

Association for Computer Educators in Texas

Teaching the Millennial Generation



52nd Annual Conference
28-29 October 2016



LAMAR UNIVERSITY
MEMBER THE TEXAS STATE UNIVERSITY SYSTEM™

ACET 2016 Conference Schedule

Time	Activity	Session 1 Spindletop Room	Session 2 Lamar Room
Friday			
7:30 AM	Breakfast/Registration		
8:30 AM	Welcome/Introduction		
8:45 AM	Key Note Plummer Room		
9:45 AM	Talk 1	Seeking Best-Practice Pedagogy for Teaching Innovation and Entrepreneurship	NoSQL database for efficient data storage and retrieval
10:30 AM	Talk 2	ADOS, An intelligent and Autonomous Desktop Organizer Software for Faculty.	Service-Learning for the Millennial Generation
11:15 AM	Talk 3	Case Study: An Incremental Approach to Developing a Compiler for YPL (Your Programming Language)	Why an Information Systems Major Should Focus on the User First
12:00 PM	Lunch		
12:30 PM	Lunch Speaker Plummer Room		
1:00 PM	Poster Presentations Plummer Room		
1:45 PM	Talk 4	The design of a center of excellence for applications of digital technologies (CADT) in the care and management of health and disability	Teaching Software Testing Techniques in Introductory Programming Courses
2:30 PM	Talk 5	Alternative Learning Environments Focused on the Learning Preferences of Female Students	The Development of a Software Tool to Reduce Time Spent Identifying and Commenting Writing Errors in Research Papers
3:15 PM	Break		
3:45 PM	Talk 6	Why we should teach Excel VBA	Teaching Secure Programming Practices in Introductory Programming Courses
4:30 PM	Talk 7	The Basics of Scala Programming	Cybersecurity attacks and their countermeasures
5:30 PM	Dinner		
6:30 PM	Election/Door Prizes		
7:00 PM	Board Meeting		
Saturday			
8:00 AM	Reg/Coffee		
8:30 AM	Talk 8	Online Information Security Practice System	The use of Edit Assist, a Software Assisted Editing Tool for Research Papers
9:15 AM	Talk 9	A look at Computer Science for ALL & AP CS Principles across Texas	A Security Encryption Technique based on Steganography and Wavelet
10:00 AM	Break		
10:15 AM	Talk 10	Bitcoin and the Byzantine Generals Problem in Distributed Systems	State of ACET – Challenges and Opportunities in developing the next generation of IT Leaders
11:00 AM	Closing Remarks Plummer Room		

Contents

Keynote Address	5
Seeking Best-Practice Pedagogy for Teaching Innovation and Entrepreneurship	6
Nosql Database For Efficient Data Storage And Retrieval	6
Ados, An Intelligent And Autonomous Desktop Organizer Software For Faculty	7
Service-Learning For The Millennial Generation	7
Case Study: An Incremental Approach To Developing A Compiler For Ypl (Your Programming Language)	8
Why An Information Systems Major Should Focus On The User First	8
The Design Of A Center Of Excellence For Applications Of Digital Technologies (Cad) In The Care And Management Of Health And Disability	9
Teaching Software Testing Techniques In Introductory Programming Courses	9
Alternative Learning Environments Focused On The Learning Preferences Of Female Students	10
The Development Of A Software Tool To Reduce Time Spent Identifying And Commenting Writing Errors In Research Papers	10
Why We Should Teach Excel VBA	11

Teaching Secure Programming Practices In Introductory Programming Courses	11
The Basics Of Scala Programming	12
Cybersecurity Attacks And Their Countermeasures	12
Online Information Security Practice System	13
The Use Of Edit Assist, A Software Assisted Editing Tool For Research Papers	13
A Look At Computer Science For All & Ap Cs Principles Across Texas	14
A Security Encryption Technique Based On Steganography And Wavelet	14
Bitcoin And The Byzantine Generals Problem In Distributed Systems	15
Closing Remarks	15
Poster Presentations	16
List of Presenters	18
Program Committee	30
Our Objectives	32

Keynote Address

Friday October 28, 2016 - 8:45AM, Plummer Room

Dr. Joe Nordgren, Dean of College of Arts and Sciences with Lamar University.

After completing his undergraduate degree at the University of Minnesota, Dr. Nordgren earned his MA and PhD degrees from Florida State University. Upon being conferred his doctoral degree in 1990, he likewise received the Outstanding Dissertation Award for his book-length monograph *Malcolm Lowry: The Destructive Search for Self*. He has published widely on notable modern writers such as Albert Camus, T.S. Eliot, and Graham Greene.

Dr. Nordgren joined Lamar in 1991, and has served in multiple administrative roles as Chair of the Department of English and Modern Languages, as Associate Dean of the College of Arts and Sciences, and now as Interim Dean of the College of Arts and Sciences. Lastly, Dr. Nordgren has served his profession as a member of numerous panels and programs ranging from the Advisory Panel for the Literature Granting program sponsored by the Texas Commission on the Arts to the present Governor's XXXV Executive Development Program offered through the Lyndon B. Johnson School of Public Affairs.

Beyond academe, Dr. Nordgren enjoys photography and golf, both at which he describes himself as mediocre at best.

Seeking Best-Practice Pedagogy for Teaching Innovation and Entrepreneurship

Tejus Mane BS, Aniket Khade BE, Damilola Runsewe BS, Dr. Stefan Andrei PhD, Dr. David Cocke PhD

Friday October 28, 2016 - 9:45AM, Spindletop Room

Research into best practice pedagogy of teaching and learning innovation and entrepreneurship in technologies such as computer science and engineering depends on developing cognitive skills and behavioral skills necessary for creativity, innovation and entrepreneurship. These activities promote the five elements of innovator's DNA: associative thinking, observation, experimenting, questioning, and networking.

Nosql Database For Efficient Data Storage And Retrieval

Rajan Alex, Ph.D.

Friday October 28, 2016 - 9:45AM, Lamar Room

This is work will introduce applications in Node.js that use MongoDB database. Presentation will include how to download the needed software, create database, and data analytics to reveal information from large volume of unstructured data in Node.js. A number of hands on applications will be presented.

Ados, An Intelligent And Autonomous Desktop Organizer Software For Faculty

Isaac K. Gang, PhD, Gavin N. Alvesteffer

Friday October 28, 2016 - 10:30AM, Spindletop Room

What if there is a way to organize the desktop so that folders, files, and users are neatly organized automatically by keyword and/or relevance. In this proposal, we will try to answer this question and ultimately attempt to develop an autonomous software to accomplish this inherently tedious task.

Service-Learning For The Millennial Generation

Nary Subramanian, Ph.D.

Friday October 28, 2016 - 10:30AM, Lamar Room

Service-learning is a form of pedagogy where the student learns by working with a community member outside of class. Service-learning can take the form of projects, internships, or research experience, and has been found to be effective for teaching millennials. This presentation discusses service-learning approaches for imparting IT education.

Case Study: An Incremental Approach To Developing A Compiler For Ypl (Your Programming Language)

Arthur D. Hanna, Ph. D.

Friday October 28, 2016 - 11:15AM, Spindletop Room

I've discovered a wonderful way to help novices learn methods for programming-in-the-large, the semester-long case study, which requires the student to actively engage in re-solving a problem by answering computational-thinking and critical thinking questions and by supplying "missing code" segments. My presentation describes one of my favorite case studies.

Why An Information Systems Major Should Focus On The User First

Sam Hijazi Ph.D.

Friday October 28, 2016 - 11:15AM, Lamar Room

A computer system consists of three major components. These are hardware, software and the user. There is a clear difference between Information Systems, as a major or study, Computer Science and Computer Engineering. While in its purest form, Computer Engineering focuses on enhancing the hardware, Computer Science focuses on software development. What is left is the user. The computer user controls the hardware and the software to manipulate, processes, and solves real world problems. This presentation focuses on the reasons a degree of Information Systems must have a class designed just to build this type of thinking. A graduate in Information Systems must be a computer savvy, business savvy, and a problem solver. Preparing a person who knows how to utilize both hardware and software creatively, efficiently, critically, and effectively in a field that is changing by the second is another goal of this presentation.

The Design Of A Center Of Excellence For Applications Of Digital Technologies (Cadt) In The Care And Management Of Health And Disability

Stefan Andrei, PhD, Monica Harn, PhD, Vinaya Manchaiah, AuD, PhD, Ashley Dockens, AuD, PhD, Jamie Hartwell Azios, PhD, Elizabeth Long, DNP, Delanea Bronson

Friday October 28, 2016 - 1:45PM, Spindletop Room

The CADT will develop innovative digital products and applications that support healthcare providers, caregivers, those with health conditions and disabilities, and their families. Outcomes will fulfill the primary area of research (i.e., developing new evidence-based procedures (EBP) for technologies/health and disabilities management resulting in high quality products and publications).

Teaching Software Testing Techniques In Introductory Programming Courses

Theresa Horvath, B.S. Takeisha Moranza, M.S. Yihao Li, M.S. W. Eric Wong, Ph.D.

Friday October 28, 2016 - 1:45PM, Lamar Room

Software testing is timely and costly, yet early programming courses often don't teach it. We explain why it needs to be taught and why it has not been emphasized in the past. We offer pedagogically sound activities and examples for educators to use with students to develop good testing habits.

Alternative Learning Environments Focused On The Learning Preferences Of Female Students

William A. Booth, Ph.D.

Friday October 28, 2016 - 2:30PM, Spindletop Room

Over the past 30 years there has been a dramatic decrease in the percentage of women majoring in computer science when compared to the percentage of women majors in Medical School, Law School, and the Physical Sciences. This trend is a concern for educators in the field of computer science. Several faculty members in the computer science department at Baylor University are looking at ways to help retain women majors in both computer science and bioinformatics. One potential way for improving the retention of this underrepresented population, is to implement the computer science curriculum in ways more consistent with the learning style and social preferences of those populations.

The Development Of A Software Tool To Reduce Time Spent Identifying And Commenting Writing Errors In Research Papers

Charles L. McDonald, Jr., Ph.D., Theresa A. McDonald, Ph.D.

Friday October 28, 2016 - 2:30PM, Lamar Room

This technical presentation describes the development of a tool that identifies and comments writing errors in research papers. Written entirely in VBA, the tool operates as a Word Add-in that presents thirty buttons across three ribbons. The rationale for the code that supports each button's actions will be addressed.

Why We Should Teach Excel Vba

Sam Hijazi Ph.D.

Friday October 28, 2016 - 3:45pM, Spindletop Room

Excel is amazing productivity software. It is used by millions of people for business, scientific, and personal reasons. Many people have not taken advantages of the macro side of Excel. This presentation aims at sharing some intriguing and powerful macros to save hundreds of unneeded laborious hours. Also, the presentation will discuss the possibility of using VBA as an introductory programming language for non-computer science major students. VBA is a pure object-oriented language the presentation will discuss some ranges, control objects, ActiveX controls, functions and subs, the application controls, and user forms.

Teaching Secure Programming Practices In Introductory Programming Courses

Takeisha Moranza, M.S., Theresa Horvath, B.S., Yihao Li, M.S., W. Eric Wong, Ph.D.

Friday October 28, 2016 - 3:45PM, Lamar Room

When software does not perform correctly, development costs increase and lives are lost or placed at risk. Software must always work as intended and never be allowed to enter an unsafe state. Teaching students secure programming practices will decrease the risk for software malfunctions, which will reduce catastrophes and abnormalities.

The Basics Of Scala Programming

Dr. Mary Myers

Friday October 28, 2016 - 4:30PM, Spindletop Room

Scala stands for “Scalable Language”. This means that Scala grows with you. You can play with it by typing one-line expressions and observing the results. So it feels like a scripting language. But you can also rely on it for large mission critical systems, as many companies, including Twitter, LinkedIn, or Intel do. Scala was created with the goal of being a better language, removing those aspects of Java which are considered restrictive, tedious, or frustrating for the developer.

Cybersecurity Attacks And Their Countermeasures

Stefan Andrei, PhD

Friday October 28, 2016 - 4:30PM, Lamar Room

Cybersecurity attacks are conducted by large organizations targeting information systems, infrastructures, networks, personal computing devices by various means of malicious acts. Because of their persistency, cyberwars became the preferred way to disturb the activities of an organization or a country. This presentation will describe these concepts together with existing countermeasures.

Online Information Security Practice System

Heejun Choi, Gowthamraju Murududdi, Vamshi Vijaykumar
Saturday October 29, 2016 - 8:30AM, Spindletop Room

Security classes require much practice in using various hacking tools to attack different operating systems and assess security risks. However, existing security courses do not allow students to fully obtain this practice due to the limitations associated with the performance of students' laptops. This study aims to suggest how to develop online security practice system and to emphasize how important it is on the pedagogical effect.

The Use Of Edit Assist, A Software Assisted Editing Tool For Research Papers

Saturday October 29, 2016 - 8:30AM, Lamar Room

Charles L. McDonald, Jr., Ph.D., Theresa A. McDonald, Ph.D.

Attend this presentation to see a Microsoft Word Add-in designed to save faculty time in reviewing research papers! It will quickly perform the mundane task of identifying and commenting about 2,000 writing errors. It was written in VBA and includes an easy to use database manager, to configure rules and comments.

A Look At Computer Science For All & Ap Cs Principles Across Texas

Saturday October 29, 2016 - 10:00AM, Spindletop Room

Deborah Kariuki , MEd BsCS

The call for Computer Science for all initiative and the introduction of the new AP computer science principles course has created an exciting momentum in computer science education across Texas, how is ACET going to participate in policy making going forward.

A Security Encryption Technique Based On Steganography And Wavelet

Saturday October 29, 2016 - 9:15AM, Lamar Room

Heejun Choi, Xiao Jie Ge, Evan Guo, Qiang Guo

Data encryption scheme has been considered a very necessary process for protecting data against unauthorized people. This paper suggests a new encryption scheme based on two methods, such as wavelet and steganography, emphasizing its impact on the cyber security field.

Bitcoin And The Byzantine Generals Problem In Distributed Systems

Saturday October 29, 2016 - 10:00AM, Spindletop Room

Lawrence J. Osborne, Ph.D

Bitcoin is a decentralized, distributed system of trust and ownership. It depends on technologies such as a distributed general ledger that is cryptographically verifiable. A central clearinghouse, and sender identity credentials are not needed. Is it the first practical solution to the famous Byzantine Generals Problem in computer science?

State Of Acet – Challenges And Opportunities In Developing The Next Generation Of It Leaders

Saturday October 29, 2016 - 10:15AM, Lamar Room

Isaac K. Gang, PhD

In looking back to the past year, the author, who is the current ACET President, will conduct a round table discussing some of the organization's accomplishments and areas of improvement as it strives to be one of the leading Computer Science and IT pedagogical associations in the state of Texas.

Closing Remarks

Saturday October 29, 2016 - 11:00AM, Plummer Room

William A. Booth, Ph.D

Poster Presentations

Modeling and Prototyping using Additive Manufacturing Technologies

Lamar University - Timothy Gonzales, Greg Yera

Mentor: Dr. Stefan Andrei

Programming is a Snap!: increasing knowledge and interest in computing

Lamar University - Hannah Leleux, Timothy Gonzales, Colin Smith, Diego Fernandez, Alexander Strong, Timothy Holcombe

Mentor: Dr. Sunjing Wang

Brain Tumor Segmentation Using Deep Learning Technique

Lamar University - Oyesh Mann Singh

Mentor: Dr. Jing Zhang

QUIC Firefox

Lamar University - Vraj S Pandya

Mentor: Dr. Stefan Andrei

MapReduce-based Clustering Algorithm for Big Data Analysis

Lamar University - Fredrick M Ryans, Najar Aryal, Garima Panta

Mentor: Sujing Wang

MapReduce-based Clustering Algorithm for Big Data Analysis

Lamar University - Fredrick M Ryans, Najar Aryal, Garima Panta

Brain Tumor Segmentation using Deep Learning Technique

Lamar university - Oyesh Mann Singh

Mentor: Dr. Jing Zhang

Work in Progress: Machine Learning in Robotics

Lamar University - Timothy Holcombe, Greg Yera, Tim Gonzales,
Hannah Leleux, Logan Smith, Alexander Strong, Colin Smith
Mentor: Dr. Peggy Doerschuk, Dr. Sujing Wang

BlackBox: An Online Tool For Teaching Programming and Software Testing Concepts

Baylor University: Kelechi Fletcher
Mentor: Dr. Bill Booth

List of Presenters

Rajan Alex, Ph.D.

Rajan Alex is a professor of Computer Science at West Texas A&M University for 21 years. He has taught most of the courses in Computer Science at the undergraduate level. His research interest includes fuzzy logic application development, neural network applications and software education. He has authored and co-authored more than fifty research publications. He is a certified Java programmer and has worked as a Reader for the College Board AP Computer Science exam. He lives in Canyon, TX, with his wife and a dog named Laila. In his free time he likes to run and take part in marathons.

Gavin N. Alvesteffer

Gavin N. Alvesteffer is an undergraduate student at UMHB, who has been involved in undergraduate research for 4 years he has been at UMHB.

Stefan Andrei, Ph.D.

Dr. Stefan Andrei graduated B.Sc. and M.Sc. from Cuza University of Iasi, Romania, in 1994 and 1995, respectively. He got his PhD from Hamburg University, Germany, in 2000 as a World Bank Scholarship Japan Graduate student. He was a recipient of a postdoctoral fellowship from Singapore-MIT Alliance between 2002 and 2005. He is currently an Associate Professor and the Chair of Department of Computer Science with Lamar University. His research interests include real-time embedded systems and software engineering. He has more than 21 years teaching courses such as, real-time embedded systems, software engineering, foundations of computer science, computer law and ethics, and programming languages. Stefan has been on the Program Committee for more than 50 prestigious conferences. He was invited as a Speaker at several universities and private organizations. He has already been

a co-author of more than 100 peer reviewed papers at international reputable journals and conferences. Among his main contributions, he proved the problem of incremental counting satisfiability and invented the LRTL (Linear Real-Time Logic) useful for verification of real-time embedded systems specifications. His research got more than 220 non-self scientific citations. He was and is involved as a PI, co-PI, or Senior Personnel in more than 12 funded research projects. He is a Senior Member of the ACM and an IEEE Member.

Dr. Jamie Hartwell Azios

Dr. Jamie Hartwell Azios is an Assistant Professor and director of the Aphasia Conversation Lab at Lamar University. She has expertise in using qualitative research methodologies to examine the perspectives and interactions of adults with neurogenic communicative disorders in various social contexts. Her primary research interests include the co-construction of conversation in acquired brain injury, literacy in aphasia, the impact of aphasia on social inclusion in long-term care, and patterns of communicative behaviors in individuals with dementia.

William A. Booth, Ph.D.

Dr. Booth is a Senior Lecturer in the Department of Computer Science at Baylor University. He earned a BS in secondary education from Texas A&M university in 1986. After teaching in the Texas public school system for six years he returned to school in 1992. In 1994 Dr. Booth earned a MS in Computer Science from Baylor University. He worked for six years as a programmer analysis at Baylor before becoming a full time member of the faculty in 2000. In 2013 Dr. Booth earned a Ph.D. in Educational Psychology from Baylor. His current area of research includes the pedagogy of computer science and computational thinking.

Mrs. Delanea Bronson

Mrs. Delanea Bronson, MS, CCC-SLP is a clinical supervisor and instructor in the Department of Speech and Hearing Science at Lamar University. She received her Bachelor of Science degree from Texas Tech University and her Master of Science degree in Speech Language Pathology from Lamar University. She has been a practicing speech-language pathologist for 15 years. Her primary clinical and research interest include assessment and management of dysphagia.

Dr. David Cocke1, Ph.D.

David Cocke is the Jack M. Gill Chaired Professor and Associate Director of and co-founder of the Center for Innovation, Commercialization and Entrepreneurship at Lamar University. He holds a BS in Chemistry from the University of Texas, an MS in Chemistry from Lamar and a PhD in Chemistry from Texas A&M University CS. He is currently a practicing Chemist/Chemical Engineer/Biochemist seeking to help relieve human suffering and improve human wellness and longevity through biochemistry. Particular interests are in autoimmune diseases (scleroderma, RA, celiac conditions, diabetes, fibromyalgia, Raynaud's phenomenon, and chronic fatigue), oxidative stress (cancer, atherosclerosis, Afib, thyroid problems, and liver problems) food allergies and sensitivities and sulfur biochemistry along with entrepreneurial education.

Dr. Ashley Dockens

Dr. Ashley Dockens is an Assistant Professor with the Department of Speech and Hearing. She has expertise in the area of Audiology.

Isaac Gang

Dr. Isaac Gang is an Assistant Professor of Computer Science & Engineering at the University of Mary Hardin-Baylor's College of Sciences, department of Computer Science & Engineering. He joined the UMHB CSE faculty in the fall of 2011 from the University of Southern Mississippi where he taught as an Adjunct Professor of computer science at the USM's School of Computing. His primary teaching responsibilities at UMHB include programming (C++, C#, Java), games, graphics, robotics, data structure and algorithms.

Ciao Jie Ge

Ciao Jie Ge is a graduate student of Master of Science in Information Systems at the University of Mary Hardin-Baylor.

Arthur D. Hanna, Ph.D.

Associate Professor of Computer Science at St. Mary's University with thirty-four years as a full-time faculty member teaching both graduate and undergraduate courses. Former officer in the United States Army. Taught computer-related courses to government audiences on a part-time basis since 1984 and consulted in industry since 1975. Professional interests include Computer Science education, programming and programming languages, compilers, algorithmic, simulations, and operating systems.

Dr. Monica Harn

Dr. Monica Harn is Professor and Chair of the Department of Speech and Hearing Science at Lamar University. She has been a speech-language pathologist for 23 years. She earned her Ph.D. degree from Louisiana State University. She has been active in research in service delivery and intervention for children with language and speech impairment.

Sam Hijazi

D.B.A., Information Systems, University of Sarasota, 1995-1998,
Dissertation: Quality Distance Education Using Technology:
Student's Perspective

M.A., Economics, with honors, Morgan State University, Baltimore,
Md., 1989-1992

B.S., Computer Science and Applied Mathematics, Towson State
University, Towson, Md., 1987-1989

A.A., Computer Science, Montgomery College, Rockville, Md.,
1984-1986

Theresa Horvath

Theresa Horvath is a current high school teacher at McKinney High School in McKinney, Texas. She teaches AP Computer Science, PreAP Computer Science, Computer Science III/IV and AP Calculus BC. She coaches her high school's Computer Science UIL competition team. She received her Bachelors in Computer Science from the University of Dayton in Dayton, Ohio.

Deborah Kariuki MEd BsCS

I came from Kenya to attend university here in United States to do Medicine but I was told about computer science and the Y2K that was going to come and if I majored in computer science I would have a job right after graduation. So I majored in computer science even though I had never seen a computer in my life before accepting to major in CS where I graduated with a B Sc. in computer science and in Digital electronics. After working as a programmer for several years at IBM, I decided to become

a teacher where I have enjoyed teaching for the last 5 years. I teach IB computer science HL 1&2, IB computer science SL 1&2, computer science 1, AP computer science, computer science III, IB Information technology for a Global society HL 1&2, & SL1 &2, Project Lead the Way CSE, Dual Credit University of Texas CS302, and Independent studies in Computer Applications (These are many preps but the numbers do not allow for a new hire so I need to recruit more students so that my school can hire another teacher to help me). I have also sponsored several clubs in my school which include TAME-Texas Alliance of Minority Engineers, Skills USA, NTHS- National Technical Honor Society, Computer Science and Computer Applications UIL, all in hope of giving students a social interaction place in order to recruit more girls in computer science and engineering and an opportunity to see others like themselves when we go for competitions and best of all for students to have an opportunity to apply for scholarships. Last school year this worked because this year I have about 12 girls out of over hundred students taking computer science. My goal is to double this number next school year and maybe even start a trend of having an equal number of girls as boys in both engineering and computer science. During Hour of Code Last year I involved the ESL students in learning how to code and I am proud to see several girls will be joining computer science due to this effort. For these efforts I was awarded a grant from IBM worth \$5000 in promoting more girls to computer science and I was also recently nominated and unanimously appointed to the boards of TAME and ACET- Association of Computer Educators of Texas. It is an honor to be the representative of K-12 on these two boards and I am enjoying working with these groups in promoting computer science and engineering to K-12 schools of Texas. Last year and this year I was Awarded the NCWIT Educator Award 2015 & 2016 for Austin area, I have also enjoyed working with TACSE and Texas Computer Science Taskforce in promotion of CS and recruitment and training of new teachers as well as contracting with UTeach for the new UTeachCS principles course starting in the fall of 2016.

Aniket Khade, BE

Aniket Khade is a Chemical Engineering doctorate student at Lamar University, Beaumont. He received his B.E Degree from Pune University, India. At Lamar University, he is currently working on Process Simulation for Leak detection in Heat Exchangers and Abnormal Situation Management in Chemical Industries, as a part of his PhD Research work. He is the COO of Tefnut Technologies LLC, a company that provides sustainable water solutions from the atmosphere. He is also an active member of the Technical Innovation & Entrepreneurship (TIE) group on campus.

Dr. Elizabeth Long

Dr. Elizabeth Long is an Assistant Professor of Nursing at Lamar University. In addition to teaching in the undergraduate and graduate programs, she maintains an active gerontological nurse practitioner practice at local long term care facilities. She is currently serving as the Program Champion for a Music and Memory project at a local facility and is active in the states campaign to reduce the use of antipsychotics in long term care. Her interests include pharmacology, assessment, pathophysiology and geriatrics. Dr. Long has over 28 years of experience as a clinician and educator. She is a member of local, state, and national professional organizations and has roles as a Continuing Education Reviewer with the Texas Nurse's Association at the State level and on the National level with the Education Committee with the Gerontological Advanced Practice Nurses Association. She previously served as the co-editor of the GAPNA section of the Geriatric Nursing Journal. Current research projects include music and memory, reminiscence and themes involving older adults in children's literature.

Dr. Vinaya Manchaiah

Dr. Vinaya Manchaiah (AuD, MBA, PhD, FAAA) currently holds the positions: Director of Audiology, Jo Mayo Endowed Professor, Associate Professor of Audiology at Department of Speech and Hearing Sciences, Lamar University, Beaumont, Texas, USA. He has worked in various clinical, educational, research and administrative roles over the last 10 years. He has published over 60 papers in various academic and professional journals. His area of research interest includes: audiological rehabilitation, eHealth, psychosocial aspects of hearing loss, hearing aid demographics, occupational and recreational hearing loss and hearing conservation. He has research collaborations in more than 10 countries and has been part of many cross-cultural studies. He is keen to develop research in low- and middle-income countries and heading the project on measuring the outcome of community based hearing rehabilitation in India. He has been very active in service roles. He served as the Board of Director for the British Academy of Audiology (BAA) during 2011-14. He is the co-founder and Senior Editor of a global online platform - Global Audiology. He is the co-founder of Audiology India and served as the President during 2011-15 and currently serving as the Board of Director for Strategic Planning. Outside work, Dr. Manchaiah likes travel and photography. He has visited 59 countries so far and aims to go around the globe.

Tejus Mane1, BS,

Tejus Mane is a chemical engineering graduate student at Lamar University, Beaumont. He received his B.S from Rice University and has gained diverse experience in biotech R&D and downstream process engineering. After joining Lamar University, Tejus is currently doing his thesis on molecular simulations and modeling of tetracycline conformations, as well taking an active role in the entrepreneurial initiatives on campus. His current roles include CEO of Tefnut Technologies LLC, which provides sustainable atmospheric water solution and president of the Technical Innovation & Entrepreneurship group on campus that fosters an entrepreneurial spirit on campus.

Dr. Theresa McDonald

Dr. Theresa McDonald As Professor in the Computer Technology and Information Systems department at Texarkana College, Dr. McDonald teaches in such areas as computer logic and design, Cisco switches and routers, business computer applications, and computer technology theory. Formerly in addition to her teaching duties, she performed computer hardware installation and repair. She also provided computer and software support to faculty and staff. She moved into being the college's Project Manager and now the Enterprise Resource Planning Director. As adjunct faculty for the College of Business at Texas A & M University - Texarkana, she teaches in such areas as management information systems in graduate and undergraduate. She formerly taught in areas of marketing and records management at a community college and provided training and support for computer programs, hardware, and networks. Dr. McDonald received her A.A.S. from Texarkana College, her B.A.A.S and M.S. from Texas A & M University - Texarkana, and her Ph.D. from Nova Southeastern University. She has received the Endowed Chair for Teaching Excellence Award at Texarkana College. She brings 25 years of experience in teaching and computer consulting.

Dr. Charles McDonald

Dr. Charles McDonald is a professor of MIS and General Business at Texas A&M University-Texarkana. Dr. McDonald has a history that includes electronic hardware design, software development, process control systems, and consulting efforts. He has been active in serving on or chairing many university and college committees. In addition, he pioneered “paperless” and Web-based classes prior to the Web-CT and Blackboard shell’s prominence. His research interests include developing software solutions and identifying factors affecting the enrollment and retention of Hispanic students in higher education. Dr. McDonald received a Ph.D. in computer information systems from Nova Southeastern University in 1996.

Takeisha Moranza

Takeisha Moranza is a current high school computer science teacher at McKinney Boyd High School in McKinney, Texas. She received her Bachelors in Computer Science from the Southern University in Baton Rouge, Louisiana and her Master’s in Computer Science from Texas A&M University in College Station, Texas.

Gowthamraju Murududdi

Gowthamjaju is a graduate student of Master of Science in Information Systems at the University of Mary Hardin-Baylor.

Dr. Mary Myers

I am a technical instructor focusing on designing, administering, using, and building Big Data applications for Cloudera. Cloudera is the leader in next generation data management. In addition, Cloudera is the leading innovator in and largest contributor to the open source Apache Hadoop® ecosystem. The company’s enterprise data hub (EDH) software platform empowers organizations to store, process and analyze all enterprise data, of whatever type, in any volume -- creating remarkable cost-efficiencies as well as enabling business transformation.

Lawrence J. Osborne, Ph.D

Dr. Osborne has been a faculty member at Lamar University since 1990. Prior to joining the Lamar faculty, Dr. Osborne taught on the faculty at Missouri State University in Springfield, Missouri for seven years. He served as Department Chair at Lamar University for nineteen years before relinquishing that position at the beginning of 2013. Dr. Osborne has published more than 30 research articles in peer-reviewed conferences proceedings and journals on wired and wireless networks, distributed computing, algorithms, and computer science education. He has made numerous conference presentations at ACM, IEEE, and the Association of Computer Educators in Texas. Dr. Osborne regularly reviews papers for the Annual Conference on Innovation and Technology in Computer Science Education (itiCSE), and for the ACM Special Interest Group on Computer Science Education (SIGCSE). He has served for nine years as a Program Evaluator for ABET, Inc. which accredits all engineering and approximately half of the computer science programs in the United States. Since 2015 he has been one of 57 ABET Computing Accreditation Commissioners whose responsibility is to determine the final action taken each year on accreditation applications. Dr. Osborne received his undergraduate degree in Mathematics Education at Southeast Missouri State University, his M.A. in Mathematics from the University of Missouri-Columbia, and his M.S. and Ph.D. in Computer Science from the Missouri University of Science and Technology in Rolla, Missouri.

Damilola Runsewe, BS

Damilola Runsewe graduated with a Bachelor's of Science in Chemical engineering from Covenant University, Nigeria in 2014. He has experience in the oil exploration field and in waste/water treatment. Damilola is currently enrolled for his M.Sc. in Chemical engineering at Lamar University and working on environmentally friendly corrosion inhibitors. He is also involved in school

activities as the president of the international student council. He is currently a student mentor in the Engineering with innovation and entrepreneurship course. Damilola is also the Chief Technology Officer of Tefnut Technologies LLC which provides sustainable atmospheric water solutions.

Nary Subramanian

Nary Subramanian is an Associate Professor of Computer Science at The University of Texas at Tyler, Tyler, Texas. Dr. Subramanian received his Ph.D. in Computer Science from The University of Texas at Dallas. He is a Fellow of Service Learning at UT Tyler's Center for Excellence in Teaching and Learning. He is a Member of the Board of Association of Computer Educators in Texas. He has over fifteen years' experience in industry in engineering, sales, and management. His research interests include software engineering, system engineering, and security engineering.

Vamshi Vijaykumar

Vamshi Vijaykumar is a graduate student of Master of Science in Information Systems at the University of Mary Hardin-Baylor.

W. Eric Wong

W. Eric Wong is a full professor and the founding director of the Advanced Research Center for Software Testing and Quality Assurance in Computer Science at the University of Texas at Dallas. He is also the Principal Investigator (PI) for the NSF-sponsored REU (Research Experiences for Undergraduates)/RET (Research Experience for Teachers) site at UT-Dallas. Both Theresa Horvath and Takeisha Moranza have been RET participants under Professor Wong's supervision since May 2016.

Program Committee

Conference Chair

Dr. Stefan Andrei, Lamar University

Program Chair

Dr. William Booth, Baylor University

Program Committee Members

Dr. Mary Myers, Cloudera

Dr. Isaac Gang, University of Mary Hardin-Baylor

Dr. Rajiv R Malkan, Lonestar College

Dr. Art Hanna, St. Mary's University

Open, Northeast Texas Community College

Dr. Theresa McDonald, Texarkana College

Dr. Shohreh Hashemi, University of Houston-Downtown

Dr. Catherine Tabor, University of Texas - El Paso

Dr. Nary Subramanian, University of Texas - Tyler

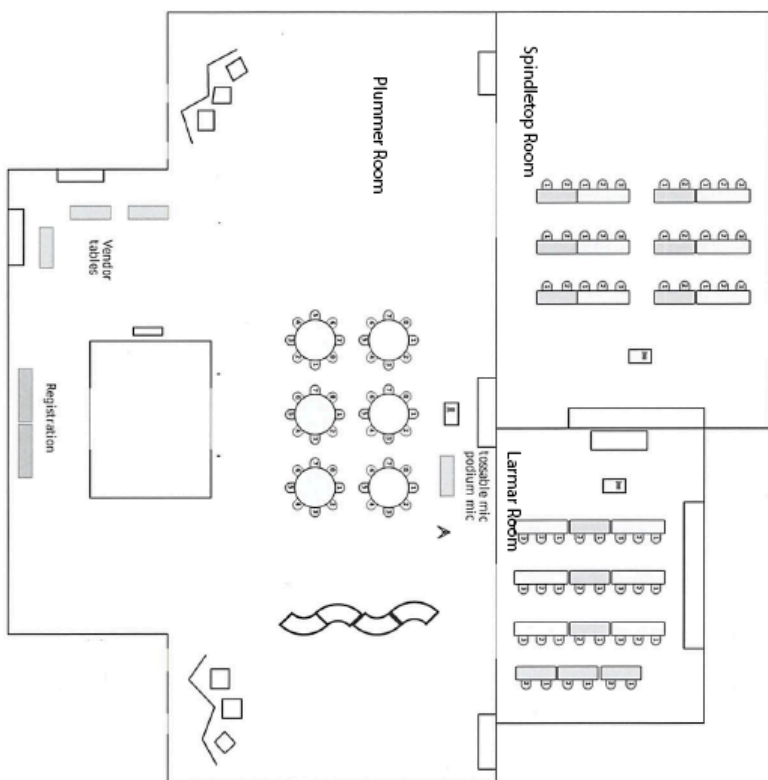
Dr. W. Eric Wong, University of Texas - Dallas

Dr. Deborah Kariuki, Round Rock ISD

Dr. Robert Nelson, Blinn College - Bryan

Dr. David Ondik, Texas Lutheran University

Dr. Amy Werst, University of Texas - Austin





Our Objectives

To provide an association in the State of Texas dedicated to the specialized areas of both administrative and academic computing.

To provide for the exchanging and sharing of ideas, techniques, materials and procedures developed for use in educational computing.

To promote general recognition of the level professional of the administrative and academic data specialists in modern educational systems; and the high level of competence required for those roles.

To encourage the appropriate use of electronic and computing equipment and techniques for the improvement of administrative and academic computing in educational systems.

To cooperate with manufacturers and distributors of electronic and computing equipment and supplies, in establishing and maintaining proper technical standards, and in meeting new needs for specialized devices and systems in educational computing systems.

To provide encouragement and consultation related to the improvement of educational computing and information systems.

To receive and administer funds for research related to educational, administrative and academic computing purposes, all for public welfare, and in general.

To exercise any, all, and every power from which a non-profit corporation, organized under the provisions of the Texas Non-Profit Corporation Act, for educational purposes, all for the public welfare, can be authorized to exercise.