Association for Computer Educators in Texas

Computer Science Education for ALL

ACET

Association for Computer Educators in Texas

Promoting Computer Education and Research in Texas

Proceedings of the 54th Annual Conference
19-20 October 2018

BAYLOR UNIVERSITY

Presentations

List of Presenters

Keynote Address

Developing a Cybersecurity Program

Dr. Jeff Donahoo
Baylor University
Friday October 19, 2018 - Lunch, UC-A

A Successful Implementation of Three Summer Code Camps for Middle School Girls

Lamar University College of Art and Science and College of Education and Human Development hosted three programming/coding camps in July and August 2018 for transitioning 6th-8th grade girls. These summer camps were funded through Texas Workforce Commission in the amount of $89,753. Stefan Andrei, Professor and Department Chair of Computer Science served as the Principal Investigator on this grant proposal. Sujing Wang, Assistant Professor of Computer Science, and Otilia Urbina, Assistant Professor of Professional Pedagogy served as the co-Principal Investigators of this project.

The goal of this camp is to offer hands-on experiences that provide challenging and innovative concepts in learning, problem solving, and analytical skills while fostering an interest in computer coding/programming. Each camp exposed 50 girls (150 total) to coding/programming, problem solving, teamwork and technology application skills through the utilization of Scratch software, LEGO® Mindstorms® Robots (6th gr.), SeaPerch Aquatic Robots (7th gr.) and Raspberry Pi 3 (8th gr.).

These camps were intended to extend and complement Lamar University's mission of establishing additional STEM summer camps that target national gap female technology needs for the purpose of introducing females to a technical learning environment that will expose them to coding/programming careers in anticipation they will pursue careers in coding/programming. This presentation describes how these Summer Camps were organized, taught and assessed. The intent of this paper is to provide information for others to host such Summer Code Camps and further prompt the effort to increase female participation in computing.

Active and Collaborative Learning in Computer Science Education

Cynthia C. Fry, MSE
Baylor University

This presentation will introduce the concepts incorporated in Active and Collaborative Learning (ACL), including:
- Stump your partner
- Think-pair-share
- Catch-up
- Fishbowl debate
- Case study
- Team-based learning
- Group problem solving

Also covered will be examples of how this can be used when teaching computer science, as well as designing assignments, forming groups, managing groups, and assessing student performance.

Brewable: A Senior Project Experience

Kyler Blodgett, Darrin Meyer, Alex Rodriguez
West Texas A&M University
kyleraustinblodgett@gmail.com,
dmeyer017@gmail.com ,
t.rex70007@gmail.com

In recent days, software systems are everywhere. Not all software systems are built with security and reliability in mind. This web-based utility "Brewable" was developed as a part of a senior capstone project experience at XYZ University. The project went through different phases of development starting from requirement analysis to testing. The design process focused on incorporating some of the non-functional aspects of the project such as security, performance, and reliability. This project was developed using a agile development and testing method. The methods chosen were based on the time we had to develop the project through the semester. Using this method allowed the team to quickly develop, deploy, and test working software at every period of development. The project utilized a grey-box testing and input validation approach for the majority of the testing period. From this, we will convey our experiences from utilizing a full development cycle from planning to deployment of functioning software and the wisdom we have taken from this.

Building the Big Data Cloud Computing Cluster for Hands-on Practice

The purpose of this project is to build a big data cloud computing cluster that can be simultaneously accessed by the students. The big data cloud computing cluster is composed of four virtual machines that deploy big data analysis software such as Hadoop, Flume, Spark, Mahout and so on,and requires high computing performance. This project was initiated by this need of hands-on practice in the big data class and has been conducted for 2 months by 11 project members. As a technical project that integrates numerous technologies -such as port forwarding, visualization, data analysis, virtual network, and so forth -its implementation requires much technical competence. As for the technical issue, one major challenge is the ability of the cloud computing cluster to remain accessible from different remote locations simultaneously. In addition,the computing resources on each virtual machine should be shared by at least more than 30 users concurrently. Under the support of the instructing faculty, it is consented that with proper port forwarding techniques and accurate firewall settings, these issues could be solved. Regarding the pedagogical outcome, with the addition of a big data cloud computing cluster, various big data mining hands-on practices using big data analysis software,including Hadoop, Spark, Mahout, etc. that have not been done due to the absence of practice environment were able to be performed inside and outside of the class. This cluster will continue to be updated by the feedback of the students and be expanded to accommodate more users by adding data nodes and upgrading systems.

Develop Programs for Option Contacts

The call and put options are sold and bought on every trading day on the CME exchange by people experienced in handling them. The seller also known as the writer of a call option contract on a commodity or stock agrees to buy the underlying asset for its buyer for the specified price and by the indicated date in the contract. Similarly, a put option contract seller or writer agrees that the writer will sell the underlying asset owned by its buyer for the specified price and by the indicated date in the contract. Both contacts are agreements between two parties about an asset and can provide payoffs. Financial engineering is a mature field dealing with the study and construction of financial instrument consisting of option contracts and underlying assets to create payoff for its investors. Many of the financial engineers are programmers and so we must have an interest in teaching them in our CS courses to give more job opportunities for our students. In this work, we will look at the terminologies involved, how to create simple portfolios that guarantee payoffs,and how to develop programs to compute option prices.

How Li-Fi network technologies will change our lives

J.B. Groves III

This session explores how network connectivity as we know it is evolving through Light Fidelity technology and products. The current spectrum has to accommodate more and more users. Future network grow this reliant on emerging technologies that enable the connectivity demands of tomorrow. Li-Fi has the capability to enable unprecedented data and bandwidth for the future.

How to Teach a Financial Data Mining Course
Tutorial–Half Day

Gary D. Boetticher, Ph.D.
University of Houston –Clear Lake
boetticher@uhcl.edu

Colleges accommodate students by offering "cutting edge"technical courses that help students prepare for the job market. The underlying paradigm is that students are learning "to work for money." What is missing from the equation is "how to get money to work for them." Thus, students have worked very hard to get a job, but lack the knowledge for managing their money.

In 2009 I created a class called Financial Data Mining to address this issue. The course has evolved extensively over the 10 years. This hands-on tutorial shows participants how to create a Financial Data Mining course. It assumes no prior financial/trading background. Tutorial objectives include:

1)A review of basic financial/trading terminology.
2)Provides data and software resources.
3)How to construct a realistic financial model.

Keeping up with Computer Science… Shifting the Focusing to computer science for ALL.

Computer Science is a foundational knowledge for all students in the 21st century. But many schools don't teach it especially in the elementary school level. Coding is a foundational skill, just like reading and writing. That's why we should teach: Read, Write, Code! In this session teachers and administrators will learn strategies on how to begin to integrate computer science into your curriculum by using code.org, scratch, google cs first, and many other resources.

Online Python for non-CS Majors

With the rapid growth of CS4All initiatives, more college students are needing to learn programming. However, these students are not computer science majors and the traditional approach to computer science education is intimidating to them. In this talk, I present lessons learned from two summers of teaching a 1-hour, asynchronous, on-line course on Python for non-majors.

Remote Embedded System Lab (RESL)

Most of the computer engineering classes have a lab component attached to the class. These labs provide hands-on exposure on how to design a system for an application or to solve a problem. These labs are mostly done on general purpose embedded systems-base board or FPGA boards. Many students from Electrical Engineering (EE), Computer Science(CS), and Computer Engineering (CE) fields are interested to learn more about embedded systems and FPGA design. As a result, there is an increase in class enrollments every time the class is offered. This increase in enrollment requires more resources to teach these classes. In order to meet the demands of growing classes, buying more computers and boards is not a great way to scale.

The Remote Embedded Systems Lab(RESL)is a development environment for embedded systems. This lab is remotely accessible through a web browser and allows users to upload compiled code to an embedded systems board or a FPGA board, and to monitor the board's outputs by camera, microphone, and serial port. The user can interact with the target board and activate sensors and buttons through the web interface in real-time and is accessible 24x7. The RESL also features an extensive database which permits the management of boards,users, permissions, and helps to see statistics of usage. It also provides a web-based method for developing and testing applications using embedded systems which opens paths for distance education programs as well as helping to reduce the required number of physical workstations and boards in traditional labs.

Student Success and Retention through Quality Enhancement Plan (QEP)

In 2014, the University of Houston-Downtown(UHD)launched a university-wide process to explore, plan, and institute programs that would provide its students opportunities to improve their critical thinking and problem solving skills through community engagement. The two years of focused and intense efforts resulted in UHD's Quality Enhanced Plan (QEP) -A+CE: Academic Achievement through Community Engagement."1The faculty teaching lower-level courses were invited to update courses to 1) include strategies to enhance students' critical thinking and problem solving, 2) include the A+CE Learning Outcomes, 3)and assign an A+CE Signature assignment, and4) submit Signature assignments for assessment and evaluation. In fall 2016, the A+CE was implemented in forty-one lower-level and core courses for the first time. Since then, the number of courses with A+CE designation has more than doubled to eighty-nine courses, and more than 100 faculty volunteers have taught more than 9,000 students in A+CE designated courses. Furthermore, freshman student retention had increased to more than 70%. This presentation reviews the processes used to develop QEP, factors that led to selection of critical thinking emphasis, and factors in choosing community engagement as a pedagogical strategy. In addition, A+CE course requirements, learning outcomes, and the signature assignment will be discussed. Finally, an A+CE course is show-cased.

Teacher Training: Iterative vs. Recursive Algorithm Design

Cynthia C. Fry, MSE
Baylor University

This presentation will provide an introduction to iterative and recursive design in algorithms. We will define each approach, provide examples of their uses (factorial, Fibonacci, Towers of Hanoi),and a comparison of their advantages and disadvantages. This is one of the criteria in TExES Computer Science 8-12 (241), Domain III, Competency 9.

Teacher Training: Search Algorithms

An introduction to search algorithms, including the linear search and the binary search. Advantages and disadvantages of each.

Teacher Training –Sorting Algorithms

This workshop will cover the design, implementation and analysis of most prevalent sorting algorithms found in the computer science curriculum. Each algorithm will be explained, analyzed and then implemented in C++, Java, and Python.

Teacher Training –What is Big-Oh Really Telling Us

This workshop will cover the Asymptotic analysis of algorithms. The five asymptotic measures (Big-Oh, Little-Oh, Big-Omega, Little-Omega and Theta) will be covered with particular emphasis on Big-Oh. In addition to time complexity of common algorithms we will look at solving recurrence relations and its impact on algorithm analysis.

Teaching Computer Science to Middle School and High School Teachers

Dr. Art Hanna
St. Mary's University

I'm happy to provide a K-12 education track 30-minute presentation. Having taught programming (C and Java) to MS and HS teachers for We Teach_CS collaboratives in San Antonio, I have some "suggestions" that I would *LOVE* to share.

The Challenges and Rewards of Leading Student Projects with External Industry Customers

Dr. Matthew Fendt
Baylor University

Working with an external industry customer in a classroom setting is a challenging but rewarding experience for students. I, along with another colleague here at Baylor University, led a Computer Science senior capstone group of three students in a collaborative project with the Family Health Center of Waco. The Family Health Center provides healthcare services to the vulnerable and under serviced population in Waco. The students developed a mobile app to assist the researchers in the administration and maintenance of patient health surveys. The collaboration presented a number of challenges for myself as the instructor and also for the students. These include the discovery of customer wants and needs, the difference of knowledge of technology, institutional and HIPAA compliance, and encouraging of the adoption of our technology. The project was very valuable as well. The experience taught the students how to work with a customer, learn communication and documentation skills, and how to prepare for on site visits and customer training. I will be discussing in detail some lessons learned and inviting discussion about collaborating with industry customers in a classroom setting.

The ICPC International Collegiate Programming Contest: Today and Tomorrow

William B. Poucher

The ICPC International Collegiate Programming Contest dates to 1970. Headquartered at Baylor University, the competition has over 320,000 alumni and serves over 3,100 universities in 111 countries worldwide. The ICPC operates under the ICPC Foundation and is undergoing change after 20X growth over 20 years. These changes will offer greater opportunity to advance and engage in the art, science, and sport of competitive programming. Opportunities will be presented and discussed.

The Plotter Class –Using Graphics to Motivate Students in the Introductory Curriculum.

William A. Booth, Ph.D.

This presentation will cover the development and application of the Plotter class. I simple graphics library that allows introductory computer science students integrate graphics into the programs. The Plotter class can be used for simple animation or complex game development.

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

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.

What Do You Mean I have no budget?

Starting out the school year with no textbooks or curriculum has a disheartening effect on a teacher who is excited to make a difference. Or so it was for me. Today's presentation will provide participants with Free resources for the following courses, Animation,Video Game Design, Computer Programming, Computer Science, 3D Printing, Mobile App Development. All the resources that I will be providing are free. Some resources that I will show you are low cost. These resources were found with the budget friendly teaching in mind. This presentation will be a fast paced and you will leave excited about what you will bring back to your students on Monday morning. Door prizes will be awarded for participants.

Teacher Training: Search Algorithms

Cynthia C. Fry, MSE
Baylor University

This presentation will introduce search algorithms, including the linear search and the binary search, including:
- what does each type of search algorithm do
- a demonstration of each search algorithm
- a discussion of the various advantages and disadvantages of each

Poster Presentations

Melody Identification Using Machine Learning

Wyatt Snyder
Faculty Mentor: Dr. Greg Hamerly
Baylor University
Wyatt_Snyder@baylor.edu

Currently, there are no publicly known best practices for algorithmically identifying a melody. My research project aims to resolve this by first determining these best practices, and then implementing a prototype of a machine learning algorithm to display these practices' effectiveness. In order to discover and develop these best practices for identifying melodic lines, I will need to determine what key features an machine learning model will require to do just that. Additionally, I will show what impact transposition of a melodic line will have on the performance of my identification algorithm, as well as how many notes it will require to correctly identify it. Currently, the project is in its inception. I am researching the literature that is published on related subjects in preparation of starting my own research in 2019. As I have not yet begun my research in full force, I, appropriately, do not have any outcomes to report yet. Ideally this research will spark further investigation into melodic identification, and give a foundation for the creation of a software product.

SEMBATE: a SEMAFOR-based textual entailment system

Melody Horn
Faculty Mentor: Cindy Fry
Baylor University
M_Horn@baylor.edu

I present a system for recognizing textual entailment based on Frame Net frames emitted from the SEMAFOR semantic parser. My system checks for overlap between hypothesis and text frames in a manner inspired by that of the SALSA RTE system. I evaluate this system on various data sets and discuss its performance and larger issues within textual entailment. SEMBATE performs significantly worse than the SALSA RTE system when evaluated on the same corpora, despite using a better parser. If it were accurate enough to be trustworthy, it could be used in contexts such as fact checking and certain types of automatic grading.

List of Presenters

Dr. Rajan Alex

Dr. Rajan Alex is a Professor of Computer Science at West Texas A&M University. He has been teaching there since 1995. He received a bachelor's degree from University of Kerala, India, in 1977. He received a master's degree in mathematics from New Mexico State University in 1987. He received a Ph.D. degree in applied mathematics in 1994 and a master's degree in computer science in 1995, both from Texas Tech University. He teaches courses in computer science that are both programming related and theoretical. His research interests and publications are in fuzzy logic set theory and its application, and computer education.

Dr. Stefan Andrei

Dr. Stefan Andrei graduated 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 a 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 23years 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 13 funded research projects. He is a Senior Member of the ACM and an IEEE Member. More details about Stefan may be found at the address: cs.lamar.edu

Kyler Blodgett

Kyler is a senior software engineering student at West Texas A&M University.

Dr. Boetticher

Dr. Boetticher began teaching at the university level in 1983. He was awarded a patent in Computational Bioinformatics in 2011. He served on two IEEE executive boards (Reuse Standards, Reuse Interoperability Group). He was General chair of the PROMISE (Predictive Models in Software Engineering) conference in 2011. He has received 2 best paper awards (one in Financial Data Mining).

Dr. Boetticher began trading in 1998. He has invested over 18,000 hours and created more than one million financial models. Compared to over 1090 professional Commodity Trading Advisors (CTAs), he was ranked in the top 1% in the world (from Barclay Hedge) for the first quarter of 2018 with a net profit of 21.56%.

Dr. William (Bill) A. Booth

Dr. William (Bill) A. 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.

Heejun Choi

Heejun Choi is an Assistant Professor of Computer Science Department at the University of Mary Hardin-Baylor. He holds a Ph.D. in Computer Science from the University of Louisville. He also holds an MS in Information Technology from Pohang University of Science and Technology, in Pohang, Korea and a BS in Computer Science from Air Force Academy in Cheongwon, South Korea. His research interests are in Big data analytics, Machine learning and Cybersecurity.

Kimberly Lane Clark

Kimberly began her career in educational technology 11 years ago gaining experience teaching students in grades K-12 in Mississippi and Texas. In the latter part of her years in education she also served as a campus technology coordinator. Kimberly is currently a District Blended Learning Specialist in Texas. She has also served as a technology consultant for School House 21 since 2011, technology consultant for Educate Texas, facilitator for Code.org, the Dallas, TX city lead for Black Tech Women, and she served as a guest computer science consultant for the Global Academic Technology Essentials Teacher Institute at Mississippi State University. In 2016, she was selected as the third cohort of the TED-Ed innovators and she currently serves as the 2017-2018 ISTE Computer Science Network president. Kimberly earned a B.A. in Educational Technology, a M.Ed in Secondary Education and an Ed.S in Secondary Education with a specialization in Technology from Jackson State University.

Christi Coplin

Christi Coplin has been teaching in the career and technology field in both urban and rural school districts in Texas since 1997. She is currently teaching Computer Programming, Video Game Design and Principles of Information Technology at Commerce High School in Commerce, Texas.

Dr. Jeff Donahoo

Dr. Jeff Donahoo received his B.S. and M.S. degrees from Baylor University and his Ph.D. in Computing from the Georgia Institute of Technology. Upon graduation, he returned to Baylor University, where he currently serves as a Professor of Computer Science. Jeff teaches courses in networking, operating systems,and computer security. Jeff coaches the Baylor CyberSecurity team, which finished 4th in the US in 2018. He created the Practical Guide focusing on applied computing technologies and has written several books in the series, which are used internationally and have been translated into multiple languages. Jeff is a recipient of the Baylor Outstanding Professor Award and Medal of the University of Warsaw.

Cynthia C. Fry

Cynthia C. Fry joined the faculty of the School of Engineering and Computer Science at Baylor University in 1997, where she teaches a variety of engineering and computer science classes, in addition to being the Faculty Advisor for the Women in Computer Science (WiCS), Director of the Computer Science Fellows program, and the Co-Director for the Technology Entrepreneurship Initiative at Baylor. She is the lead PI on a series of grants from the Kern Family Foundation, and a KEEN Fellow. She has authored and co-authored over fifty peer-reviewed papers.

Cameron Gassis

Cameron Gassis an undergraduate student of Computer Science at the University of Mary Hardin-Baylor.

Mr. Groves

Mr. Groves began working with computers in 1973. He has over 26 years of information technology industry experience. He has taught Computer Science for Wharton County Junior College since 1999. He has 18certifications in the areas Fiber Optics, PC Hardware, Networking, Security, and others. He is a published author in the fields of Fiber Optics, Smart Home Technologies, and STEM education. He serves the Electronics Technicians Association in several capacities which guides his professional life. His current research and certification interest are VLC (Visible Light Communications), Li-Fi (Light Fidelity), and AWS Cloud certifications.

Shohreh Hashemi

Shohreh Hashemi is an Associate Professor and Martel Professor of Management Information Systems at the University of Houston Downtown (UHD), Houston, Texas, where she teaches both upper-and lower-level MIS courses in face-to-face, hybrid, and online modes. Her research interest is now focused on student retention and success. She is the A+CE faculty champion for the Davies College of Business (DCOB). Professor Hashemi is the recipient of the UHD Excellence in Teaching Award, and twice recipient of the UHD Excellence in Service Award.

Melody Horn

Melody is an undergraduate computer science student at Baylor University. She originally hails from Denver, Colorado.

Dr. Charles McDonald

Dr. Charles McDonald recently retired as 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.

Dr. Theresa McDonald

Dr. Theresa McDonald is a 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, then the Enterprise Resource Planning Director, and now full time faculty. As adjunct faculty for the College of Business at Texas A & M University -Texarkana, she has taught 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 more than 25 years of experience in teaching and computer consulting.

Fernando Mosquera

Fernando Mosquera is a PhD student in Computer Science and Engineering at the University of North Texas. He has worked as a technical IT professional with multiple college degrees and successful 10-year track record of profitable business on technical environments. He is currently working on a security research project related to Computer Architecture Area.

Darrin Meyer

Darrin is a senior software engineering student at West Texas A&M University.

Wenceslao Ortiz-Gamiz

Wenceslao Ortiz-Gamiz is an undergraduate student of Computer Science at the University of Mary Hardin-Baylor.

Dr. Pottathuparambil

Dr. Pottathuparambil has worked several years in embedded systems design and reconfigurable computing. He recently finished his PhD where his dissertation focused on formulating best practices for building hardware designs for living (changing) computational science applications. He has designed FPGA based accelerators for high frequency trading platform and scientific applications. He is currently collaborating on a research project to build configurable Data Flow Graphs (DFGs) for applications using FPGAs. He is also working on several embedded systems based projects related to smart lighting and Internet of Things (IoT).

Dr. Poucher

Dr. Poucher is a Professor of Computer Science at Baylor University and has served as Executive Director of the ICPC International Collegiate Programming Contest since 1988. He has served as World Finals Judge, South Central Regional Director, and a co-coach. He serves on the Board of the UPE Honor Society in the Computing Sciences. He is an ACM Fellow. He is recipient of a number of awards including the University of Warsaw Medal. He developed systems in energy management, communications, synthetic vaccine research, and global enterprise tools. He is a Texan.

Alex Rodriguez

Alex is a senior software engineering student at West Texas A&M University.

Wyatt Snyder

I am a Computer Science Fellows student at Baylor University. I hail from Newalla, Oklahoma and have always had a passion for both Mathematics and Music. Only recently have I been able to marry the two through my research at Baylor on identifying melodic lines using machine learning.

Lingyi Zhangis

Lingyi Zhangis an undergraduate student of BBA Business Computer Information System at the University of Mary Hardin-Baylor.

Program Committee

Program Chair

Cindy Fry, Baylor University

Program Committee Members

Dr. Art Hanna, St. Mary's University
Dr. William A. Booth, Baylor University
Dr. Deborah Kariuki, University of Texas
Dr. Stefan Andrei, Lamar University
Dr. Rajiv R Malkan, Lonestar College
Dr. Theresa McDonald, Texarkana College
Dr. Shohreh Hashemi, University of Houston-Downtown
Dr. Nary Subramanian, University of Texas-Tyler
Mrs. Theresa Horvath
Dr. Greg Speegle, Baylor University
Dr. Matthew Fendt, Baylor University
Dr. Sam Hijazi, Texas Lutheran University
Dr. Mary Myers