tech University, College of Engineering, May 18, 2018.
- Marquis Who's Who in America, July 2017
- Fellow, Women Faculty Writing Program, Fall 2017 – Spring 2018
- A Most Influential Faculty Member (student: Alexis Miller), Honors Convocation, Texas Tech University, College of Engineering, May 19, 2017.
- Apple Polishing Award (student: Isaac Griswold-Steiner), Mortar Board, November 4, 2016.

- Selected, Region C Leadership Summit, Society of Women Engineers, Grapevine, TX, August 26-27, 2016.
- A Most Influential Faculty Member (student: Patrick Braud), Honors Convocation, Texas Tech University, College of Engineering, December 11, 2015.
- Selected, Academic Leadership for Women Workshop, Henry Luce Foundation, Society of Women Engineers Conference, 2015, Nashville, TN, October 23-24, 2015.
- Selected, Region C Leadership Summit, Society of Women Engineers, Houston, TX, September 12, 2015.
- Selected, STEM-CORE Affiliate Faculty Program, STEM Center for Outreach, Research & Education, Texas Tech University, August 19, 2015; May 17, 2017.
- Selected, Academic Leadership for Women Workshop, Henry Luce Foundation, Society of Women Engineers Conference 2015, Los Angeles, CA, October 24-25, 2014.
- Nominated by Computer Science Department, Dr. Charles L. Burford Faculty Award, College of Engineering Teaching Award, Spring 2013.
- Honorary Member for distinguished service as Computer Science Graduate Advisor, Golden Key International Honour Society, November 13, 2011.
- Award for Women Professors in Recognition of Their Support in Computer Science, Texas Tech University Association for Computing Machinery Student Chapter, 1998

GRADUATE STUDENTS

- Committee Chair
  - Ph.D.
    - Kwesi Danso, High Performance Computer Cybersecurity
    - Arun Beldhe, Immersive Video Streaming
    - Dana Harris, Computer Science Education
    - Ban Quy "Billy" Tran, Quantum Machine Learning
    - Onengiyeofori Harry, High Performance Computing Education
    - Anurag Nandyala, High Performance Computing
    - Samuel Abiola, High Performance Computing
    - Jeannette Diaz, Computer Science Education
    - Elham Hojati, Towards Smart Reliable Scalable Green Data Centers: Improving the Automation of Monitoring and Management in Green High-Performance Computing, August 2024
    - Patrick Cook, The Power and Promise of SHAMROQ – A Transdisciplinary Approach to Extract Regulatory Text Patterns, May 2024
    - Brandon Woolley, Evolutionary Approach for Hierarchical Scheduling of Real-Time Embedded Multicore Architectures, December 2021 (with co-Chair Dr. Atila Ertas, Mechanical Engineering)
    - Akalanka Bandara Mailewa Dissanayaka Mohottalalaga, Security Big Data Analytic Framework with MongoDB and Linux Containers, May 2020
    - Mario Pitalua, Dynamic Clustering and Visualization of Variable Diffusion in Big Data, December 2018
    - Raymond Pettit, Using Automated Assessment Tools to Analyze In-Depth Student Learning of Programming Concepts, December 2015.
    - Soma Datta, "A Multi-stage decision algorithm for rule generation for minority class", August 2014.
    - Yaoqin Jing, "Extracting Structured Data From Web Pages With Maximum Entropy Segmental Markov Models", December 2007.
    - Elizabeth Morris, Dissertation: "A Machine Learning Approach to Automate Classification of Literature in a SAM Research Database", Summer 2004.
  - MSSE - Thesis
    - Kaduptiyage Fernando, "Modelling Topic and Sentiment Evolution in Twitter Based on Word Embedding for Classification of Trends in Different Domains", Fall 2023
    - Philip Huffman (distance), "Enhancing Software Integrity Through Formal Methods and Reusable .NET Web Services", Fall 2009.
    - Shane Laurent (distance), "A Model for Assessing Reusable, Remoting Sensors in Test and Measurement Systems," Spring 2007
    - Jason Digiacomo (distance), "True Phoenix: Static Source Position Error Corrections for the Pitot-Static Systems on an F-16 Falcon", Fall 2005
    - Jorge Baquero, Thesis: "A Simple Transformation Model of HTML into RDF for the Semantic Web" , Summer 2004.
    - Donald Craig (distance student), Thesis: "A Simple Practical Model for Knowledge Discovery in Textual Information", December 2003.
    - Edwin Aybar, Thesis: "Performance Analysis of Web-Based Systems", Summer 2002.
  - MSCS - Thesis
    - Azzam Sahel, High Performance Computing

- Mohammed Feroz, “Examination of Data, and Detection of Phishing URLs using URL Ranking”, Summer 2015.
- Vedik Shetty (co-chair with Surya Yadav (ISQS)), “The Design and Implementation of a Query Enhancer and Webpage Relevance Rater for the World Wide Web”, Spring 2010.
- Santhosh Swaminathan, “Rule Induction Using Ant Colony Optimization for Mixed Variable Attributes,” Summer 2006
- Sophia Penumaka, “Study on the Relationship of Training Data Size to Error Rate and the Performance Comparison for Two Neural Network Algorithms”, Fall 2006
- Ratheesh Raghavan, “Study of the Relationship of Training Set Size to Error Rate in Yet Another Decision Tree and Random Forest Algorithms”, Spring 2006
- Hamideh Hassouneh, “Optimizing Both Communication and Synchronization in Distributed Association Rule Mining Algorithms”, Fall 2005
- Kranthi Malreddy, “Mining Frequent Itemsets Using Advanced Partition Approach”, December 2004.
- Xupeng Xie, “Classification Rule Induction with an Ant Colony Optimization Algorithm”, Summer 2004.
- Jeffrey Zheng, “Study on the Relationship of Training Data Size to Error Rate and the Performance Comparison for two Decision Tree Model Algorithms”, Summer 2004.
- Joey Wigner, “Analysis and Visualization of the Code of Beginning Programmers”, December 2002
- Steven Tyrer, “Experimental Analysis of Second Year Computer Science Major Programs”, May 2001.
- Bharath Kuruvalli, “CASE Tool for Hypermedia Instructional System Development”, May 2000.
- Prashanth Thiruvaipati, “Relational Database Applications’ Optimization and Performance Study”, August 1998.
- Balaji Nageswaran, “Software for the Analysis and Evaluation of Aggregate Source Using Aggregate Frictional Properties”, August 1998.
- Joe Ulans, “Experimental Analysis of First Year Computer Science Major Programs”, May 1998.
- Vinay Yerramilli, MS, “Static Analysis of Novice Student C++ Programs”, May 1998.

o MSSE – Project
- Joshua Ball, “Arduino Tutorials for Introductory C Programming”, December 2022
- Jordan Hudgens, “Combining Stateless and Stateful Services in a Microservice Architecture”, December 2019
- Patrice Fote, “Customer Prediction in Conjunction with Information Propagation on Twitter”, May 2019
- Eric Peterson, “Hearing Phone: App-Based Hearing Aid and FM System”, May 2019
- Dian Li, “Real-Time Twitter Analysis”, December 2018
- Ruraj Joshi, “Oil Field Controller and Data Feed”, May 2018
- Yu Mao, “Recommender System Using Neural Networks”, May 2018
- Frank Ibem, “Word-Level Sign Language Recognition Using Convolutional Neural Networks”, Fall 2017
- Xin Chen, “Handwritten Digits Recognition using CNN based on TensorFlow”, Fall 2017
- Bhavya Batra, “Automating Society of Women Engineers Outreach Tool”, Spring 2017
- Daniel Medina-Sada, “Twitter Analysis of Disease Indicators by County”, Spring 2017
- Roshan Shetty, “Big Data File Conversion and MongoDB Storage”, Spring 2017
- Jeff Sorbo, “Ensemble Learning for Cardiovascular Disease Indication”, Spring 2017
- Yongji Li, “AutoSWE (Automating Society of Women Engineers Outreach Tool)”, Spring 2016
- Raghu Nandyala, “Topic Analyzer based on Omniquo’s Meaning Understanding Platform”, December 2015
- Nathan Neilitz, “STEM Outreach with Scratch”, NA
- Casey Lee, “Society of Women Engineers Android Outreach Application, December 2015.
- Ashley Englisch, “Let It Grow! An Optimal Planning Application for Gardeners”, Summer 2015
- Zachary Falgout, “Game Set Play, A Social Network for Tennis Players”, Summer 2015
- Alexander R. Geoghegan, “Performance Analysis of Encryption Protocols in a VoIP Network”, Spring 2015

o MSCS – Project
- Suma Galla and Divya Pusuluru, “Choosing the Right Tools: A Framework for Assessing IAM, IGA, and PIM/PAM Solutions”, Fall 2023
- Aviral Shrivastava, “APIs for Stress Testing of High Performance Computing Systems”, May 2023
- Harshitha Nagapudi, “Java MVC Web Programming Tutorials with Spring/Maven”, May 2023
- Diane Renard, “Introductory Java and Graphical User Interface Programming”, May 2023
- Mohammad Wasiuddin, “Voice Phishing Detection of non-native English Speakers using GCP and LDA”, December 2022
- Neha Abhyankar, “Study of Lyrics Over the Years Along with Music Genres”, December 2022

        - Shubham Dhyani, “Analyzing influence parameters of tweets related to Climate Change”, August 2020
        - Rakesh Ramesh, “Analyzing Conversational Traits In Social Media By Combining Topic Modeling And Emotional Modeling”, May 2020
        - Anant Mahadhevan, “Analyzing Conversational Traits In Social Media By Combining Topic Modeling And Emotional Modeling”, May 2020
        - Dewang Shah, “Analyzing Impact of Deep Learning and NLP strategies on Multi-Class Fake News Detection with Speaker Profiles”, May 2020
        - Siddharth Mehta, “Addressing cold start in Twitter News Recommendation”, December 2019
        - Praneeth Yerramothu, “Geospatial Visualization of Twitter Data”, December 2018
        - Geoffrey Rathina Pandi, “Web Interface for Privacy Preserving Twitter Analysis”, December 2018
        - Agnes Antony-Joseph, “SWE Natural Language Analysis of Outreach Data”, May 2018
        - Arun Jegarkal, “Twitter Analysis of Disease Indicators by County”, May 2018
        - Samip Kothari, “Secure Big Data Access with Web Interface”, May 2018
        - Yuan Li, “Graph Analysis Techniques for Variable Reduction”, Spring 2017
        - Mitali Perekh, “Peer-to-Peer Connectivity using Wi-Fi on Android”, May 2016
        - Sebastian Nino-Penaloza, A Survey on Web Spam Taxonomies: Analysis on Web 2.0 Spam, Fall 2016
        - Karthik Akula, “Cloud Based System for Big Data Analysis”, Spring 2015
        - Sandeep Sakinala, “Tutorial on SCADA Systems”, December 2014
        - Lianci Liu, “A Text Mining Tool for Analyzing Sentiment and Topics”, December 2014
        - Abhilash Jyothiprakash, "Distributed Password Cracker", May 2014
        - Gopinath Reddigari, "Cloud System for Document Posting", May 2014
        - Sairam Batchu, "Cloud Community", May 2014
        - Abdul Nayeem Mohammed, "3D Human Model for Nutrition", May 2014
        - Fnu Archana Mohan, "Integrating Social Networking and E-Learning for New Paradigms in Learning Content Delivery", NA
        - Rashed Sultan, “E-learning, an Online Learning Management System Application”, August 2013
        - Akash Pargat, “MyBlackBoard”, August 2013
        - Rathish Cholarajan, “PHPBot: A Model-View-Controller-style Social Networking Framework in PHP5”, August 2013
        - Anupam Tambi, “Dynamic Form Designer”, August 2013
        - Amit Yadav, “A Kalman Filter implementation and analysis for Robot Localization”, August 2013
        - Chiranjeeb Nandy, "Automated Graduate Admissions Process for Fast-Tracking Student Candidate Acceptances", August 2012
        - Adithya Sekar, "Forms Approval Process for Matriculating Departmental Level Students", August 2012
        - Amit Murkute, "Automated Scheduling for Multi-Employee, Multi-Shift Workplaces", August 2012
        - Amey Rupji, "Course Scheduler for Student-Faculty Preference Listings", August 2012
        - Venkatraj Murugan, "Course Scheduler for Student-Faculty Preference Listings", August 2012
        - Anup Devara, “Federal Funding Information System – Release II”, May 2012.
        - Praveen Kota, "The Registry", December 2011.
        - Jagannath Valaiyapathy, "Federal Funding Information System", August 2011.
        - Aditya Benegal, "Sustainable Search on the Web", December 2010.
        - Nandi Ramachandra, Sharath, "Sustainable Search from a Local Cache", December 2010.
    - Masters in Interdisciplinary Studies
        - Jalen Seals, Internship in Interdisciplinary Studies, May 2022
- Committee Member
    - Ph.D.
        - Mert Side, “Secure and Energy-Efficient High-Performance Computing”, December 2025
        - Dinesh Otieno, “Combating Sub-Perceptual GPS Spoofing through Fine-Grained Trajectory
        - Analytics”, August 2025
        - Josh Archer, “Studying the impact of a Logic Programming based integration of science and
        - computing learning”, May 2025
        - Tasnia Ashrafi Heya, “Security of voice-interactive devices: exploring vulnerabilities and
        - Countermeasures”, August 2024
        - LynnDee Ford, “Transdisciplinary Approach to Systems Engineering Methodology for the Concept Stage, May 2024
        - Saroj Gopali, “Pattern Recognition and Analysis in Imbalanced Sequential Data”, May 2024
        - Ghazanfar Ali, “Dynamic Control and Automation of High-End Computing Systems”, December 2023
        - Zulfiqar Ali Khan, “Novel Vulnerability Detection Techniques for Ethereum-based Smart Contracts”, December 2023
        - Luis Felipe Gutierrez, “Enabling Context-Aware Natural Language Processing: From Dense Vector
        - Representations to Contextual Features”, May 2023

- Bipana Thapaliya, “Fast clustering of big data through successive bi-partitioning”
- Prerit Datta, “Predicting Consequences through Cyberattack Descriptions”
- Faranak Abri, “Content Analysis and Modeling Interactions in Social Engineering Attacks”, August 2022.
- Sraddhanjali Acharya, “Wearable Stretch Sensors at the Human-Computer Interface: Investigating Security Applications and Privacy Threats”, December 2021
- Shuva Dass, “Reinforcement Learning for Generating Secure Configurations”, August 2021
- Daniel Moran, “A Unique Transdisciplinary Engineering-Based Integration of KJ, Kano, HOQ/QFD, TRIZ, ISM, and DSM and Associated Platform”, August 2021
- Van Vung Pham, “Integrating visual analytics and machine learning approaches for analyzing
- multivariate proximal sensor data”, August 2021
- Sam Denard, “Development Cycle Modeling and Risk Analysis”, May 2021
- Wei Zhang, “Towards a Discoverable Dataset Ecosystem for Scientific Data Management”, May 2021
- Pratap Chillakanti, “Evaluation of Technology Platforms for use in Transdisciplinary Research”, May 2021
- Sagar Chhetri, “Continuous Project Portfolio Management based on Bayesian Reliability”, May 2021
- The Vinh Nguyen, “Instilling Computational Thinking through Making Augmented Reality Application”, December 2020
- Moitrayee Chatterjee, “Deep Evidential Reinforcement Learning”, August 2020
- Richard Matovu, “Power Usage, Motion Sensor and Neural Side-Channels on Mobile Devices: Examining Attacks and Countermeasures”, May 2020
- Robert Stroud, “Complexity Frameworks in Enterprise Design”, May 2019
- Wei Xie, “Supporting an Efficient, Durable, and Scalable Distributed Storage System with Consistent Hashing”, December 2018
- Sara Sartoli, “Formal Modeling of Adaptive Security Requirements for Dynamic Systems with Uncertainty”, August 2018
- Ashlee Taylor, “Assessment of the Mobile Jump2Health™ Intervention to Increase Fruit and Vegetable Intake in Children Ages 3 – 8”, Fall 2017
- Adam Stroud, “Development of Net Shape Structural Titanium Manufacturing Capability Using the System of Systems Design Approach”, Fall 2017
- Guillermo Rodriguez, “Indexing Approximations and Optimizations in Search Systems”, May 2017
- Jon Ilseng, “Measuring Productivity and Performance in a System of Systems of Government Organizations, Educational Institutions and Industry to Meet the Needs of Society", Fall 2015.
- Alaa Darabseh, “Cyberspace Security Use Keystroke Dynamics”, Summer 2015
- M. Lindsey Williams, “A Framework for Assessing Domain Transfer Risk in Biologically Inspired Design”, May 2015
- Vijay Ramamoorthy, “Projective Streaming and Sand Tray: Using Conjoint Analysis to Compare Two Therapeutic Processes”, August 2014
- Timothy Horton, “Hyperspectral Signature Characterization and Detection of Escherichia Coli (E. coli)”, August 2014.
- Samujjwal Bhandari, “A Language and Architecture for Adaptive Event Pattern Detection”, December 2013.
- Arisoa Randriansolo, "Artificial Intelligence in Computer Security: Detection, Patch and Defense", May 2012.
- Gregory Wagner, "Image Based Rendering Using a Stereo Images and Interpolation Through a Modified Ray Tracer", December 2007.
- Sepalika Rajapakse (agriculture), “Automated Radiometric Normalization Technique for Multi-Temporal Landsat-TM and ETM+ imagery”, Summer 2005
- Jonghan Ko, Texas Tech University, Plant and Soil Science, “Development of a Cotton Crop Model That Uses Remote Sensing Data”, Summer 2004.
- Cherry Owen, “Experimental Software Engineering”, Summer 2002.
- Ben Calloni, “Language Specific Versus Generic Iconic Programming Systems and Grammars”, May 1997.

- MSSE - Thesis
  - Oluwabukunmi O. Oyedeji, “An Approach to Quantifying Soft Goals Satisfaction in Self-Adaptive Systems”, Spring 2017
  - Chase Baker, “Aspect-Oriented Secure Connectors for Implementation of Secure Software Architectures”, Spring 2014
  - Dwayne Towell, “A Software Implementation Progress Model”, Summer 2004.
  - Eduardo Fuentetaja, “A Comparison of Black-Box Models for Software Evolution,”, Summer 2002.
  - Paul Rindahl, Thesis: “Converting Legacy Code to the Object-Oriented Paradigm”, Summer 2002.

- MSCS - Thesis
  - Manoj Khatri, “Performance Comparison of Single Board Computer Clusters”, August 2025
  - Udochukwu Nwandikom, “Automatic Detection of Metaphors in CyberSecurity Texts - Corpus and Models”, May 2023
  - Justin Rodriguez, “Visualization of Reasoning: Debugging Techniques in ASP”, May 2021
  - Han Xu, "Integrating Logical Reasoning and Probabilistic Graphical Models for Spoken Dialog System”, Fall 2016
  - Janani Ramachandran, "Integrating Exception Handling and Data Dependency Analysis Through Application Exception Rules", NA
  - Kalaranjani Vijayakumar, “Exploring In-Memory HDF5 and Early Evaluations”, Spring 2015.
  - Andrew Courter, "Supporting Data Consistency in Concurrent Process Execution with Assurance Points and Invariants", December 2010.
  - Samira Masoom, "Parameter Analysis of Multi Class Support Vector Machine for Classifying rRNA Sequences From Bacterial Taxonomy", December 2010.
  - Rajiv Shrestha, "Using Assurance Points and Integration Rules for Recovery in Service Composition", May 2010.
  - Nianen Chen, “Optimization of Execution Plan for High Performance Distributed Data Mining in Grid Service”, May 2005.
  - Gregory Wagner, “Image-Based Rendering Using a Stereo Image and Interpolation Through a Modified Ray Tracer”, Summer 2004.
  - Youling Cao, “Analysis of Software Reengineering Process and Methodology in Component-Based Computing”, Summer 2001.
  - Aaditya Rai, MS, “Performance Prediction of the Genetics Linkage Program Under Different Allocation Heuristics”, December 1999.
  - Runlin Zhu, MS, “Phillips Petroleum Parallelization of FORTRAN Code”, December 1999.
  - Shaoyi Zhuang, MS, "Perceptual Adaptive Quantization of JPEG Image", December 1998.
  - Cai Gao, MS, "Issues Involving a CASE Tool for Architectural and Detailed Design", Summer 1998.
  - Juan Sun, MS, "Lagrangian Multiplier in Pearlmutter Algorithm and Dynamic Neural Networks", May 1998.
  - Yan-Wei Shi, MS, “Iconic Software Development Environments”, August 1997.
- OTHER – Thesis
  - Hirva Sunilkumar Bhayani, “Exploring the Molecularity of Olfactory and Gustatory Perceptions”, May 2024, Biotechnology
  - Lauren Kirsch, “Gene-NE: A Computational Assessment of the evolution of gene
  - names mined from the text of the biomedical literature”, May 2021, Biotechnology
- MSCS – Project
  - Prathyush Kotla, “Reinforcing Mobile Device Sensor Attacks using Generative Adversarial Network”, August 2020
  - Jake Gonzalez, “Using Graph Theory to Investigate Underlying Patterns in Data Through Visualization”, August 2020
  - Jaturong Kongmanee, “Google Chrome Extension for Image Caption Generation”, May 2020
  - Mahesh Gurram, “Functional Comparison of Cloud Standard Based API with Native API in IaaS”, Spring 2016.
  - Abhijit Warkhade, “A Workflow for Testing the Assurance Point Model Execution Engine”, Summer 2012.
  - Dharmin Majmudar, “Multiple User Support in Android Operating System”, Summer 2012.
  - Tanya Mishra, “Automated Class Accounts on UNIX”, Summer 2012.
  - Michael Johnson, "Vendor Neutral Cross Cloud Platforms for Vendor Neutral Mobile Applications", May 2011.
  - Jennie Mellado Marcera, "Hispanic Advancement in Computing Education Research", December 2010.
  - Sankar Puchala, "Analysis and Implementation of Various Techniques for Software Requirements Engineering", August 2010.
  - Shoumith Channegowda, "Implementation of a Comprehensive Requirement Management and Requirement Validation Tool", August 2010.
- MSSE – Project
  - Abdullah Muqim, "Assessing Security of SCADA Systems Using Mutation Testing", Spring 2015.

UNDERGRADUATE AND HIGH SCHOOL RESEARCH

- Riya Setty, Clark Scholar, High School Student, “Analysis of Network-Based Anomalies with KDD Cup ’99 Dataset”, Summer 2019

- Pradip Lamsal, BSCS, Honors College, "Big Data Cross-Indexing"
- Vijayanta Jain, Convolutional Neural Modeling for Prediction of Autism Diagnosis, Spring 2017, 2nd place, Undergraduate Research Competition
- Robin Qiu, Clark Scholar, Rising Senior High School Student, "Variable Diffusion in Big Data", Summer 2017
- Marika Perlmutter, High School Senior, "Serious Game Design for Obesity Prevention", Summer 2017

SENIOR DESIGN OR SPECIAL PROJECTS DIRECTED

- Ethan Homan, "Security Analysis of Machine Learning Methods on ARM-Based High Performance Computing Clusters", Spring 2025, Honors College Research
- Chidiogo Obianyor, "Exploring High Performance Computing (HPC) Security and Building Awareness Through Simulated Attacks and Impact Analysis", Fall 2024, Spring 2025, Honors College Research
- Cody West, "Predicting Social Media Community Performance Metrics", Fall 2019, Spring 2020
- Daniel Cole, "Sentral - iOS App to Aggregate Music Services", Fall 2018
- Simon Woldemichael, Xujia Wu, "MachServe.IO - Machine Learning Micro-Services", Fall 2018
- Antonio Bujanda, Quan T. Nguyen, Online Patient/Doctor Medical System, Fall 2017
- Calvin Fair, Exposome Data Security, Fall 2017
- Vijayanta Jain, Convolutional Neural Modeling for Prediction of Autism Diagnosis, Fall 2017
- Connor Lower, Shrey Shrivastava, Serious Game for Teaching Toddlers about Nutrition, Fall 2017
- Lee P. Sander, Kevin Taing, Machine Learning for Zillow House Price Prediction (Kaggle Competition), Fall 2017
- Kevin Taing, iOS Virtual Reality Application for Texas Tech, Fall 2017
- Calvin Fair, Serious Game for Obesity Prevention, Summer 2017
- Dayne Lowrey, Applied Algorithms, Summer 2017
- Pradip Lamsal, Exposome Data Mining, Summer 2017
- Kayce Ogoke, Meeting Icebreaker Game for Student Organizations, Spring 2017
- Alexander Clines, Isaac Griswold-Steiner, Nils Griswold-Steiner, Orion Koepke, Ryan Berg, TTU Applied Algorithm Competition, Fall 2016
- Kevin Taing, "Apple iOS App for Society of Women Engineers Outreach", Fall 2016
- Alexis Miller, Apple Mobile App for Stroke Rehabilitation, Spring 2016
- Isaac Griswold-Steiner, WebCat for Automated Program Grading, Spring 2016
- Ryan Reagan, Unity Game for Computer Science Outreach, Fall 2015
- Kendrick Williams, Unity Game for Computer Science Outreach, Summer 2015
- Kris Ayala, Big Data Analysis for Student Retention, Spring 2015
- Jamy Scott, Computer Science Outreach Website, Spring 2015
- Gates Gibson, Lazarus GPU Cluster Outreach Website, Spring 2015
- Brian Fairbanks, Healthy Computer Practices Website, Spring 2015
- Derrick Franco, TTU Blu Light App, Spring 2015
- Derrick Franco, Texas Tech Building Tour Google Glass App, Fall 2014
- Brian Ufford, Panhandle Angel Foundation Wordpress Site, Fall 2014
- Wendy Castillo, Android Planning App, Summer 2014
- Robert Madey, Computer Security Content Management Site for www.jump2health.com, Spring 2014
- Derrick Franco, RaiderList (Craig's List for the TTU Student Community), Fall 2013
- Ridge Lawrence, Meal Preparation and Cost Web Tool, Summer 2013
- Don Pathirage, Post Approval System for Detection of Pornographic and Illicit Material", Summer 2013
- Kush Patel, Enrique Salazar, Derrick Training Manager Application, Spring 2013
- Natalie Debusk, Uno nutrition game using MIT's Scratch programming environment for outreach, Fall 2012
- Tyler Hagen, worked on a computer game for anesthesiologist residents to become proficient at difficult operating room situations, Spring 2012.
- Robert Harris, worked on a degree scheduler so students can determine how long it will take them to get a computer science undergraduate degree, Fall 2009
- William Noth, worked on a conference management system for Dr. Atila Ertas in Industrial Engineering, Fall 2009
- David Powers, worked on an inventory and billing program for his father's business, Fall 2009
- Mark Holak, worked on a children's web site for the TTU Federal Credit Union, Summer 2009
- Mark Romero, QUICK Scheduler for scheduling semester classes and work, Spring 2009
- Luke Lee and Jarrett Roberts, Local Events Web Site (EventBull) Implemented Using Ruby on Rails, Spring 2007
- Leah Beal, Semantic Web Tutorial, Fall 2003
- Vincci Carel, Matt Bohn, and Clint Miller, "Tutorial on Java Web Application Development", Spring 2002
- Nathan Rice, Ali "Cyrus" Neek, and Garrett Spradling, "Bridge Program for the TTU COE", Spring 2002
- Nathan Rice, Ryan Fiske, Ali "Cyrus" Neek, and Anthony Strickland, "Bridge Program for the TTU COE", Fall 2001
- Andrew Douglas and Todd Woolery, "Tutorial on Developing Web-Based Systems", Fall 2001
- Kavitha Perla, "Data Warehousing and Data Mining Project for SAM Analysis", Summer 2001
- Kavitha Perla and Beth Anderson, "Tutorial on Developing Web-Based Systems", Spring 2001

- Laura Newberry and Elaine Woods, “User Interface Tutorial”, Fall 2000
- Joey Wigner. “Beginner Program Analysis II,” Summer 2000
- Shunguo Yan, “Reverse Engineering of Sequential to Parallel Code”, Spring 2000
- Jim Jones and Steven King. “Grade Assessment,” Spring 2000
- Dan Beatty. “Lutheran Student Fellowship Database,” Spring 2000
- Dwayne Isbell. “Interdisciplinary Communication,” Spring 2000
- Joey Wigner. “Beginner Program Analysis I,” Spring 2000
- Beth Anderson. “Design Issues in Beginning Software Engineering”, Spring 2000.
- Brian Melton and Jim Gross. “Recreation Center Class Scheduler,” Spring 2000.
- Eric Wong. “Planning in the Project Process”, Summer 1999.
- Fred Napier. “Capability Maturity Model Level for the Project Process”, Spring 1999.
- Justin Law. “Microprocessor Simulator on the WWW in JAVA,” Fall 1997.
- Tim Myatt and Marianne Rives. “Microprocessor Simulator on the WWW in JAVA,” Spring 1997.
- Mark Cotherman. “Drag and Drop WWW Form Design in JAVA,” Spring 1997.
- Tim Myatt. “JAVA Tutorial on the WWW,” Spring 1997.
- Winifred Lo. “JAVA Metrics Program,” Spring 1997.
- Houston Cromwell. “Netscape WWW Server on Windows NT 4.0 for the ASEE ERM Newsletter Web Page,” Fall 1996 - Spring 1997.

REFERENCES

Available Upon Request