September 10-12, 2025

#TAPIA2025

Advancing Tech Innovation Through Inclusion

tapiaconference.org

CMDiT
Fostering Innovation Through Inclusion

acm Association for Computing Machinery

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2025 CMD-IT/ACM Richard Tapia

Celebration of Diversity In Computing Conference

September 10-12, 2025

The 2025 CMD-IT/ACM Richard Tapia Celebration of Diversity in Computing Conference is organized by the Center for Minorities and People with Disabilities in Information Technology (CMD-IT) in collaboration with the Association for Computing Machinery (ACM). The Tapia Conference is the premier venue to acknowledge, promote and celebrate diversity in computing. The goal of the Tapia Conference is to bring together undergraduate and graduate students, faculty, researchers, and professionals in computing from all backgrounds and ethnicities to:

- Celebrate the diversity that exists in computing
- Connect with others with common backgrounds, ethnicities, disabilities, and gender to create communities that extend beyond the conference
- Obtain advice from and make contacts with computing leaders in academia, industry and government labs
- Be inspired by great presentations and conversations with leaders with common backgrounds

This year marks the 19th conference since its inception in 2001. Our 2025 theme is **“Advancing Tech Through Inclusion.”** The 2025 program is developed with a focus on Generative AI.

Center for Minorities and People with Disabilities in Information Technology (CMD-IT)

The **Center for Minorities and People with Disabilities in Information Technology (CMD-IT)** vision is one where computing broadly impacts society through proven inclusivity. CMD-IT is a non-profit organization whose mission is to drive societal change by providing skill development, opportunities, and resources for our target communities through innovative programs, events and strategies for the computing community. CMD-IT fosters strong, long-lasting relationships between industry, academia, government, and the underrepresented communities they serve, which include Blacks/African Americans, Hispanics/Latinx, Native Americans and Persons with Disabilities. Through these initiatives CMD-IT increases awareness of the distinctive needs of each of its communities and advocates for the advancement of better environments and practices for the benefit of all. CMD-IT delivers its mission through outreach, collaboration, and financial responsibility.

CMD-IT is the organizer of the CMD-IT/ACM Richard Tapia Celebration of Diversity in Computing Conference along with the following programs:

LEAP Alliance

The LEAP Alliance is focused on diversifying future leadership in the computing professoriate at research universities as a way to increase diversity across the field of computing. The problem we address is stark and straightforward: a very small percentage of the faculty (tenured, tenure-track, teaching, research, instructors) at PhD-granting universities are from the following underrepresented communities: Black or African-American, Hispanic, or American Indian or Alaska Native.

Student Professional Development Workshops

Student Professional Develop Workshops provide undergraduate and masters level computer science students with the unique opportunity to receive coaching and development from Industry professionals.

Academic Careers Workshops

It is well known that mentoring activities are critical for successful promotions in the professoriate. Such activities are especially needed for communities for which the numbers at a given institution are very small. The goal of the workshops is to mentor assistant- and associate-level faculty, senior doctoral students, and postdocs in computing about academic careers. The workshops target participants from the following communities: African Americans/Blacks, Native Americans/Indigenous, Hispanics/Latinx, and People with Disabilities.

CMDiT
Fostering Innovation Through Inclusion

Welcome Letter From The General Chair and Program Chair

Welcome to the 2025 CMD-IT/ACM Richard Tapia Celebration of Diversity in Computing Conference!

We are excited about the Tapia 2025 Conference and look forward to connecting with both new and returning participants. This year's focus is on generative artificial intelligence and includes a program with over 75 sessions including:

- 26 Tapia Student Poster & ACM Student Research Competition presentations
- Over 50 technical, professional development, and broadening participation panels, workshops, and Birds of a Feather sessions
- GenAI Hackathon and Tutorial
- Student Professional Development Workshop
- Career Fair with corporate, academic, government, and nonprofit exhibitors

We are also excited to offer 125 Tapia Conference scholarships to students, faculty and postdocs.

We encourage you to take full advantage of every opportunity to learn, connect, and be inspired as we celebrate diversity in computing. We look forward to seeing you at Tapia 2025!

Sincerely,

Shameeka Emanuel
General Chair

Dr. Heriberto Acosta Maestre
Program Chair

Fireside Chat Plenary Speakers

Jay Boisseau
Google
Advanced Computing Strategist

Ramy Jaber
Cerebras Systems
Solution Architect - LLM Interface

The Fireside Chat is focused on Generative AI, noting how GenAI can be used to advance scientific discovery and the underlying hardware needed for AI. Jay Boisseau will present about Google tools for AI Assistants for Science. Ramy Jaber will present about inference on Cerebras platforms. The presentations will be followed by an informative discussion with questions from the participants.

Ken Kennedy Distinguished Lecturer

"You Belong in AI: Why the Field Needs New Perspectives Now"

Rubén Lozano Aguilera
Allen Institute for AI

AI is moving faster than our ability to govern it, explain it, or fully understand it. We're optimizing for technical excellence - faster, cheaper, more precise without first agreeing on what this technology is for, or who it truly serves. What if we stopped thinking of AI as just code and compute, and started seeing it as culture? Not just a system to engineer, but a reflection of values, power, and intent.

In this keynote, I'll share lessons from building products used by billions at Google and Amazon, and now shaping truly open-source AI at Ai2 (Allen Institute for Artificial Intelligence). I'll explore how open systems, ethical defaults, and community-led governance can help close the wisdom gap - alongside what it felt like to enter this field - part luck, part relentless effort - as a queer, first-gen immigrant in tech. Whether you're deep in AI or just figuring out where you fit, this is an invitation to build differently - and to build something that includes you.

2025 Richard Tapia Achievement Award For Scientific Scholarship, Civic Science and Diversifying Computing

Jennifer Tour Chayes

Dean of the College of Computing, Data Science,
and Society at UC Berkeley

Jennifer Tour Chayes is Dean of the College of Computing, Data Science, and Society at UC Berkeley. Jennifer led the establishment of this college – the first new college at Berkeley in more than 50 years. She is also Professor of Electrical Engineering and Computer Sciences, Information, Mathematics, and Statistics. Before joining Berkeley in 2020, Jennifer was Technical Fellow at Microsoft, where she led research programs for more than 20 years and was founder and managing director of three interdisciplinary labs: Microsoft Research New England, New York City, and Montreal. These labs were focused on core computing and AI and the interface of computing with many other fields, including mathematics, physics, biomedicine, economics, and social sciences. Before joining Microsoft, she was Professor of Mathematics at UCLA.

Jennifer is a member of the National Academy of Sciences and the American Academy of Arts and Sciences and received the 2015 John von Neumann Prize from the Society of Industrial and Applied Mathematics. She has authored more than 150 scientific papers in mathematics, physics, computer science, economics, biology, and chemistry and is the co-inventor of 30 patents. She earned her Ph.D. in mathematical physics at Princeton University and was awarded an honorary doctorate from Leiden University in the Netherlands.

Jennifer's research areas include phase transitions in computer science and structural and dynamical properties of networks, including modeling and graph algorithms. She is one of the inventors of the field of graphons, which are widely used for machine learning of large-scale networks. Her recent work focuses on machine learning, including both theory and applications in cancer immunotherapy, ethical decision-making, and climate change. Most recently, she has been focusing on the use of generative AI in the creation of materials for carbon capture.

6:00am - 9:30pm CDT
Mother's Room
Location: Pecos 3

6:00am - 9:30pm CDT
Quiet Room
Location: Pecos 1

8:00am - 9:00am CDT
STARS Breakfast (Private Event)
Location: San Antonio 4-6

8:00am - 7:00pm CDT
Tapia Conference Check-In
Location: Texas Ballroom Foyer

8:15am - 9:00am CDT
CMD-IT Line Dance Class - Boots On the Ground!
Location: Texas Ballroom

Get ready for Friday Night's Dance Party after the Tapia Awards Reception by learning a line dance like Boots on the Ground!

Join us Thursday and Friday morning before the plenary for dancing, music and fun!

9:00am – 10:30am CDT
Welcome & Generative AI Fireside Chat
Location: Texas Ballroom

The Fireside Chat is focused on Generative AI, noting how GenAI can be used to advance scientific discovery and the underlying hardware needed for AI. Jay Boisseau will present about Google tools for AI Assistants for Science. Ramy Jaber will present about inference on Cerebras platforms. The presentations will be followed by an informative discussion with questions from the participants.

Presenters: Jay Boisseau (Google) and Ramy Jaber (Cerebras Systems)

10:30am – 11:45am CDT
Private Student Poster Presenters' Luncheon (Invitation Only)
Location: Texas Center Prefunction

10:30am - 12:00pm CDT
Career Fair & Graduate Application Reviews
Location: Longhorn Hall D

10:45am - 11:45am CDT
Diversity Includes Disability
Location: Texas 1-2

According to the most recent Computing Research Association Taulbee Survey (2023), about 3.4% of undergraduate computing students and less than 2% of computing master's and PhD students receive disability accommodations from their universities. Computing students and professionals with disabilities can feel isolated and may not know other disabled people. To address this isolation and to increase accessibility awareness, universities, broadening participation projects, and employers should actively be thinking about accessibility as part of their work related to equity and inclusion.

This Birds of a Feather session will bring together people who have a disability or who are interested in supporting individuals with disabilities in computing education or careers. The goal of the session is to build community and to learn from each other about strategies for achieving success and ensuring that computing fields are welcoming and accessible to individuals with disabilities. At this particular moment, some people with disabilities feel threatened by both DEIA rolls back and the challenges to Section 504. Gathering together can be a source of strength, community building, and resilience.

The session will begin with brief introductions from the presenters and attendees. The session will include information about internships, mentoring, and career development opportunities for students with disabilities as well as resources for educators and employers who would like to be more welcoming and accessible to individuals with disabilities.

There will be a brief overview of relevant topics and large group discussion through which we will hone in on topics to be discussed in small groups. Topics discussed could include: accessibility in computing education, disclosing disability status in interviews, recruiting and retaining employees and interns with disabilities, and including people with disabilities in broadening participation activities. Presenters will spread out amongst the smaller groups to facilitate discussion. The session will conclude with reports from the smaller groups and ways to stay connected after the conference. The target

audience includes students and professionals with disabilities as well as faculty, industry representatives, and professionals interested in supporting individuals with disabilities in their education or career. The organizers include people with disabilities and the leaders of AccessComputing and AccessCSforAll, projects that work nationwide to increase the participation of individuals with disabilities in computing education and careers. Through this work, they regularly interact with a variety of stakeholders interested in this topic including people with disabilities, computing educators, disability service professionals, and computing employers.

Presenters: Brianna Blaser, Director (University of Washington), Rob Parke (University of Southern California), and Cathy Law (Oregon State University)

10:45am - 12:00pm CDT
Leveraging Generative AI for Protein Engineering
Location: San Antonio 4-6

Advancements in generative AI have revolutionized protein engineering, making it more accessible and accelerating breakthroughs in biotechnology, medicine and synthetic biology. This workshop will introduce participants to the fundamentals of protein engineering and demonstrate how generative they can leverage AI to design, analyze, and predict protein structures. We will explore key protein databases and visualization tools such as ChimeraX to examine 3D protein structures, analyze homology, and customize molecular views. Attendees will gain hands-on experience using generative AI tools like ProtGPT2 and EvoDiff hosted in HuggingFace to design novel proteins and predict their folds with AlphaFold. Additionally, we will compare generated proteins to existing ones in databases and discuss potential applications in drug discovery, enzyme design and synthetic biology. Participants will receive digital materials, including interactive notebooks, datasets and step-by-step guides, enabling them to replicate the techniques demonstrated. Attendees will have practical knowledge of AI-driven protein engineering workflows and a deeper understanding of how diversity in scientific research enhances innovation in computational biology. The session is ideal for students, researchers and professionals interested in engineering at the intersection of biotechnology, AI and bioinformatics—no prior experience required.

Presenter: Tia Pope (North Carolina A&T State University)

10:45am - 12:00pm CDT
Maximizing Business Value with AI: From Quick Wins to Scalable Impact
Location: Dallas 5-7

AI is only valuable when it delivers outcomes that matter. As AI adoption accelerates, organizations are under pressure to move beyond experimentation and prove that AI can drive real business impact.

This session explores how technical leaders and founders are turning AI into business value—from early quick wins to scalable, long-term impact. Panelists will discuss how to align AI projects with strategic objectives, avoid the pitfalls of implementing AI without clear ROI, and manage the unique challenges across different industries and regulatory landscapes. Whether you're testing a pilot or scaling across an enterprise, you'll gain practical insights to turn AI into a true business advantage.

Presenters: Jamika Burge,Founder (blackComputeHer) and Ramy Jaber Cerebras Systems

10:45am - 12:00pm CDT
Receipts And Reality: Unpacking The Research On Black Women and Girls In Computing
Location: Texas 3-4

This collaborative, interactive workshop brings together researchers, industry professionals, and advocates to critically examine and refine findings from a comprehensive literature review on Black women and girls in computing. This session is part of an NSF Broadening Participation in Computing (BPC) effort to identify key themes, research gaps, and evidence-based strategies to improve the representation and retention of Black women and girls in computing.

Despite ongoing efforts, Black women remain significantly underrepresented in computing, and existing research is often fragmented. This workshop will provide a structured and engaging space to assess what the research tells us,

where gaps remain, and what new directions are needed.

In this 90-minute session, researchers will present findings from initial literature reviews, thus setting the stage for a dynamic and participatory discussion. Attendees will listen to curated podcast clips featuring first-hand narratives of Black women in computing, offering personal insights into the challenges and successes within the field. These stories will frame small-group breakout discussions, where participants will analyze key themes, identify gaps, and provide feedback on emerging findings.

Insights from this session will directly contribute to a report that will inform a forthcoming scoping review, shaping the direction of future research on Black women's experiences in computing. By fostering dialogue, this workshop will drive meaningful action toward equity and inclusion in computing.

Presenters: Dr. Kyla McMullen (University of Florida/Modern Figures, Inc.), Jeremy Waisome (University of Florida/Modern Figures, Inc.), Atayliya Irving (University of Florida), and Khloe Wright (Howard University)

12:00pm - 1:15pm CDT
BPC Accelerator Lunch (Invitation Only)
Location: San Antonio 4-6

12:00pm - 1:15pm CDT
General Lunch & Networking
Location: Texas Ballroom

12:00pm - 1:30pm CDT
Tapia Student Poster & ACM Student Research Competition Round I
Location: Texas Center Prefunction

Presentations:

MARLHospital: A Multi-agent Reinforcement Learning Environment for Medical Decision Making

Poster Authors: Promise Ekpo, Brian La, Thomas Weiner, Gonzalo Gonzalez-Pumariega, Angelique Taylor

MathWiz: Unique and Advanced Culturally Responsive AI

Poster Author: Destiny Bertier

Jailbreaking Speech: Evaluating the Vulnerability of Language Models to Multi-Turn and Symbol Substitution Attacks

Poster Author: Shahrzad Sayyafzadeh

Investigating the Use of AI Tools in Student Informal Technical Preparation and Workforce Readiness

Poster Authors: Oluwagbeminiyi Johnson and Marlon Mejias

Eyes in Motion - Utilizing Eye Tracking for Assistive Technology

Poster Author: Francisco Morales Puente

Breaking the Sequence: Faster AI Reasoning with Diffusion-Based LLMs

Poster Author: Jensen Coonradt

Virtual Co-presenter: A Tool to Enhance Accessibility and Engagement of Sign Language E-commerce Livestreaming

Poster Authors: Yuehan Qiao, Zhihao Yao, Meiyu Hu and Qianyao Xu

Pypro: The AI-Powered Game-Changer in Coding!

Poster Author: Elijah Ballou

Howard University - AI4PC at Richard Tapia Conference 2025: Logit-based Supervised Token Classification for Multilingual Hallucination Span Identification Using XGBOD

Poster Author: Mildness Akomoize

Multi-Dimensional Fairness-Aware Explanations for Bias Mitigation in Recommender Systems

Poster Authors: Navkar Uttamchand Jain and Enock Okorno Ayiku

Enhancing Software Failure Analysis through Semantic Similarity and Knowledge Graph Modeling

Poster Author: Boyang Zhang

AfriMamba: How State Space Machines can help African Language Identification

Poster Authors: Howard Prioleau and Saurav Aryal

The Future of Gaming: Integrating AI and Brain-Computer Interfaces for Inclusive Play

Poster Author: Osita Odunze

Understanding, Explaining, and Handling Rumor-spreading Dynamics - an LLM (Large Language Model) augmented visual analytics approach

Poster Author: Chinelo Njoku

Health Monitoring Via RFID-based Cardiac Motion Tracking System

Poster Authors: Alejandro Chavez-Mayoral and Bin Hu

Trajectory Analysis for Congestion Detection in Foraging Robot Swarms

Poster Author: Arturo Gonzalez

Visual QA and LLMs for Medical Image Diagnosis

Poster Author: Shazab Ali

Transformer-Based Deep Learning Approach for TM-Score Prediction

Poster Author: Sai Prashanthi Pallati

Exploring the Use of LLMs to Generate Contextualized Worked Examples From Programming Patterns

Poster Authors: Yoshee Jain and Kathryn Cunningham

The Impact of Computer Classes on Students' Confidence in Digital Skills

Poster Authors: Laura Boettcher and Matheus Westphalen

DeepTabCoder: Code-based Retrieval And In-context Learning For Question-Answering Over Tabular Data

Poster Authors: Saharsha Tiwari and Saujanya Thapaliya

Identification of Relevant Latent Subspace for Efficient Neural Network Validation

Poster Author: Nusrat Jahan Mozumder

Improving Machine Translation With Context-Aware Entity-Only Pre-Translations using GPT-4o

Poster Authors: Jabez Agyemang-Prempeh and Isaac Adjei

C-FIT: Providing Novice CS freshmen a legup for CS 1

Poster Author: Sofia Mata Avila

CodeBears+: Expanding STEM, Coding, and AI learning from Summer Camp to Year-round Engagement

Poster Author: Amyra Harry

Sequence-Level Model of the Kinetics of Annihilation in DNA-Based Neural Networks

Poster Author: Tanvi Ganapathy

12:00pm - 1:15pm CDT
BPC Accelerator Lunch (Invitation Only)
General Lunch & Networking
Location: Texas Ballroom

12:15pm - 1:15pm CDT
CMD-IT Lunch (Private Event)
Location: Texas C-D

1:15pm - 4:30pm CDT
Career Fair & Graduate Application Reviews
Location: Longhorn Hall D

1:30pm - 1:45pm CDT
Multi-Modal LLM-Driven Indoor Navigation for Users with Vision Impairment: Fusing AI, Floor Plans, and Vision
Location: San Antonio 4-6

Safe navigation poses a significant challenge for blind and low-vision (BLV) individuals. Existing solutions often rely on Indoor Positioning Systems (IPS), which are not available in many environments. In this research, we propose a novel navigation assistance system that integrates macro and micro-navigation for goal-based navigation with the power of multi-modal foundation models. This system can assist BLV individuals in navigating dynamic indoor areas. To ensure safe navigation, we integrate a real-time open-world object detection model, YOLO-World, as an auxiliary model alongside a Large Language Model (LLM) for more robust obstacle detection and hazard assessment. To provide macro navigation, our system uses LLM-based floor plan analysis to convert layouts into navigable graph representations while generating contextual rules and trajectories. Our system combines high-level route generation with low-level navigation to provide more efficient and precise guidance in different indoor areas. To increase rerouting capabilities for user reorientation, we integrate image-based localization through image feature matching with the help of Vision Language Models (VLMs) to detect each scene in an indoor area. Although comprehensive experimental results are still pending, preliminary trials demonstrate significant improvements in navigation efficiency and user independence.

Presenter: Aydin Ayanzadeh, Teaching Assistant (University of Maryland, Baltimore County)

1:30pm - 2:30pm CDT
Our Voices, Our Power: How Latinas Can Drive Change Through Empowerment and Advocacy
Location: Texas 1-2

Due to a lack of representation, Latinas are often grouped under Women of Color, yet the diversity within the Latina community makes this a very diverse group. That diversity gets lost when grouped with other women of color. In this panel, we will focus on the experiences of Latinas in computing. Many Latinas stay quiet when confronted with uncomfortable situations, a common response within systems that often silence marginalized voices. In a world that professes inclusivity yet resists dismantling systemic barriers, how do Latinas navigate and challenge the inherent contradictions to assert their value and thrive? How do Latinas find the strength to stand alone, to fight even harder, when the support of their allies prove to be merely performative? These challenges intensify when you are a young professional and also one of the only Latinas.

This panel will bring together accomplished Latina leaders to have a conversation on career advancement and self-advocacy. Panelists will share their personal career journeys and insights into navigating barriers and challenges as well as strategies, tools, and resources for building a network of mentors, making informed career choices, and advancing their careers.

Panel Moderator: Manuel A. Pérez Quiñones, Professor (UNC Charlotte)

Presenters: Karla Badillo-Urquiola, Assistant Professor (University of Notre Dame), Brianna Posadas, Assistant Professor (California State Polytechnic University, Pomona) and Cecilia Aragon, Professor (University of Washington)

1:30pm - 2:45pm CDT
Entrepreneurship in Computing
Location: Texas 5-6

The Entrepreneurship in Computing panel is moderated by Alicia Makaye, Ph.D., Chief Operating Officer of GXA, with the following panelists: George Makaye, Chief Executive Officer, GXA, Albert Marquez, Chief Operations Officer, 1 US Construction, and Ieshea Hollins, Founder and CEO, Direnzic Technology Consulting Group, LLC. The companies represented on the panel have been in business for over 20 years, in some cases. The panelists will discuss factors to consider when starting a company and strategies for maintaining the company in the long-term. The panelists exemplify excellence, innovation, and leadership at the intersection of computing and entrepreneurship. These leaders have turned challenges into opportunities, proving that entrepreneurship can powerfully shape the tech landscape.

Panel Moderator: Alicia Makaye, Ph.D., Chief Operating Officer (GXA)

Presenters: George Makaye, Chief Executive Officer (GXA), Albert Marquez, Chief Operations Officer (1 US Construction), Ieshea Hollins, Founder and CEO, (Direnzic Technology Consulting Group, LLC)

1:30pm - 2:45pm CDT
Generative AI Tutorial
Location: Texas C-D

Generative AI is transforming how we interact with technology. Building software tools with large language models (LLMs) requires both new engineering skills and an appreciation of how AI is working under the hood. This workshop begins with a high-level introduction to generative AI, language models, and the transformer breakthrough that powers today's LLMs. Then we'll shift from concepts to practice with a hands-on coding session, where participants will develop a chatbot interface enhanced by retrieval-augmented generation (RAG). No prior AI experience is required - just bring your curiosity and readiness to code together.

Presenters: Matthew Dearing (Argonne National Laboratory) and Dena Metili Mwangi (Recurse Center)

1:45pm - 2:00pm CDT
The Rise of Intelligent Machines: How AI and Robotics are Reshaping the Future
Location: Texas 3-4

Robots are no longer just machines confined to factory floors-they are becoming smarter, more autonomous, and deeply integrated into our daily lives. From self-driving cars and warehouse automation to robotic surgeons and AI-powered assistants, robotics and artificial intelligence (AI) are transforming industries at an unprecedented pace. But what does this mean for the future of work, innovation, and human-robot collaboration?

This lightning talk will explore how advancements in AI, machine learning, and robotics are creating new opportunities while also presenting ethical and technical challenges. We will discuss:

The latest trends in intelligent robotics, including autonomous systems, collaborative robots (cobots), and AI-driven automation.

How robotics is shaping industries such as healthcare, manufacturing, logistics, and space exploration.

The role of human-robot collaboration—Will robots replace humans, or will they enhance human capabilities?

Challenges in AI-powered robotics, including bias in machine learning, ethical concerns, and the need for better regulation.

Attendees will gain insights into cutting-edge innovations in robotics and understand the critical skills needed to thrive in this evolving field. Whether you are a student, researcher, or tech professional, this session will provide valuable knowledge about how AI and robotics will shape the future—and how you can be part of it.

Presenter: Sakshi Dubey, Software Technical Program Manager (Amazon Robotics)

3:00pm - 4:00pm CDT
Broadening Participation in Computing: Strategies for Sustained Commitment
Location: Texas 1-2

As higher education continues to evolve, sustaining and advancing broadening participation efforts requires innovative and adaptable approaches. This interactive session will provide participants with actionable strategies to address challenges and ensure long-term commitment to expanding access and inclusion. Through expert-led discussions, peer learning, and insights from institutions like Princeton University, Cornell University, and University of Washington (UW), attendees will explore how AI tools can support students' academic success, foster cross-institutional collaboration, and secure innovative funding for sustained impact. Participants will also examine strategies for reframing broadening participation messaging to gain institutional buy-in. By the end of the session, attendees will leave with practical tools, a shared sense of accountability, and concrete strategies they can implement within their own institutions to drive lasting change.

Presenters: Les Sessoms, Recruitment & Retention Specialist/Graduate Programs (University of Washington), Corina Hernandez Assistant Director of Diversity, Equity, and Inclusion (Princeton University), and LeeAnn Roberts, Director for Diversity, Equity, Inclusion, and Belonging (Cornell University)

3:00pm - 4:00pm CDT
Capital One: What It Takes to Build Technology That Serves Everyone—And to Do It at Scale
Location: Texas 3-4

Imagine it's 100 years ago. It's 1924 -there's no WiFi, no smartphones, the only 'cloud' you think about is the one in the sky. Fast forward to 2024 and the cloud is powering data, analytics, scientific testing and statistical modeling to provide financial access for a range of customers, including those traditionally left behind by the banking industry.

In this session, Lo Li, Managing Vice President in Capital One's Retail Bank, will cover what technology transformation is making it possible to reimagine banking—and what it takes to build technology that truly meets people where they are, responsibly and at scale.

Capital One is reimagining banking by offering a personalized experience that enables customers to bank on their terms – digitally or in person, at a Branch, Café, ATM, convenience stores or through its top-rated mobile app.

She'll take you behind the scenes of leading innovation within a large-scale organization, sharing how her teams build products and services that prioritize financial health—like eliminating overdraft fees and launching tools that help people safely spend, save, and plan.

From reimagining financial services delivered through cafés and community partnerships, to introducing students to coding through programs like Capital One Coders, this session provides a grounded look at building technology that serves real people.

These purpose-driven innovations are made possible by Capital One's technology transformation journey. Over the last decade, Capital One completed its shift to the cloud, moving to AWS and rearchitecting its data environment. Using modern technologies—including real-time data, machine learning, and a cloud-native, open source-first, API-driven architecture—Capital One has dramatically advanced its ability to build trusted, scalable, and inclusive financial experiences. It has earned hundreds of patents in AI and become one of the world's great software engineering companies.

Attendees will walk away with: Strategies for launching purpose-driven initiatives at scale Tactics for aligning mission with cross-functional product and engineering teams Behaviors that foster inclusivity , accountability, and trust in large-scale organizations Through real-world stories and interactive reflection, Lo invites attendees to explore their own role in building meaningful technology-driven products and services—with purpose at the center.

Presenter: Lo Li, Managing Vice President (Capital One)

3:00pm - 4:00pm CDT
Decoding the Cyber Workforce: Strategies for Success Starts with Boots on the Ground
Location: Texas 5-6

While cybersecurity career pathways are abundant, their structure is often convoluted. As the workforce continues facing critical talent shortages, Women in CyberSecurity (WiCyS) decodes the entry point and career advancement through student chapters, professional affiliates, programs, and more. This session will cover the demands on the workforce, the need to develop career professionals further, actionable steps to map out career advancement, and how to amplify the message through the lifecycle of commitment to cybersecurity workforce initiatives. In this session, attendees will learn about the research WiCyS has produced to support, sustain and scale the organization and the community it serves through a data-driven lens.

Presenter: Lynn Dohm, Women in CyberSecurity (WiCyS)

3:00pm - 4:00pm CDT
Rebooting Tech Culture: The Six Cs and How to Ignite Innovation and Build Organizations Where Everyone Can Thrive
Location: San Antonio 1-3

Panel Moderator: Telle Whitney (Telle Whitney Consulting, LLC and co-founder, Grace Hopper Celebration)

Presenters: Shanna-Shaye Forbes, Senior Embedded Software Engineer (L&T Technology Services Limited), Mayowa Awe, Executive Director (National Science and Technology Medals Foundation), Eric Marin,

Chief Financial Officer (United Way Tarrant County)

3:00pm - 4:00pm CDT
Rethinking Learning with GenAI: Opportunities, Challenges, and Best Practices for Educators
Location: Dallas 5-7

The fast advancement of Generative AI (GenAI) tools has created new opportunities and challenges in education. While some worry about over-reliance on GenAI, others see its potential in bridging learning gaps, boosting student confidence, and fostering deeper engagement.

This panel explores the impact of GenAI as an intervention in classrooms—particularly how it supports students with diverse backgrounds and learning needs. Panelists will discuss:

- Does GenAI improve student comprehension and confidence compared to traditional teaching?
- Can GenAI reduce cognitive load, allowing students to focus on critical thinking rather than mechanics?
- How do we balance AI-assisted learning while ensuring students develop deep skills and avoid over-reliance?

The discussion will include real-world examples of GenAI interventions, insights into student outcomes, and practical strategies for integrating AI without sacrificing core learning principles.

Panel Moderator: Dr. Gabriela Gongora-Svartzman, Director of Computing Programs and Associate Teaching Professor (Northeastern University)

Presenters: Lino Coria Mendoza, Associate Teaching Professor (Northeastern University), Obianuju Okafor, University of Texas at Austin (Microsoft), and Tiffanie Smith, Associate Professor Computer Science Department (Lincoln University)

3:00pm - 4:15pm CDT
Superconductive Electronic Computing: Foundations and Quantum Applications
Location: San Antonio 4-6

Superconductive electronics harnesses the unique property of zero electrical resistance at cryogenic temperatures to enable high-performance computing based on novel circuits with exceptional speed, energy efficiency, and sensitivity. Unlike traditional semiconductor devices, superconductor-based circuits can operate at extremely high frequencies with minimal power loss, making them ideal for next-generation computing and sensing technologies.

This presentation will introduce the fundamental principles of superconductivity, including the Josephson effect and flux quantization, which form the basis of superconductor-based logic and memory devices. Recent advancements in superconductive electronics have also paved the way for critical components in quantum technologies, such as superconducting qubits, quantum amplifiers, and ultra-sensitive detectors. The integration of superconductive electronics with quantum systems offers promising pathways toward scalable quantum computing, high-precision measurements, and energy-efficient high-performance computing.

Presenters: Timothy M. Pinkston, George Pfleger Chair Professor and Vice Dean (University of Southern California), Beyza Zeynep Ucpinar, PhD Student (University of Southern California), and Tara Renduchintala PhD Student (University of Southern California)

4:30pm - 5:00pm CDT
Afternoon Break
Location: Texas Center Prefunction

4:30pm - 5:45pm CDT
ACM SRC Competition Round II (Graduate)
Location: Texas 3-4

4:30pm - 5:45pm CDT
ACM SRC Competition Round II (Undergraduate)
Location: Texas 5-6

5:00pm - 6:30pm CDT
CMD-IT VIP Reception (Private Event)
Location: San Antonio 4-6

5:30pm - 7:30pm CDT
Capital One Disability Community Reception
Location: Texas 1-2

6:00am - 9:30pm CDT
Mothers Room
Location: Pecos 3

6:00am - 9:30pm CDT
Quiet Room
Location: Pecos 1

8:00am - 9:00am CDT
STARS Breakfast (Private Event)
Location: San Antonio 4-6

8:00am - 5:00pm CDT
Tapia Conference Check-In
Location: Texas Ballroom Foyer

8:15am - 9:00am CDT
CMD-IT Line Dance Class - All Are Welcome!
Location: Texas Ballroom

Get ready for Friday Night's Dance Party after the Tapia Awards Reception by learning a line dance like Boots on the Ground!

Join us Thursday and Friday morning before the plenary for dancing, music and fun!

9:00am - 10:30am CDT
Ken Kennedy Distinguished Lecture
Location: Texas Ballroom

AI is moving faster than our ability to govern it, explain it, or fully understand it. We're optimizing for technical excellence—faster, cheaper, more precise—without first agreeing on what this technology is for, or who it truly serves. What if we stopped thinking of AI as just code and compute, and started seeing it as culture? Not just a system to engineer, but a reflection of values, power, and intent.

In this keynote, I'll share lessons from building products used by billions at Google and Amazon, and now shaping truly open-source AI at Ai2 (Allen Institute for Artificial Intelligence). I'll explore how open systems, ethical defaults, and community-led governance can help close the wisdom gap—alongside what it felt like to enter this field—part luck, part relentless effort—as a queer, first-gen immigrant in tech. Whether you're deep in AI or just figuring out where you fit, this is an invitation to build differently—and to build something that includes you.

Presenter: Rubén Lozano Aguilera, Lead Technical Product Manager (Allen Institute for AI)

10:30am - 12:00pm CDT
Career Fair & Graduate Application Reviews
Location: Longhorn Hall D

10:45am - 11:45am CDT
Black in Computing Community
Location: Texas 1-2

Given the underrepresentation of Black individuals in computing, this Birds-of-a-Feather (BOF) session at Tapia aims to foster a supportive and inclusive community for members of the Black computing community. Last year, this session was a tremendous success. It brought together members of the community from students to faculty, industry and allies to collectively celebrate achievements as well as discuss issues faced by Black individuals in the field that impact diversity, equity, and inclusion. We aim to expand on this success by including presenters from multiple institutions. Our goals which guide our topics include: 1) Creating a supportive community through fostering increased sense of belonging and camaraderie among Black computer scientists including students (undergrad and grad), faculty, industry partners and allies, through witnessing a larger representation of Black computer scientists; 2) Addressing systemic challenges through open-ended discussions driven by the audience and exploring strategies to address systemic barriers and biases in computing; 3) Inspiring the next generation by acknowledging present Black CS trailblazers 4) Increasing engagement and productivity by acknowledging the accomplishments of the audience and 5) Providing support through recognition of supportive Black CS communities : e.g. IAAMCS, AAPHDCS, blackcomputeHER.

Presenters: Dale Marie Wilson (University of North Carolina Charlotte), Marlon Mejias (University of North Carolina Charlotte), Yolanda Rankin, Associate Professor (Emory University), Cheryl Swanier, Dean (Voorhees University) and Felesia Stukes, Associate Professor (Johnson C. Smith University)

10:45am - 11:45am CDT
Representing Disability – Narratives, Models, and Justice
Location: Texas 3-4

How disability is defined and represented impacts societal attitudes, policies, and practices—including in computing. This session explores dominant disability narratives, the models that shape them, and the significance of Disability Justice.

We will examine two fundamental models of disability: the medical model, which views disability as an individual problem to be fixed, and the social model, which frames disability as a product of societal barriers. These perspectives influence personal biases, institutional policies, and the inclusion of disabled people in computing and beyond.

The session will also address ableism, or discrimination against disabled people, and how it manifests in cultural narratives. One pervasive example is “inspiration porn”, a term coined by activist Stella Young, which objectifies disabled people for non-disabled audiences.

Finally, we will discuss Disability Justice, which goes beyond legal rights to address systemic oppression and advocate for truly inclusive, mixed-ability spaces. Understanding disability through this lens is essential for designing accessible technologies, fostering inclusive learning environments, and challenging ableist assumptions in computing.

This session welcomes all who want to deepen their understanding of disability representation, recognize ableism, and become better students, educators, professionals, and allies.

Presenter: Kayla Brown,Program Coordinator University of Washington (AccessComputing)

10:45am - 12:00pm CDT
Demystifying Secure Quantum Communication: A Hands-on Workshop for All
Location: Texas 5-6

Quantum technologies are revolutionizing secure communication, sensing, and computing, with quantum cryptography emerging as a critical tool for safeguarding data against quantum-enabled cyber threats. This hands-on workshop introduces the fundamentals of quantum cryptography, the role of photonics, and the practical implementation of a quantum-inspired communication link using the BB84 protocol. Designed for professionals with limited prior exposure to quantum mechanics, the session will provide an accessible yet immersive experience into how quantum principles can be applied to enhance cryptographic security. Participants will begin with an overview of quantum technologies, focusing on their industrial and scientific impact. We will explore the fundamentals of quantum cryptography, including quantum key distribution (QKD), photonic principles, and the role of polarizers and waveplates in securing communication. The hands-on segment will guide attendees through setting up an optical communication link, aligning optical components, and demonstrating a classical version of quantum-encrypted communication.

Through interactive exercises, live demonstrations, and guided hands-on activities, attendees will develop an intuitive understanding of how quantum cryptography works, its benefits, and current challenges. No advanced physics background is required—just curiosity and an interest in emerging security technologies. By the end of the workshop, participants will be able to explain quantum cryptographic concepts, set up and align optical components, and implement a BB84-inspired encryption link, gaining both theoretical insights and practical skills relevant to quantum-secure communications.

Presenters: Mo Hasanovic, Assistant Teaching Professor (Syracuse University), Jason Pollack, Assistant Professor (Syracuse University) and Jae Oh, Professor
(Syracuse University)

10:45am - 12:00pm CDT
Empowering Your Voice: Using AI as an Assistant, Not a Boss
Location: San Antonio 4-6

This interactive workshop explores how students can use large language models (LLMs) to enhance creativity and critical thinking while maintaining their unique perspectives. Participants will engage in hands-on activities to understand the ethical and responsible use of LLMs in problem-solving.

The main activity involves designing an AI-powered resume evaluator, with students divided into three groups:
• Group 1: Human Work + AI Assistance – Brainstorm ideas independently, then refine them using LLM feedback.
• Group 2: Human Work Only – Develop the solution without AI, relying on creativity and critical thinking.
• Group 3: Direct AI Prompting – Use LLMs to generate solutions through carefully crafted prompts.

Each group will present and compare their results, reflecting on AI's role in ideation, the balance between automation and originality, and ethical considerations. This comparative approach helps students assess the strengths and limitations of AI while reinforcing the importance of human judgment.

The session concludes with a discussion on how to use LLMs as collaborative tools rather than decision-makers, ensuring students leverage AI effectively without compromising individuality. By the end of the workshop, participants will have a foundational understanding of LLMs as assistive tools in professional and creative settings, equipping them with skills to integrate AI ethically and effectively.

Presenters: Lino Coria Mendoza, Associate Teaching Professor (Northeastern University), David Paquette, Assistant Director Graduate Student Retention and Engagement (Northeastern University), Keith Bagley, Associate Clinical Professor (Northeastern University), Jonathan Mwaura, Associate Teaching Professor (Northeastern University Alvaro Monge, Professor (Northeastern University)

10:45am - 12:00pm CDT
Making AI Your Competitive Advantage at Work
Location: Dallas 5-7

AI is moving fast—and it's no longer just a research topic or a tool for specialists. It's becoming part of how real work gets done. This panel will focus on practical ways professionals are embedding AI into daily workflows to improve productivity, speed up analysis, and support better decisions.

We'll dig into how to identify meaningful integration points, pick tools that fit your work (from LLMs to agentic systems and automation platforms), and build the skills needed to keep pace. Panelists will share concrete examples from product, engineering, and research roles—highlighting what's working, what to avoid, and how using AI well is quickly becoming a competitive edge.

Panel Moderator: Rubén Lozano Aguilera, Lead Technical Product Manager (Allen Institute for AI)

Presenters: Laura Silva H., Technical Project Manager and Strategist (Fintech) and Dena Metili Mwangi, Programming Fellow (Recurse Center)

10:45am - 12:00pm CDT
Navigating the Application Journey - From School Admissions to Job Market Success
Location: San Antonio 1-3

This workshop is designed to provide student attendees with the opportunity to learn about and discuss career options and choices as they relate to research positions in academia, industry, and government labs. Through the participation of three experienced panelists, participants can gain a better understanding about graduate school, internships, and the different places of work. The panelists will discuss applications, environment, and career paths for all of these stages. Participants can engage in direct conversations with panelists to address their individual goals and needs.

Presenters: Cecilia Aragon, Professor (University of Washington), Damian Rousson, Senior Scientist and Group Lead (Lawrence Berkeley National Laboratory), Daricia Wilkinson, Assistant Professor (Arizona State University) and Betsy DiSalvo, Professor (Georgia Institute of Technology)

10:45am – 6:00pm CDT
Generative AI Hackathon
Location: Texas C-D

The goal of the hackathon is to provide opportunities for students to explore the use of GenAI, in particular LLMs, to solve challenge problems provided by our supporters. The hackathon provides an opportunity for students to be creative and innovative with developing solutions in a short time period so as not to

interfere with participation in the conference sessions. The hackathon also includes a component for students to present their results to a small panel of judges.

Hackathon Schedule:

10:45am - 11:30am CDT
Challenge Problem Presentation

11:30am - 4:00pm CDT
Hackathon

4:15pm - 6:00pm CDT
Judging

12:00pm - 1:15pm CDT
CMD-IT Faculty Only Networking Lunch
Location: Dallas 5-7

12:00pm - 1:15pm CDT
General Lunch & Networking
Location: Texas Ballroom

1:15pm - 5:00pm CDT
Career Fair & Graduate Application Reviews
Location: Longhorn Hall D

1:30pm - 2:30pm CDT
Bridging the Accessibility Gap: Apprenticeships & Inclusive Career Pathways in Tech
Location: Texas 1-2

The computing industry is rapidly evolving, yet professionals with disabilities remain one of the most underrepresented groups in tech. Despite advances in AI, accessibility tools, and inclusive hiring initiatives, professionals with disabilities continue to face barriers to entry and career progression. So how do we close this gap – and how can disabled students, faculty, researchers, and industry leaders work together to drive change?

This Birds of a Feather (BoF) session will be a collaborative discussion on creating equitable career pathways in computing through apprenticeships, mentorship, research-driven inclusion efforts, and industry collaboration.

Who Should Attend & Why It Matters
·Disabled Undergraduate & Graduate Students: Learn how to leverage apprenticeships, career networks, and mentorship to launch careers in tech – without accumulating more student debt. · Faculty & Researchers: Explore how industry-academia partnerships can provide real-world accessibility and inclusion solutions, leading to better student retention, engagement, and success.
· Industry Professionals: Discover how companies can engage with BIT's nationally recognized apprenticeship model to build diverse, skilled talent pipelines in computing fields.

Key Discussion Topics:
· For Disabled Students & Early-Career Professionals: How to access free training, certifications, and industry connections to launch careers in computing.
· For Faculty & Researchers: How integrating workforce development programs, accessibility, and industry collaboration into computing education can bridge the employment gap.
· For Employers & Hiring Managers: How BIT's apprenticeship model and accessibility initiatives are creating job-ready, diverse candidates in high-demand fields.

BIT's Apprenticeship & Career Pathways Model
BIT Academy provides a hands-on, real-world training approach to prepare professionals with disabilities for competitive careers in computing. Participants gain the education and skills needed to pursue industry-recognized certifications and direct employer connections in:
· Salesforce Administration
· Digital Accessibility (for CPACC certification)
· Front-End Development (with a focus on accessibility)
· Project Management

Why It Matters for Computing's Future
As technology transforms the workforce, accessibility must be embedded in the process – or professionals with disabilities will remain underrepresented in the next generation of computing. BIT ensures that professionals with disabilities are not just included in this shift – they are leading it.

Attendees will leave with actionable strategies for creating accessible, inclusive pathways in tech – whether as disabled students preparing for their careers, faculty shaping computing education, or industry leaders hiring the next generation of innovators.

Presenters: Mike Hess, Founder/Executive Director (Blind Institute of Technology (BIT))

1:30pm - 2:30pm CDT
Sharing Strategies for Workplace Resilience
Location: Texas 3-4

Level up your resilience: insights from women who've mastered tech's ups and downs. This panel features three women with a wealth of knowledge expanding various tech roles, including a Site Reliability Engineer with seven years of experience, a Senior Product Manager with more than ten years of experience and a Senior Program Manager with over two decades in the field. Coming from the perspective of individual contributors and senior management. Panelists will discuss: the meaning of resilience amidst setbacks, strategies to rekindle professional drive, and the evolution of daily resilience practices. The setbacks range from navigating unfulfilling projects, missed opportunities and taking time off to focus on their family.

Also, we will examine the critical role of supportive networks and how to cultivate them. Practical advice will be shared for those struggling to build resilience, including how to support struggling colleagues and the importance of taking necessary breaks.

Panel Moderator: Jazmin Ewers, Software Engineer (Google)

Presenters: Nicole Loncke, Site Reliability Engineer (Google) and Jasmine Pegrem Gilbron (Strategy Group)

1:30pm - 2:45pm CDT
Cyber-Physical Defense in Action: A Hands-On CPS Security Workshop
Location: Dallas 5-7

In this interactive workshop, participants will explore real-world cybersecurity threats to industrial cooling and HVAC systems by simulating an attack on a Raspberry Pi running OpenPLC. Working in pairs and following a step-by-step worksheet, they'll create ladder logic, analyze Modbus TCP traffic for vulnerabilities, and carry out a mock attack to disrupt fan control. Afterwards, they'll learn to implement defenses like firewall rules, encryption, and anomaly detection. Alongside hands-on labs, guided discussions, and a final Q&A, attendees will gain practical skills and insights for safeguarding critical infrastructure.

Presenters: Rima Asmar Awad,Cyber security researcher (Oak Ridge National Laboratory CyManII) and Mathew Singleton, Cyber Security Technical Professional (Oak Ridge National Laboratory)

1:30pm - 2:45pm CDT
Effective Programs for Broadening Engagement in Computing
Location: San Antonio 1-3

This workshop provides an opportunity for representatives from the NSF-funded Broadening Participation in Computing Alliances and other organizations to share their effective programs about broadening engagement in computing. The workshop will begin with representatives sharing one effective program from each of the following NSF BPC Alliances and other organizations: AccessComputing, blackcomputeHER.org, CAHSI, CMD-IT/LEAP, CRA-W, ECEP, and STARS. The attendees will have an opportunity to break up into nine groups, with each group having an opportunity to learn the details about the effective program such that information can be taken back to the institution for implementation or partnerships can be established. Participants will have an opportunity to learn about three effective programs.

Presenters*:* Valerie Taylor (CMD-IT), Brianna Blaser. Director (AccessComputing), Jamika Burge, Founder (blackComputeHer), Oscar Veliz (ProfessorCAHSI), Timika Oridota (CMD-IT/LEAP), Susan Rodger (Duke University/CRA-WP), Joshua Childs (University of Texas/ECEP) and Jamie Payton (STARS)

1:30pm - 2:45pm CDT
Professional and Career Mentoring for Researchers in Industry and Government Labs
Location: San Antonio 4-6

This workshop is designed to provide attendees from industry and government labs with the opportunity to develop their professional and career skills. It can also benefit those in academia, especially those considering a career move to industry or a government lab. Through discussion with three experienced panelists and a moderator, participants will have an opportunity to gain a better understanding of how to thrive in a research career and advance one's research and/or management career in

industry and government labs. Participants will hear from the panelists about their careers, to set the context, and then engage in direct conversations with panelists tailored to their individual goals and needs.

Presenters*:* Jaime Moreno, Distinguished Researcher (Emeritus IBM), Maged Elaasar, Systems Engineer (NASA Jet Propulsion Laboratory), Taghrid Samak, Engineer Manager (Meta), Gonzalo and Ramos, Principle Research (Microsoft Research)

1:45pm - 2:00pm CDT
From Academia to Industry: Building a Career at the Intersection of Research and Design
Location: Texas 5-6

From Academia to Industry: Building a Career at the Intersection of Research and Design

Transitioning from academia to industry can seem quite daunting. In this talk, I will share my journey from getting my PhD in Computer Science to becoming a Design Researcher at IBM Quantum. Drawing from my academic research in human-computer interaction (HCI) and my industry experience in quantum computing, I will offer practical strategies for students and early-career professionals navigating similar transitions.

This talk will begin by highlighting the transferable skills I gained during my PhD, such as conducting user studies, synthesizing data, and communicating complex ideas—skills that became my foundation at IBM. I will then discuss the challenges of transitioning to industry, including overcoming imposter syndrome and adapting to fast-paced environments.

Central to the session are five key lessons for success – building a T-shaped skill set that balances depth and breadth, reframing academic research as compelling storytelling for portfolios and interviews, leveraging professional organizations and conferences for networking, embracing a beginner's mindset to thrive in unfamiliar fields, and betting on yourself by applying for roles even when you don't meet every requirement.

Through personal experiences and practical advice, this talk will empower attendees to view their academic training as a strength, not a limitation. Whether you're a student exploring career options or a professional seeking to pivot into UX research or emerging tech, this session will equip you with the tools and confidence to build a meaningful career at the intersection of research and design.

Presenters: Oluwatobi Lasisi (IBM)

3:00pm - 4:00pm CDT
Hispanics in Computing
Location: Dallas 5-7

1:30pm - 2:45pm CDT
Cyber-Physical Defense in Action: A Hands-On CPS Security Workshop
Location: Texas 3-4

The Hispanics in Computing group was founded a few months before the Tapia 2009 Conference and has met at this annual conference ever since. The gathering allows many of us to meet face-to-face and discuss issues facing Hispanics. These past few years have increased the need for the community to come together to help students through their programs, professionals through their early career years, and more established professionals to make and achieve new goals. The goal for this year's BoF gathering is to explore how to maintain a supportive community in the face of the challenges that equity and inclusion is facing in this country. The impact of these gatherings has been tremendous. Several members of the community that attended our BoF as young graduate students are now in tenure track positions or employed in research organizations. The group has a strong online presence (listserv, Facebook, LinkedIn, and website http://www.hispanicsincomputing.com/) and looks forward to this family reunion at the conference.

Presenters: Karla Badillo-Urquiola, Assistant Professor (University of Notre Dame), Patricia Ordóñez, Associate Professor (University of Maryland, Baltimore County), Alvaro Monge, Professor (Northeastern University), Brianna Posadas, Assistant Professor (California State Polytechnic University, Pomona), Manuel A. Pérez Quiñones, Professor (UNC Charlotte), Oscar Veliz, Professor (Northeastern University)

3:00pm - 4:00pm CDT
CogniSphere: An AI-Driven Platform for Personalized Cognitive Wellness
Location: Texas 1-2

CogniSphere tackles cognitive decline and social isolation in older adults through an AI-driven platform offering personalized cognitive exercises through Generative AI models. With elder-friendly interfaces, it provides cognitive exercises from memories provided by users' support network, leveraging AI services. Over 55 million people worldwide have dementia, and 10–15% of 10 million with Mild Cognitive Impairment (MCI) develop dementia annually. In the U.S., loneliness affects 1 in 3 adults, and lack of social support impacts 1 in 4—both increasing dementia risk by 49–60%. Our cost-effective dementia prevention platform enhances elderly well-being.

We propose an AI-driven platform powered by AI services that uses personal memories, photos, and videos to deliver tailored cognitive exercises. A reinforcement learning (RL) feedback loop analyzes user progress and behavior, continuously refining exercises. This innovative approach aims to enhance cognitive resilience and slow the progression of cognitive decline. Various types of cognitive exercises that are proven to enhance cognitive health are personalized using data from users' support networks. Our multi-modal Generative AI framework integrates text, speech, and visual stimuli to sustain engagement across diverse exercise formats, while an RL-driven feedback loop continuously optimizes cognitive training based on user performance.

Presenter: Mira Kim (California State University, Fullerton)

3:00pm - 4:00pm CDT
How to Build AI Agents: A Hands-On Guide to Intelligent Agents
Location: Texas 5-6

AI agents are transforming industries by enabling autonomous decision-making in dynamic environments and we believe that the Tapia community stands to benefit from knowledge on how to build these systems. From chatbots and recommendation systems to negotiation agents, the ability to design and deploy intelligent agents is a crucial skill for AI practitioners. This session provides a practical guide on how to build AI agents, covering foundational concepts and real-world applications in creating smart decision making systems. We will explore the role of generative AI in enhancing agent decision-making and adaptability. Through interactive demonstrations, attendees will gain insights into how they can construct agents that can operate in uncertain environments. The session concludes with a discussion on challenges such as scalability, ethical considerations, and next steps to continue learning about this space.

Presenters: Kevin Scroggins (University of Florida) and Emmanuel Dorley (University of Florida)

3:00pm - 4:15pm CDT
CREATE: Culturally Responsive Education and AI Technology Exploration
Location: San Antonio 1-3

This workshop will engage participants in discussions and interactive activities around the topic of Generative AI and Culture. Participants will explore how generative AI can support culturally relevant and responsive computing education while addressing potential biases. Although the amount of work is still limited, culturally sustaining work has proven to be beneficial for learners within computing, and as this area of research gains traction, GenAI presents opportunities and challenges related to personalizing learning for students. This session will introduce participants—regardless of prior experience—to foundational concepts of culturally relevant pedagogy and generative AI. Through hands-on activities, attendees will critically analyze AI-generated content for bias, explore prompt engineering techniques to generate culturally responsive materials, and discuss ethical considerations. Relevant to all interested in computing education, including non-profits, faculty, and graduate students, participants will be left with strategies for identifying and mitigating bias in AI-generated content, as well as actionable steps to advocate for more culturally relevant computing education.

Presenters: Simone Smarr, Senior Research Scientist (Howard University) and Tiffanie Smith, Associate Professor (Lincoln University)

3:00pm - 4:15pm CDT
Empowering Non-Coders to Build Generative-AI Apps
Location: San Antonio 4-6

Generative AI is transforming the way applications are developed, reducing barriers to entry for developers from diverse backgrounds. This workshop presents three approachable methods for creating generative AI-powered applications, offering participants practical, hands-on experience in AI-driven software development.

Blocks Programming with Thunkable: Participants will utilize Thunkable's OpenAI blocks to build no-code AI applications through a straightforward drag-and-drop interface.

Natural Language to Code with Bolt: Discover how generative AI tools can convert English descriptions into functional code.

Python Development with PeopleCode.ai: Leverage the PeopleCode.ai OpenAI library to simplify the integration of AI in Python applications, while maintaining flexibility for more advanced customizations.

This workshop is designed for individuals of all technical levels, including those from non-traditional computing fields such as humanities and business. Drawing from our experience teaching coding and generative AI at the University of San Francisco, as well as from the development of tutorials at draganddropcode.com, attendees will gain a comprehensive understanding of AI application development. By the end of the session, participants will have acquired valuable skills to apply to their own projects. Let us work together to democratize AI development. Let's democratize AI development!

Presenters: David Wolber, Professor of Computer Science) and Ashlesha Bhagat, Union College

3:00pm - 4:15pm CDT
The Sweet Secret to Winning at Work: Guide to Creating a Leadership Presence & Image
Location: Dallas 5-7

According to Harvey Coleman, how well you perform in your job has little impact on your overall success in your professional career. In his book Empowering Yourself: The Organizational Game Revealed, Coleman asserts that career success is determined by three key elements: Performance, Image, and Exposure (PIE).

In this workshop, our career coach, Brittany J. Brown, ACC, will delve into the PIE Framework and provide practical strategies for enhancing your professional presence and growth. By effectively leveraging the PIE Framework, you will focus on building a strong leadership brand and image.

Presenter: Brittany Brown, Enterprise Coach & Consultant (Federal Reserve System) Bold Ambassador

4:00pm - 4:30pm CDT
Afternoon Break
Location: Texas Center Prefunction

4:30pm - 5:30pm CDT
A Graduate Student's Guide to The Faculty Job Landscape
Location: Texas 1-2

One of the most powerful ways to broaden participation in computing is to have diverse faculty and mentors who enable students to imagine themselves in computing careers and find career pathways that resonate with their varied cultural or personal values and life goals. While in graduate school, students might encounter the phrases "research versus teaching" and "publish or perish." These phrases paint a picture of the academic jobs landscape as having only two destinations - a research job or a teaching job, with the primary pathway to either being a B.S. and then a Ph.D. in computer science. This simplistic picture can discourage or intimidate many students who might otherwise have considered faculty careers. We should likewise consider how the values and life goals of graduate students play a role in how they find (or do not find) their way to faculty positions to become these role models. Prior work has demonstrated the importance of how values influence choices on educational and career pathways. Some communities value work that serves or benefits the community over more individualistic efforts. Research in culturally-relevant computing has demonstrated the importance of helping students to view the field of computing and adjacent careers as being relevant to their cultural identities and providing

ways to help solve problems that are relevant to their cultural communities. One common misconception is that colleges are divided into two mutually exclusive categories, "research" schools where faculty pursue external grant funding and publish papers in prestigious conferences and journals and "teaching" schools where faculty spend their time teaching and mentoring, with little or no opportunity for impactful research. This misconception is patently wrong (many research universities have faculty whose primary responsibility is teaching and faculty at small liberal arts colleges often have careers featuring both teaching and research). This is harmful, since it draws attention away from more liberating aspects of academia, including the freedom to design classes and research projects. Additionally, we should highlight the many different pathways that graduate students can follow to faculty careers, not just the “traditional” route of an undergraduate degree followed by a doctoral degree in computer science. In reality, there are faculty whose first degrees were not in a computing-related field, those who have masters degrees, faculty who have previously worked in industry, or had families before graduate school, had career interruptions due to layoffs, or other non-traditional pathways. This BoF invites faculty members who wish to share their unique pathways to different types of faculty jobs with students (or others) considering careers in academia. During this one-hour BoF, facilitators will take turns asking guiding questions such as how did your values and life goals influence your path, how was your path different, and advice to share. Through discussion and audience questions we will together paint a more flexible, realistic and welcoming picture of the many pathways to different types of academic careers that resonate with our cultural or personal values and life goals.

Presenters: Patricia Ordóñez,Associate Professor (University of Maryland, Baltimore County), Kendra Walther,Associate Professor (University of Southern California), William Bares, Associate Professor (Whitman College), and Nery Chapetón-Lamas (MiraCosta College)

4:30pm - 5:30pm CDT
Empowering Minorities: Transformative Research Opportunities for Associate Degree Students
Location: Texas 5-6

This session will present the outcomes of a National Science Foundation (NSF) funded project designed to encourage research experiences for students pursuing associate degrees. The project brought together students from a community college and a university's associate degree program to study spatiotemporal thinking, computing, and applications. It also emphasized the role of administration in supporting and promoting research opportunities for these students. The project aimed to provide associate degree students with the chance to engage in advanced research, developing critical thinking and problem-solving skills. By working with NSF researchers, students gained a deeper understanding of the research process and the importance of interdisciplinary collaboration. The program also sought to enhance students' academic preparation and improve their chances of transferring to four-year programs. The session will focus on strategies and practices for encouraging research experiences for associate degree students. It aims to provide a comprehensive understanding of the benefits of undergraduate research for two-year college students and share best practices for creating successful research opportunities at this level. The session will be of interest to community college faculty, administrators, and anyone promoting undergraduate research and student success.

The session is divided into two parts. The first part includes discussions by faculty on student recruitment, training, mentoring, and administrative involvement. Faculty will share their experiences working with associate degree students on NSF-sponsored research projects, highlighting challenges and opportunities. The second part features presentations of student research results, including NSF-funded projects on topics like air pollution in the Port of Los Angeles and the creation of a Ukraine Data Lab and Archive. These presentations will showcase the high-quality research conducted by two-year students and provide a firsthand understanding of the benefits of undergraduate research. A Q&A session will follow, allowing participants to ask questions and learn more about the students' research projects.

The agenda includes: Introduction and overview (5 minutes); Discussions by faculty on student recruitment, training, mentoring, and administrative involvement (15 minutes);Project

Presentation 1 (10 minutes);Project Presentation 2 (10 minutes); Final Q&A session, conclusion, and wrap-up (10 minutes). I will bring students to the session to answer questions.

Overall, this session will offer valuable insights into the benefits of undergraduate research for associate degree students and best practices for creating successful research opportunities at the two-year college level. It will provide guidance for faculty, administrators, researchers, and educators interested in promoting research and student success. Attendees will gain a better understanding of the benefits and process of undergraduate research for community college and associate degree students, with discussions on student recruitment, preparation, management, and mentoring, offering practical advice for establishing or improving similar programs.

This session will be particularly beneficial for those looking to enhance the academic and professional prospects of associate degree students through research opportunities. By attending, participants will be equipped with the knowledge and tools needed to foster a research-rich environment in their institutions, ultimately contributing to the overall success and development of their students.

Presenter: Jia Lu (Valdosta State University)

4:30pm - 5:45pm CDT
Breaking Bias Building Fairer AI Systems
Location: San Antonio 1-3

Large language models (LLMs) are revolutionizing industries, from healthcare and education to entertainment and finance, by enabling unprecedented levels of automation, creativity, and efficiency. However, these powerful tools often carry hidden biases that can perpetuate inequality, reinforce stereotypes, and harm marginalized communities. For instance, studies have shown that LLMs can generate outputs that reflect gender, racial, and cultural biases present in their training data, leading to real-world consequences such as discriminatory hiring algorithms, biased legal decision-making tools, and harmful content recommendations. In this interactive session, "Breaking Bias: Empowering Women to Build Fairer AI Systems," we'll dive deep into the challenges and opportunities of creating ethical and inclusive AI. We'll begin by exploring the tools and techniques used to detect and reduce biases in LLM training data, such as fairness metrics, adversarial debiasing, and diverse dataset curation. Through real-world case studies, we'll examine the societal impacts of biased AI outputs, including examples like [specific case studies, e.g., "Amazon's biased hiring algorithm" or "GPT-3 generating harmful stereotypes"]. These examples will highlight the urgent need for fairness-aware AI systems and the role of technologists in addressing these issues.

The session will also feature a hands-on workshop where participants will collaborate to design strategies for creating fairness-aware AI models. Using open-source tools and frameworks, we'll explore practical approaches to mitigating bias, such as inclusive data collection, algorithmic transparency, and human-in-the-loop systems. Attendees will leave with actionable insights and resources to apply in their own work, whether they're building AI systems, leading teams, or advocating for ethical AI practices. This session is designed for a diverse audience, from budding technologists to seasoned professionals, and will empower participants to take an active role in shaping the future of AI. By fostering a deeper understanding of bias in LLMs and equipping attendees with the tools to address it, we aim to inspire a new generation of AI practitioners who prioritize diversity, equity, and inclusion in their work. Together, we can build AI systems that reflect the values of the communities they serve and create a more equitable future for all.

Presenter: Srisuma Movva (Microsoft)

6:30pm - 9:30pm CDT
Tapia Awards Reception & Dance Party
Location: Texas Ballroom

The dinner reception includes presentation of awards to Tapia Conference competition winners and the 2025 Tapia Award recipient, Dr. Jennifer Tour Chayes.

A dance party will follow the award presentations.

Presenter: Jennifer Tour Chayes,
2025 Tapia Award Recipient
(UC Berkeley)

8:00am - 5:30pm CDT
2025 STARS Celebration
Location: Grapevine A/B

For more information and to register, visit: Stars Celebration.

The 2025 STARS Celebration will be a co-located event held on Saturday, September 13, 2025.

STARS is a student-centered organization dedicated to empowering the next generation of diverse computing leaders by fostering supportive communities, igniting action, and building sustainable pathways to a more equitable tech workforce. The annual STARS Celebration is an in-person event designed to build and sustain the STARS community – bringing together current and future students, alumni, chapter leaders, and advocates.

The event features sessions designed to:

-Elevate student voices and experiences.

-Support active engagement across chapters and between current students and alumni.

-Engage STARS alumni and grow the STARS Alumni Network.

These sessions will include best practices and resources for broadening participation in computing and AI, with hands-on training workshops for conducting justice-centered computing and AI outreach programs, tech talks on emerging topics in research and industry, and career advancement sessions.

8:00am - 5:30pm CDT
Quiet Room
Location: Pecos 1

9:00am - 3:00pm CDT
Accessibility in Computer Science
Location: Dallas 1-2

AccessUR2PhD invites you to join us for a post-conference workshop focused on learning about accessibility! Connect with faculty and researchers to learn about designing and building inclusive technology.

Follow the link to register for the Accessibility in Computer Science workshop.

Companies want engineers who can build accessible technology, because creating an accessible digital world requires people to design and build that world to be accessible. In our community, there's exciting accessibility research being done by computer scientists, and yet many computing students are not being taught about accessibility in their courses. This workshop will give you a crash course on accessibility, expose you to research projects related to accessibility, and help you find ways to build your skills after the workshop ends.

Workshop attendees can request reimbursement for one night of lodging. Lunch will be provided.

Accommodations, requests for supplemental funding for extended lodging and dietary needs can be submitted at the registration link for the Accessibility in Computer Science workshop.

Presenters: Brianna Blaser, Director (University of Washington), Maya Cakmak, Associate Professor (University of Washington), Richard Ladner, Professor Emeritus (Paul G. Allen School of Computer Science & Engineering at the University of Washington), Raja Kushalnagar, Director of the Information Technology (Gallaudet University) and Stacy Branham,Assistant Professor/ co-PI of AccessComputing (University of California Irvine)

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Conference Organizations

The 2025 CMD-IT/ACM Richard Tapia Celebration of Diversity in Computing Conference is possible because of the tremendous dedication and contributions of many organizations and volunteers from the computing community. We very much appreciate the significant support, time, and excellent input. We extend a sincere thank you to everyone, including our attendees, for making this conference possible.

ORGANIZER

CMDiT
Fostering Innovation Through Inclusion

The Center for Minorities and People with Disabilities in Information Technology (CMD-IT) cmd-it.org

CMD-IT is a non-profit organization whose vision is one where computing broadly impacts society through proven inclusivity. Our mission is to drive societal change by providing skill development, opportunities, and resources for our target communities through innovative programs, events and strategies for the computing community.

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