UTSA Computer Science

Fall 2022 Newsletter Edition

Germany on Campus

The TU Darmstadt`s Liaison Office at UTSA is participating in this years Germany on Campus initiative co-sponsored by the German Embassy and organizing a series of events with UTSA Global Initiatives.

The program activities will cover a spectrum of topics highlighting the political, scientific, and technological collaboration and transatlantic partnership between Germany and the U.S.

In an effort to explore and showcase the entrepreneurial and research capabilities of German subsidiaries and scientific institutions in the U.S., invited speakers and lecturers will speak on the overarching interdisciplinary topic of "Cybersecurity and AI" at the Department of Computer Science. In addition, companies and institutions will present career opportunities in a subsequent networking session.

Business and Science Made in Germany

Join us for lecture and presentation on "Cybersecurity and AI" & Career Opportunities

Date: October 25, 2022

Location: NSCC; North Paseo Building 5.140

10:30-11:15 Fraunhofer Center Mid-Atlantic CMA Software and System Engineering, Riverdale, MD

11:30-12:15 Merck, EMD Serono, EMD Digital, Massachusetts

12:30-1:30 Refreshments

https://global.utsa.edu/germanyoncampus.html

Welcome to the Fall 2022 edition of the Computer Science Newsletter. I would like to congratulate our students, faculty and staff for a safe return. We are looking forward to a successful academic school year with you.

This is an exciting year for me as being appointed as the Interim Chair of the Computer Science Department. My goal as chair is to continue to improve the quality of education for all Computer Science students, and increase faculty success.

I would also like to announce the appointment of our Assistant Chair, Dr. Dakai Zhu and thank him for his service to UTSA. In addition to duties of an Assistant Chair, Dr. Zhu is also the Graduate Advisor of Record for the Ph.D. Program in Computer Science.

Exciting news this year is the addition of eleven faculty, to include two Tenure/Tenure-Track faculty, an increase of enrollment of 15%, the recognition and award for the fastest growing academic program (Outstanding Enrollment Growth in a Master's Program, Master of Science in Cybersecurity Science), and many new initiatives you will read in this newsletter.

In this newsletter, we also recognize our Summer 2022 Ph.D. graduates and wish them a successful career.

Dr. Turgay Korkmaz

UTSA Computer Science

A Hispanic thriving university

At-A-Glance

The Department of Computer Science at The University of Texas at San Antonio is a comprehensive academic unit that offers a Bachelor of Science in Computer Science, Master of Science degrees in Computer Science and in Cybersecurity Science, and a Doctoral degree in Computer Science.

Students have access to strong research programs, state-of-the-art resources, and competitive financial support. Our faculty members conduct research in a variety of areas and are dedicated to the university mission of discovery, teaching and learning, community engagement, and public service.

42 Full-time Faculty

One of 10 schools in the country designated as an NSA Center of Academic Excellence in all 3 distinctions: Cyber Operations, Cyber Defense and Research.

9 NSF Careers

Research supported by more than $5 million in active research grants and contracts from various external funding agencies, such as the National Science Foundation, National Institutes of Health, National Security Agency, Army Research Office, Air Force Office of Scientific Research, Office of Naval Research, and Department of Homeland Security.

Two Top 35 Cybersecurity Educators

4 National Centers & Institutes
*AI Matrix Consortium
* Center for Infrastructure Assurance and Security (CIAS)
*Institute for Cyber Security (ICS)
*Open Cloud Institute

#2 in the Nation for bilingual, multilingual, and multicultural education
#20 in the Nation highest percentage of Hispanic, degree-seeking undergraduates
#9 in the Nation for granting undergraduate degrees to Hispanics
#17 in the Nation in Hispanic graduate student enrollment

https://hispanicserving.utsa.edu/hispanic-thriving/

Hack the Port competition - UTSA and Computer Science in the News

At the end of July, a group of UTSA students were awarded a grant from the National Security Agency that covered travel expenses, lodging, and per diem, allowing them to compete in the Hack the Port (HTP) competition held in Gulfport, Mississippi.

HTP is a unique competition that was inspired by U.S. Cyber Command and developed by MISI and DreamPort. In this competition, student teams take on the role of attackers (red team) or defenders (blue team) for a network belonging to a fictional facility in the maritime transportation sector. This network included industrial control systems (ICS) and other related systems such as physical protection systems. However, this specialized hardware was not virtualized. Instead, actual platforms were set up that included surveillance cameras, badge swipes, pumps, flow-rate meters, programmable logic controllers (PLCs) and human machine interfaces (HMIs). The students were not only able to monitor these systems remotely, but were able to look at the physical setups to understand what the systems were doing – including triggering visual alerts (red light instead of green) when there was some kind of system failure.

The UTSA team took on the blue team role, which required them to monitor their security information and event management (SIEM) system to detect malicious activity conducted by the red team. Once detected, the team would write up a Significant Action (SIGACT) alert and reported it to the judges for scoring. To be successful, the students were expected to be familiar with:
•   Kibana Search/Query and Visualization
•   Log File Analysis
•   PCAP and Netflow Analysis

The five-person team demonstrated a great ability to delegate responsibilities, work together on difficult problems, and communicate smoothly in a very active and high-stress environment.

The captain of the team was Jacob Rahimi, a Computer Science major, and the other team members were Timothy Avram a Cybersecurity major; Mason Eckenrod a Computer Science major; Jake Langley a Computer Science major; and Genesis Siebel a Cybersecurity major. The coach for the team was Ben Anderson, an Associate Professor of Practice who supports both the Computer Science and Information Systems and Cybersecurity Departments.

While one of the student red teams won the competition, the UTSA team learned a lot about monitoring a network, responding to events, and dealing with the unusual characteristics of ICS systems. They are also looking at competing in future MISI and DreamPort competitions which include: Hack the Building, Hack the Railroad, Hack the Hospital, and Hack the Rocket. More information on the competitions can be found at: https://www.hacktheuniverse.tech/
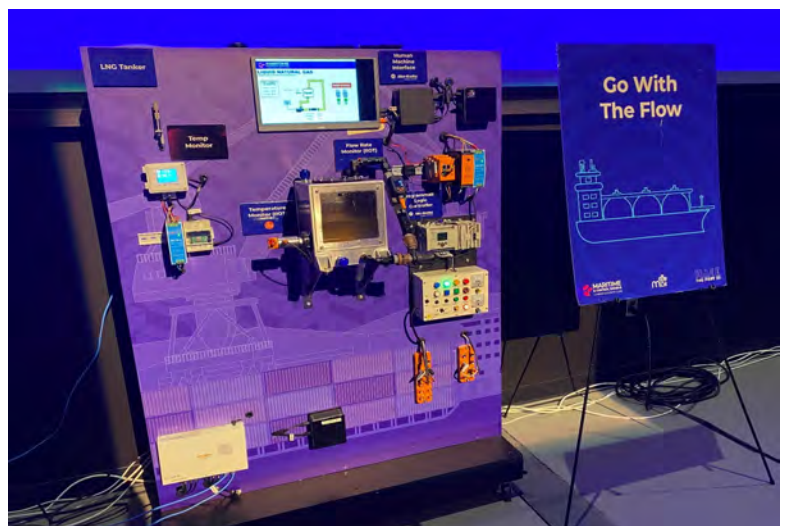
UTSA COMPUTER SCIENCE WELCOMES NEW FACULTY

Dr. Mitra Bokaei Hosseini, Assistant Professor

Dr. Hosseini joined the Computer Science Department in Fall 2022 as an Assistant Professor. Her research spans the areas of software engineering, privacy, legal compliance, and natural language processing. Her goal is to ensure software systems' verifiability, traceability, and trustworthiness. She mainly focuses on the collaborative software development environments that include stakeholders with diverse backgrounds (e.g., users, lawyers, requirement engineers, and software programmers) and reusable software designs to ensure that a given requirement corresponds to the end-users desires.

Dr. Hosseini received her Ph.D. in May 2019 from the Department of Computer Science at the University of Texas at San Antonio (UTSA). She was an Assistant Professor of Computer Science at St. Mary's University for three years before joining UTSA. She has four years of experience in the industry as an Information Security Auditor, where she was responsible for evaluating information systems and security controls in accordance with ISO/IEC 27001:2005.

Dr. Kevin Desai, Assistant Professor

Dr. Desai is currently a tenure-track Assistant Professor, starting Fall 2022. He has been with the Computer Science Department since 2019 as an Assistant Professor of Instruction. Dr. Desai received his Ph.D. in Computer Science in 2019 from the University of Texas at Dallas.
Dr. Desai's research experience and interests are in the fields of computer vision and immersive (virtual/augmented/mixed) realities with applications in the domains of healthcare, rehabilitation, virtual training, and serious gaming. Currently, he conducts interdisciplinary research revolving around the real-time capture and generation of 3D human models and their incorporation in collaborative 3D immersive environments.

Dr. Panagiotis Markopoulos, Associate Professor, Joint Faculty with ECE

Dr. Markopoulos's received his Ph.D. in Electrical Engineering at the University of Buffalo. His MS is in Electronic and Computer Engineering from The Technical University of Crete, Greece. His expertise is in the areas of machine learning, data analysis, and adaptive signal processing. His research mission is to advance efficient, explainable, and trustworthy artificial intelligence. Dr. Markopoulos focuses on theoretical (statistical, computational) foundations and on practical algorithmic solutions, applied to a wide range of real-world problems. His research has found important applications in remote sensing, computer vision, communication systems, and healthcare technology.

Ms. Hend Alkittawi, Lecturer

Ms. Hend Alkittawi received an M.S. degree in Computer Science, and a B.S. degree in Electrical Engineering. She has been preparing and teaching computer science courses for more than two years as a part-time instructor. She worked as a programmer and data analyst at Corpus Christi Independent School District. Previously, she worked on designing deep learning models and software tools at AgriLife Research Center in Corpus Christi. Prior to that, she worked on building features for a mobile application as a software developer at PlayerWatch, a startup company based in Corpus Christi. While pursuing her master's degree, she designed the lesson plans and taught two computer science programming labs. As an electrical engineering student, she was elected the chairperson for the WIE (IEEE Women in Engineering) affinity group where she focused on supporting women pursuing engineering degrees.

Dr. Fatma Arslan, Professor of Instruction

Dr. Arslan comes to the Computer Science department with 12 years of UTSA teaching/ service experience. Being a UTSA alumni, she has witnessed the great improvements that took place in the last 20 years. Dr. Arslan is interested in computational side of engineering applications such as image processing algorithms and artificial intelligence techniques focusing on computer vision. Dr. Arslan is very passionate about teaching and undergraduate research. She is looking forward to contribute to the undergraduate education at the Computer Science Department by using her experience and expertise in higher education and research.

Dr. Rajkumar Banoth, Associate Professor

Dr.Banoth, IEEE Senior Member, Cyber Security Operations Certified Trainer, pursued his Bachelor of Technology from National Institute of Technology (NIT), Hamirpur, Himachal Pradesh, in Computer Science & Engineering. He pursued his Master of Technology and PhD from Jawaharlal Nehru Technological University (JNTUH), Hyderabad, Telangana, in Computer Science & Engineering. He has published seven text books in Networking, Computer Organization and Architecture, Computer Forensic and Machine Learning. He published and granted three patents, nationally and internationally. He is an editorial board member of various publishing house as well as invitee speaker for three conferences, published eighteen Hi-indexed SCI and Scopus Journals and Presented nine Conference papers. Along with having membership in "The Institution of Engineers (India)", "Indian Society for Technical Education (LM-ISTE)", "Computer Society of India (M-CSI)", and "Research Gate".

Dr. Mohammad Imran Chowdhury, Assistant Professor

Dr. Mohammad Imran Chowdhury research is in algorithms and robotics, focusing on analyzing and designing novel path planning algorithms for Autonomous Vehicles (AVs). He received his Ph.D. in 2022 and M.Sc. in 2018 from Florida State University in Tallahassee, FL, under the supervision of Dr. Daniel Schwartz and Dr. Robert van Engelen . He completed his B.Sc. in 2012 at the Chittagong University of Engineering & Technology (CUET) in Chittagong, Bangladesh.

Dr. Ali Hikmet Dogru, Professor of Instruction

Dr. Ali Dogru received his Ph. D. at Southern Methodist University, Dallas, Texas. His dissertation was in 'A Process Oriented Engineering System Design Framework'. He received his M.S. in Electrical Engineering at the University of Texas at Arlington and his B.S. in Electrical Engineering at the Technical University of Istanbul, Turkey. Dr. Dogru's research interest is in Software Engineering, No-Code Development, Compositional Software Development, Complex Event Processing, and Fault Management.

Dr. Timothy Richards, Associate Professor of Instruction

Dr. Richards comes to UTSA's Computer Science Department with over twenty years of experience in higher education. He has worked with students at a variety of institutions including the University of Maryland College Park, the United States Naval Academy, James Madison University, and the University of Maryland Baltimore County. He looks forward to engaging with students in the classroom, working on research projects with students, and helping students achieve their professional goals. Dr. Richards focuses his research on information personalization, usable AI/ML, and human-centered computing. Dr. Richards is an accomplished pianist and enjoys traveling with his family during the summer months.

Dr. Amin Sahba, Assistant Professor

Dr. Sahba received his B.S. and M.S. in Computer Engineering from Sheikh Bahaei University and Science and Research Azad University of Tehran, respectively. He received his second M.S. in Electrical and Computer Engineering from The University of Texas at San Antonio and a Ph.D. in Electrical and Computer Engineering from the same university. Prior to joining the Department of Computer Science at UTSA in August 2022, he worked as a researcher at the Open Cloud Institute and as a lecturer in the Department of Information Systems and Cyber Security at UTSA and then as a visiting assistant professor in the Department of Computer Science at Sam Houston State University. He is currently an Assistant Professor of Instruction in the Department of Computer Science at UTSA teaching graduate and undergraduate courses as well as conducting research projects. His research interests include machine learning, deep learning, data science, IoT, cybersecurity, smart cities, image processing, and NLP.

Dr. Ramin Sahba, Assistant Professor

Dr. Sahba received a B.S. degree in Software Engineering from Sheikh Bahaei University and an M.S. degree in Computer Engineering from Science and Research Azad University of Tehran. He received his second M.S. and his Ph.D. in Electrical and Computer Engineering from the University of Texas at San Antonio. He joined the Department of Computer Science at UTSA in August 2022 as an Assistant Professor of Instruction to teach graduate and undergraduate courses and conduct research projects. Before that, he worked as a researcher at the Open Cloud Institute and as a lecturer in the Department of Information Systems and Cyber Security at the University of Texas in San Antonio and then as a visiting assistant professor in the Department of Computer Science at Sam Houston State University. His research interests lie in the area of machine learning, deep learning, data science, image processing, NLP, cybersecurity, smart cities, and IoT.

*Congratulations
Summer 2022
Computer Science Ph. D. Graduates*

Sen He
*Professor: Wei Wang, Ph.D., Assistant Professor
Ph.D. Dissertation Title: "Performance Testing for Cloud Computing"*

Kavita Kumari
*Professor: Murtuza Jadliwala, Ph.D., Associate Professor
Ph.D. Dissertation Title: "When and How to Protect? Modeling Repeated Interactions with Computing Services under Uncertainty"*

Liu, Tianyi
*Professor: Wei Wang, Ph.D., Assistant Professor
Ph.D. Dissertation Title: "Enabling 3D Applications in Public Cloud"*

Mohammad Nur Nobi
*Professor: Ravi Sandhu, Ph.D., Professor and Lutcher Brown Endowed Chair in Cyber Security
Ph.D. Dissertation Title: "Towards Deep Learning Based Access Control"*

Mir Mehedi Ahsan Pritom
*Professor: Ravi Sandhu, Ph.D. Professor and Lutcher Brown Endowed Chair in Cyber Security
Ph.D. Dissertation Title: "Defending Against Malicious Websites: Themed Threats, Detection, and Law-enforcement"*

UTSA Ph. D. Computer Science Alumni, Dr. Mehrnoosh Shakarami, is one of 15 female researchers recognized by the National Center for Women & Information Technology and one of the 2022 NCWIT Collegiate Award Recipients.

Selection of the award was based on achievements and technical abilities demonstrated through the projects with high levels of innovation and potential impact. Mehrnoosh project for this award focused on modeling and implementing mechanisms that appropriately control access to Internet of Things (IoT) systems used in smart home environments, such that only the right people can access the right things at the right time. This includes securing these environments to prevent hackers from gaining control over smart devices even if they are able to get onto the Wi-Fi network, as well as making inter-device communications more automated, increasing comfort and ease of use.

The NCWIT Collegiate Award is sponsored by Qualcomm and Amazon with additional support from Palo Alto Networks. https://www.aspirations.org/

Dr. Mehrnoosh Shakarami has extensive experience with different authentication and authorization protocols in cloud-native applications and IoT. She has practical knowledge on identity and access management in different cloud environments at large enterprise environments. Mehrnoosh is continuously playing security capture the flag (CTF) and has experience on network/application penetration tests and vulnerability assessment.

*As a passionate security researcher, Mehrnoosh invests extensive research time gaining in-depth understanding of complex security implications. Her research leads to design and implementation of identity and access management at operational and administrative levels. She has published several peer-reviewed papers in major conferences such as DBSec, TPS, and NCS.
- Dr. Mehrnoosh Shakarami*

Recent CS Grants and Awards

SaTC: Enabling Interdisciplinary Collaboration: Studying Social Engineering Attacks Targeting Vulnerable Refugee Populations

Amount: $296,470.00   *Start Date: 07/2 022 End Date: 06/2024*

PI/Co PI: Mythili Menon (Principal Investigator)Murtuza Jadliwala (Co-Principal Investigator)

Abstract:
Two recent world events, an ongoing pandemic together with continuing regional wars and conflicts, have resulted in a sizable number of refugee population being forcibly displaced and resettled in the United States. Lack of English-language and digital literacy skills have made the refugee community an easy target for new and increased social engineering attacks. This project's overarching goal is to study how language and linguistic features impact the perception and response of refugees to social engineering attacks. The project's novelties are a) a language- or linguistic-centric approach for understanding social engineering threats to refugees resulting in development of novel educational materials, open access datasets, and improved cybersecurity policies to counter these threats, and b) tailored digital literacy and educational programs and workshops to raise awareness and mitigate social engineering threats among the refugee population. The project's broader significance and importance are a) improved protection models and prevention techniques against social engineering attacks, b) informed policies and tools, resulting in better social and economic security, and reduced inequity gap within the vulnerable refugee population, and c) enhanced refugee integration into the U.S. society through increased awareness of cybersecurity threats.
The project team systematically study the linguistic cues and triggers associated with social engineering attacks such as phishing and vishing. The deliverables and key contributions of the project include a) preliminary results documenting the impact of linguistic traits of the refugee population on their susceptibility to real-world social engineering attacks, b) open-access datasets of phishing emails, and voice calls, with attributions of interactions to promote further research, c) recommendations to improve cybersecurity policies including vulnerable population, resulting in the creation of new STEM educational material for the refugee population, and d) follow-up educational workshops to debrief, discuss, and disseminate relevant educational material to the target refugee population.

Collaborative Research: HCC: Medium: HCI in Motion -- Using EEG, Eye Tracking, and Body Sensing for Attention-Aware Mobile Mixed Reality

Amount: $457,105.00   *Start : September 1, 2022 End Date: August 31, 2025 (Estimated)*

PI/Co PI: John Quarles (Principal Investigator), Kevin Desai (Co-Principal Investigator)

Mobile, wireless, headsets for virtual and augmented reality, such as the Meta Quest 2 and Microsoft HoloLens-2, are becoming more widely used in many applications beyond video games, such as training, construction, and medicine. However, wearing these head-worn goggles while walking can make some people feel sick or distracted, which has even led to injury in some cases. This effect is similar to texting while walking, but potentially worse because a person's entire periphery can be filled with distracting media elements. While previous research has investigated these issues when users are standing still or seated, it is unclear how problems unfold and how they can be prevented while users are in motion. Specifically, this project will investigate how and why virtual and augmented reality headsets affect attention and feelings of sickness. First, this work will record data, such as heart rate, brain waves, and the direction users are turning their eyes to, while they are wearing virtual and augmented reality headsets and walking. Secondly, this project will develop ways to reduce sickness and distraction while walking with virtual and augmented reality headsets. This work will improve the safety of mobile virtual and augmented reality headsets, products that virtually all big technology companies today heavily invest in as possible companions or replacements to smartphones. This project will be introduced in courses and research mentorship projects at The University of Texas at San Antonio and the University of California at Santa Barbara, to advance research training of both undergraduate and graduate students. Considering that both universities and research teams have a history of supporting many underrepresented minority students, it is expected that the educational value of this project will be high, especially in terms of recruiting and mentoring women and underrepresented minority students.

What do YOU want to see covered in this newsletter?

Do you know of upcoming CS related events?

Do you have any success stories to share?

Email suggestions and topics to the editor at cs@utsa.edu

Debra Leal

For the latest department news updates, visit our website at cs.utsa.edu
Or follow us on social media

Facebook.com/ utsacomputerscience

Twitter @utsa_cs

Linkedin groups/5061256/

Instagram utsacs

CS KICKSTART

Dr. JIANWEI NIU receives UTSA Outstanding Graduate Mentor Award in 2022

Dr. Jianwei Niu is a professor of Computer Science and the Associate Dean of University College at The University of Texas at San Antonio (UTSA). She served as the Interim Director for the School of Data Science at UTSA from August 2019 to June 2021 and was a Microsoft President's Endowed Professor from 2020 to 2021.

Dr. Niu received her Ph.D. in Computer Science from University of Waterloo in 2005 and immediately after she started the tenure-track Assistant Professor position at UTSA. During her tenure at UTSA, Dr. Niu established a successful, productive academic career. Her teaching was recognized at UTSA by the Outstanding Graduate Mentor Award and the President's Distinguished Achievement Award for Teaching Excellence. Dr. Niu has supervised 12 Ph.D. students and nine of them successfully completed their Ph.D. degrees with seven landing their academic positions at Stony Brook University, Rochester Institute of Technology (RIT), St. Mary's University, Air Force Institute of Technology, and UTSA respectively.

Dr. Niu's research has improved key problem areas in cyber security, privacy compliance, formal methods, and software engineering. Through the use of formal methods and program analysis, she is able to heighten assurance that privacy regulations are complied and security policies are enforced. Her research also includes protecting personal information of by detecting privacy violations of mobile applications and analyzing software vulnerabilities by leveraging the recent advancements in deep learning and natural language processing. Her research has been funded by the highly competitive grants from DoD, NSA, NSF, US Army, Texas Higher Education Coordinating Board (THECB), Microsoft Inc., MITRE Corp, etc. Her research establishment has gained national and international recognition, evident by more than 50 peer-reviewed publications in highly-selective venues, including flagship journals and conferences ACM Transaction on Information and System Security (TISSEC), IEEE Transactions on Dependable and Secure Computing (TDSC), IEEE Transactions on Software Engineering (TSE), Journal of Computer Security, IEEE Symposium on Security and Privacy (Oakland), and ACM/IEEE International Conference on Software Engineering (ICSE). Moreover, she has served as an associate editor of IEEE TDSC since 2019 and the co-chair of the program committee of ACM Symposium on Access Control Models and Technologies (SACMAT) in 2019. She also has served as a program committee member of many prestigious and top conferences, including ICSE, SACMAT, Symposium on the Science of Security (HotSoS), etc.

Dr. Niu has been providing leadership to help UTSA become one of the leading institutions to offer innovative curriculum in computer science and data science. She has been establishing partnerships with public and private sectors at local and national levels. Under her leadership, the School of Data Science at UTSA (along with other five Universities) recently received recognition as a National Security Agency (NSA) Data Science Partner. She co-led the design of the new Bachelor of Science degree in multidiscipline studies with five niche areas, including Data Science, Artificial Intelligence, Neuroscience, Cyber Intelligence, and Geoinformatics. Additionally, she has led the creation of the fully online, graduate certificate and undergraduate certificate in Data Science, which have been launched since Fall 2021.

Fun and Interesting Facts about Technology
https://scope.ie/blog/

1. The Firefox logo isn't a fox. It's actually a red panda. It's a common misbelief that the Firefox logo is a fox (I mean… it is in the name), but it is actually a red panda!

2. Nintendo made playing cards long before they made video games. Nintendo was founded in 1889 as a playing card company. They didn't make their first video game until 1978.

3. As of 2017, 2.1 millions people still use dial up. A study done in 2017 found that 2.1 million people still use a dial up service. These customers are situated mainly in rural America where internet is unreliable and expensive.

4. There are approx. 3.5 billion Google Searches per day. 7.2 percent of this traffic comes from people searching the term 'Google'. You can view daily Google Search trends at https://trends.google.com/trends/.

5. Google's First Tweet was in binary. Google's first tweet was in 2009, and it was gibberish to most. Translated from binary to English, it reads, "I'm feeling lucky".

6. Motorola produced the first handheld mobile phone and their first phone call was to their rival. On April 3, 1973, Martin Cooper, a Motorola researcher and executive, made the first mobile telephone call from handheld subscriber equipment, placing a call to Dr. Joel S. Engel of Bell Labs (AT&T), his rival.

7. Apple were originally designing an apple shaped flip phone before the first iPhone. Before the original design for an iPhone, Apple patented a phone design in the shape of an actual apple. It was a flip phone that, when closed, would look like the Apple logo.

More fun facts can be found here: https://scope.ie/fun-and-interesting-facts-about-technology/

Fellowships recognize outstanding newly tenured UTSA faculty

SEPTEMBER 26, 2022 — UTSA Academic Affairs has awarded endowed fellowships to nine faculty members for the 2022-2023 academic year. The awards are granted annually to recently tenured faculty to recognize exceptional early career impact, and to advance scholarly research and the academic success of their students.

Eunhee Chung, Claudia García-Louis, Greg Griffin, Ashwin Malshe, Kathryn Mayer, and Megan Piel were named recipients of the Lutcher Brown Fellowship; **Murtuza Jadliwala** *and Rohit Valecha were selected to receive the Cloud Technology Endowed Fellowship; and Yanmin (Emily) Gong received the Microsoft President's Endowed Fellowship. All three endowments are one-year, non-recurring, honorific appointments that began on September 1.*

"These faculty are a prime example of the scholarly excellence that exists here at UTSA, and I'm excited to advance their work and impact through these fellowships," said Kimberly Andrews Espy, UTSA provost and senior vice president for academic affairs. "The groundbreaking research and outstanding teaching conducted by our faculty played a large part in UTSA becoming a Tier One research university last year, and these endowments will only boost the research efforts of some of our most outstanding instructors."
— Chloe Johnson

UTSA currently has more than 85 endowed chairs, professorships and fellowships that recognize the scholarship and research of the university's highest achieving faculty.
The Department of Computer Science has three endowed recognitions. In addition to Dr. Jadliwala, Cloud Technology Endowed Fellowship, Dr. Sandhu is The Lutcher Brown Distinguished Chair in Cyber Security and Dr. Niu is the Microsoft President's Endowed Professor from 2020 to 2021.

My proudest moments are when my students are successful after completing their degrees"
- Dr. Jadliwala

Dr. Murtuza Jadliwala *is an Associate Professor in the Computer Science Department and Graduate Advisor of Record for the MS in Cybersecurity Science. His research spans all aspects of cyber and cyber-physical systems security and user privacy. He currently directs the Security, Privacy, Trust and Ethics in Computing Lab (SPriTELab). Jadliwala will use his fellowship funding to continue his team's security and privacy research and to advance education and student training opportunities in these areas.*

Dr. Jadliwala is also the host of UTSA's summer program Cyber Warriors: A comprehensive Introduction to Cybersecurity Tools and Techniques.

Q & A Session with Dr. Jadiwala

What did your journey to UTSA look like?

I graduated with a PhD degree in Computer Science & Engineering from the University at Buffalo in 2008, following which I did a 4-year stint as a post-doctoral research fellow at EPFL, Switzerland - one of the premier academic institutions in Europe. After that I joined Wichita State University in Kansas as a tenure-track Assistant Professor in 2012. I eventually moved to UTSA in 2018 as a tenure-track Assistant Professor. So far, working here in the CS department at UTSA has been an immensely rewarding experience. I have done some of my best work (in terms of research and teaching) here at UTSA. The CS department has world-class faculty colleagues who do amazing work and serve as ideal role models, and some of the brightest students that I have ever worked with in my life. The staff in the department and affiliated centers have also been tremendously helpful, and nothing that I do would be accomplished without their constant help and support. All-in-all, it has been a very memorable and academically fulfilling journey so far!

What do you enjoy most about your area of study?

For me and my students, a Eureka moment is when we discover new, and hardly obvious, security and privacy vulnerabilities. We firmly believe that by responsibly exposing these vulnerabilities and providing necessary solutions to overcome them, we are trying to make modern computing and communication technology safer and more private for humanity. This is very important for us (as users/consumers) to trust the technology we use every day!

What are some of the notable research projects that you've been involved in?

One of my most notable research projects, and the one that I most passionate about, is my CAREER research project titled "A Holistic Context-based Approach for Security and Privacy in the Era of Ubiquitous Sensing and Computing". In this project, I study the security and user-privacy challenges of modern and upcoming mobile and IoT systems and applications, and design appropriate solutions for overcoming these threats. As part of this project, I am also developing and teaching related undergraduate and graduate level courses, and conducting cybersecurity and privacy summer camps for K-12 students. Mobile and IoT devices have become a ubiquitous consumer technology, and has resulted in us being surrounded by sensors who watch and track every event in our lives. They do enable a lot of useful applications, which were never possible before, but also bring to the forefront significant user-privacy issues and challenges that must be immediately addressed! Privacy is a human right, and I firmly believe that modern computing and communication technology in this digital age cannot, and should not, be allowed to encroach on this important and fundamental right. This is the belief that drives my work in this project.

What do you hope that graduate students gain from your classes and coursework?

Every day that I teach and mentor, I try to instill the same passion that I have for the topic of security and privacy into my students. For students who have taken my courses, they will know that I have a lot of hands-on projects/labs in my course. I am a big believer that the best way to learn is by actually doing/practicing concepts that you have learnt in class! My message to my graduate students is simple – "Don't be afraid of taking on and solving difficult problems in your area of study! Often the real challenge is not solving difficult problems, but finding simple solutions to these problems!"

What do you enjoy most about being a professor at UTSA?

Working and interacting with some of the most wonderful and talented students in the whole world. I also love the diversity at UTSA! Every day, I get to learn so much more from my students as well.

How would you spend your ideal Saturday?

Saturdays, for me, is all about household chores and projects! Right from replacing light bulbs to building new kitchen cabinet shelves – all happens on a Saturday!

Outstanding Enrollment Growth in a Master's Program

The **Master of Science (M.S.) Degree in Cybersecurity Science** was recognized by UTSA for its outstanding growth in one year.

The degree offers a comprehensive and hands-on education in the area of Cybersecurity. The program provides students with a broad exposure to the highly dynamic Cybersecurity discipline along with a deep technical and scientific understanding of the related concepts, tools and techniques. The degree provides broad exposure to the cybersecurity discipline along with a deep understanding of its technical and scientific underpinnings.

Dr. Jadliwala, the Graduate Advisor of Record, goals are "(i) improving the quality and diversity of cybersecurity-focused courses offered as part of this degree program, and (ii) providing prompt and excellent quality of service to both prospective and current cohort of students. In the first direction, he will work with the CS department to provide additional cyber-security-focused elective course offerings on key topics that are currently missing in the curricula, for example, hardware security, AI/ML security, cloud computing security, web security and privacy enhancing technologies. He also plans to conduct a thorough review of the existing curricula to reduce content overlap across existing courses. In the second direction, he will introduce processes to improve the current response time(s) to both student queries, as well as, application review and admission decisions."

www.https://cs.utsa.edu/ms-cybersecurityscience

Are you interested in continuing your studies for a Ph. D. in Computer Science?

An on-line information session for our undergraduate seniors and master students is scheduled to be held and details are below:

Zoom meeting at 10am on Oct. 21, 2022 (Friday).

Topic: PhD in CS @ UTSA
Time: Oct 21, 2022 10:00 AM Central Time (US and Canada)

Join Zoom Meeting
https://utsa.zoom.us/j/97852340475

Meeting ID: 978 5234 0475

STEM Academy from Northeast ISD Campus Visit

The Explore STEM High School from Northeast ISD visited UTSA and the College of Science on Friday, September 30, 2022.

The STEM 7th and 8th grade students learned about the many things happening in the Computer Science Department and College of Science. The students visited the San Antonio Virtual Environments (SAVE) lab and learned about the various projects and research conducted by Dr. Quarles and PhD students. The SAVE Lab 'conducts research in virtual reality, augmented reality, mixed reality, simulation, 3D user interfaces, and serious games. Our projects have applications to training, education, and healthcare'. https://sites.google.com/view/savelab/home Students also visited Dr. Zhu's Real-Time Embedded System (RTES) lab and had an opportunity to interact with the camera controlled mobile robot and object detection/recognition with advanced machine learning models.

The tour also included visiting labs in the College of Science and learning about college admissions, degrees, and college-awareness.
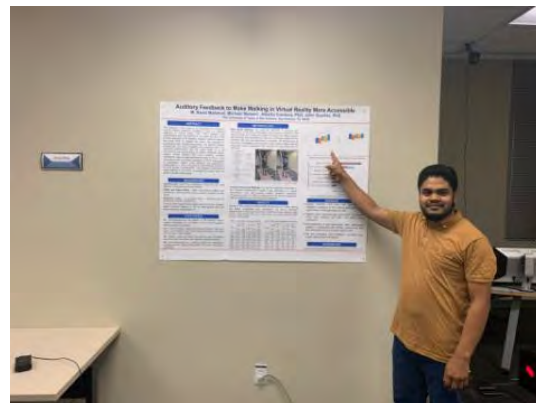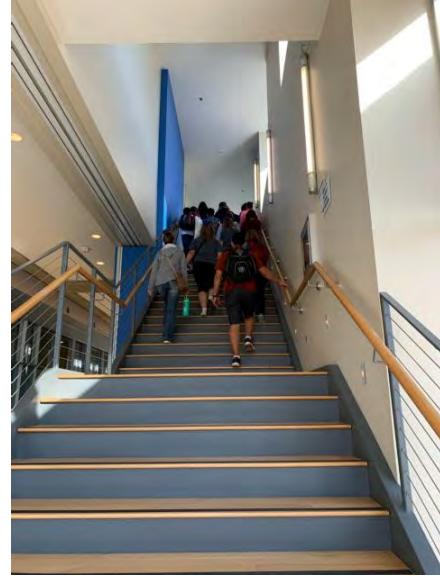
STUDENT ORGANIZATIONS FOR UTSA COMPUTING STUDENTS

UTSA has more than 330 student organizations on campus, giving its students have plenty of opportunities to connect with one another. Computer Science (CS) has many student organizations organized and run by computer science students to create a network of community amongst their fellow CS peers. One of the best ways to get connected with other students and stay in-the-know of upcoming events and activities is to join one or more of the CS clubs available for students. These organizations host various events throughout the year, including but not limited to hackathon competitions, capture the flag cyber competitions, industry panels from invited speakers, volunteer opportunities, career prep, hands-on tech workshops, studying sessions, mentoring circles, networking events, and fun socials on and off-campus.

ACM
Association for Computing Machinery

ACM is dedicated to giving members and students the opportunity to gain experience, network, socialize, learn, and grow outside of the classroom in all fields of technology and computing.

Email council@acmutsa.org
Website https://www.acm-utsa.org/

ACM-W
Association for Computing Machinery
Women's Chapter

ACM-W aims to create an engaging academic, professional, and social network for women and minorities in technology. ACM-W's purpose is to connect students with leaders and encourage them to pursue career opportunities in computing fields and to mentor for academic and professional success.

Email acmw.utsa@gmail.com
Website https://www.acm-utsa.org/acm-w

ACM - ICPC
International Collegiate Programming Contest

International Collegiate Programming Contest The ACM-ICPC, or International Collegiate Programming Contest, is a world-wide programming contest where thousands of 3-person teams compete by solving anywhere from 8 to 12 algorithm problems of varying difficulty, from easy to extremely hard.

Email Mark.Robinson@utsa.edu
Website https://www.acm-utsa.org/icpc

RowdyHacks
ACM RowdyHacks Committee

RowdyHacks is ACM UTSA's annual hackathon held every year in April. Every year, a committee of ACM members get together to help plan and organize the biggest hackathon in San Antonio, TX accommodating hundreds of students, sponsors, volunteers, and mentors.
Email team@rowdyhacks.org
Website https://www.acm-utsa.org/rowdyhacks-1

INTERDISCIPLINCARY AND GRADAUATE STUDENTS ORGANIZATIONS FOR COMPUTING

As the university encourages more collaboration across departments and colleges, more students begin establishing interdisciplinary organizations across wide varieties of fields and specializations. For Computer Science students, there are many opportunities to connect with students from other majors and programs to network with, learn from one another, and develop well-rounded skills applicable to their field of study. Masters and PhD students also have opportunities to connect with their peers through the graduate student organizations across the university and in the Computer Science department specifically. Graduate students are provided more research specific seminars and information sessions to assist with their courses, theses, and dissertations, as well as social events to connect with their peers and motivate one another to succeed.

RowdyCreators

ACM RowdyCreators
Rowdy Creators is a technology startup incubator that provides
students with the opportunity to learn new technologies, build hands-on projects in diverse teams, formulate innovative ideas, and develop proofs-of-concept for potential startup ventures.

Email rowdycreators@gmail.com
Website https://www.acm-utsa.org/rowdy-creators

CSA

Cyber Security Association
CSA regularly participate in offensive and defensive cyber competitions and exercises to hone their skills. CSA provides
training and professional events for students in computing fields.

Email utsacyber@gmail.com
Website http://utsacyber.com/

CS-GRAD

Computer Science Graduate Student Association

CS-GRAD is the graduate student group for computer science students at UTSA.
Join us for tips and tricks for efficient grading and effective recitations.

Website https://discord.gg/weNtPTy

IEEE EBM

IEEE Engineering in Medicine and Biology Society

All students, especially those interested in the fields that make up the EMBS, are welcome to join. Through volunteering, education, and informative presentations, we strive to promote innovation and participation in the field of technology and medicine

Website https://embsutsa.wordpress.com/

University Career Center

Your career interest and development is important because you are working toward to dream, a goal, and a purpose! The University Career Center will work with you to support you finding experiences and opportunities while with UTSA and beyond. Creating a plan and strategy for your success is our passion. Therefore, we provide individual career counseling, virtual networking events with employers from across the country, and a vast array of virtual resources.

Check out what we have for you!

● Log-in to Handshake to connect, schedule appointments, find events, jobs and more!
● Unsure about what career to pursue? Take the Career Explorer Assessment
● VMock provides you with instantaneous feedback on your resumes, 24/7.
● CareerShift is a national job search tool . Career Shift pulls jobs posting from all over the internet and puts them all in one place.
● Interview Stream allows you to get interview practice before the actual interview! Practice from the comfort of your computer and
get feedback on how on well you did.
● Check additional resources the University Career Center offers on our Resources Page.
● Join us at our largest fall fairs. Keep an eye on our website or Handshake for all the details!

You can also just visit our website or email us at career.services@utsa.edu.

Lisa Vigil is the College of Science Senior Career Consultant. She is available to meet with science majors one-on-one to review resumes and/or cover letters. She will also help students navigate through Handshake and LinkedIn. Space is limited, so schedule an appointment as soon as possible.
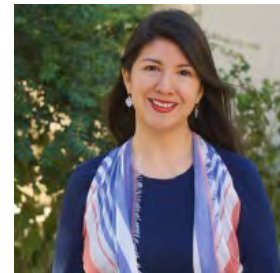
Lisa Vázquez Vigil is a San Antonio native, after working many years within the Colorado State University system. An alum of CSU-Pueblo, she received her Bachelor's degree in Mass Communications and a Master's degree in Organizational Leadership from CSU-Global. Since 2011, Lisa has gained experience in higher education, working in Admissions, Financial Aid, First Year Advising, Concurrent Enrollment, and Career Development.

Currently, Lisa sees students within the College of Sciences. She welcomes questions regarding career assessments, job & internship search strategies, résumé assistance, mock interviews, or other related career engagement areas. Lisa also serves as a liaison for specialized career development programming for her affinity groups including Latinx and DACA/Dreamer students, as a liaison for the Hispanic Association of Colleges and Universities (HACU), and as a supervisor for several UCC student employees. In Summer of 2021, she began the rollout of the new 'Runner Career Launch program to assist on-campus supervisors with resources to provide to their students for professional development. In Fall of 2021, Lisa trained as a CliftonStrengths Champion for Students, and is hosting a program to offer the Top 5 workshops to various student groups across UTSA.

Her passion for fitness and health also leads her to be a Rowdy New U Wellness Champion and hopes everyone finds a way to take care of themselves emotionally, physically, and mentally.

(Retrieved from https://careercenter.utsa.edu/blog/author/lisa-vigil/)

UTSA Vision & AI Lab

Opportunities for Undergraduate & Graduate Research Assistants

Research Topics:

- Semantic segmentation of digital media
- Explainable neural networks
- Applications in the physical sciences

Interested?

- Deadline for Spring 2023: **Nov. 5, 2022**
- Undergraduate interest form:

bit.ly/VAIL-URA

- Graduate student interest form:

bit.ly/VAIL-GRA

We need _you_!

Are you excited about **deep learning**?

Do you have experience with **neural networks**?

Would you enjoy working on a team to help solve difficult research problems?

The UTSA Vision & Artificial Intelligence Lab is looking for undergraduate & graduate RAs for several upcoming grants.

Projects are sponsored by the Department of Energy & the Department of Defense.

Eligibility:

- Undergraduate & Graduate students at UTSA
- Computer Science (or related) major
- Commit to minimum of 1 year (e.g. Spring 23, Summer 23, & Fall 23)
- **_Must complete interest form above!_**

FAQ:

- All URA & GRA positions are paid!
- Summer research hours = up to 40hrs/week
- Fall/Spring research hours = 10hrs/week
- Location: UTSA Main Campus, NPB 2.210
- All computing resources will be provided.
- We will email after 11/5 with further info.
- Some (but not all!) funding agencies require U.S. citizenship or permanent residency - _we will discuss if needed._