EAGLE DRIVE

CELEBRATING 40 YEARS OF TENNESSEE TECH UNIVERSITY'S DEPARTMENT OF COMPUTER SCIENCE • 2026

EST. 1986

A WORD FROM THE CHAIR

A RETRO LOOK FORWARD

I WAS A FRESHMAN IN COLLEGE IN 1986 when the Department of Computer Science was established at Tennessee Tech University.

The 1980s had a very distinctive look and feel, including "big hair," television shows like Miami Vice and Cheers, the movie Top Gun in theaters and artists such as Bon Jovi, Peter Gabriel, Whitney Houston and Run-D.M.C. on the airwaves. Music videos played constantly, and video game consoles were quickly becoming a part of everyday life.

While I did not attend Tennessee Tech as a student, 30 years later I found myself here as chair of the department. In the 10 years that I have been part of this community, I have witnessed remarkable success and growth in nearly every aspect of what we do.

The term retro refers to stylistic elements that deliberately evoke a sense of nostalgia for days gone by. The artwork for this edition of Eagle Drive intentionally embraces a retro aesthetic as we approach the 40th anniversary of the establishment of the Department of Computer Science at Tennessee Tech.

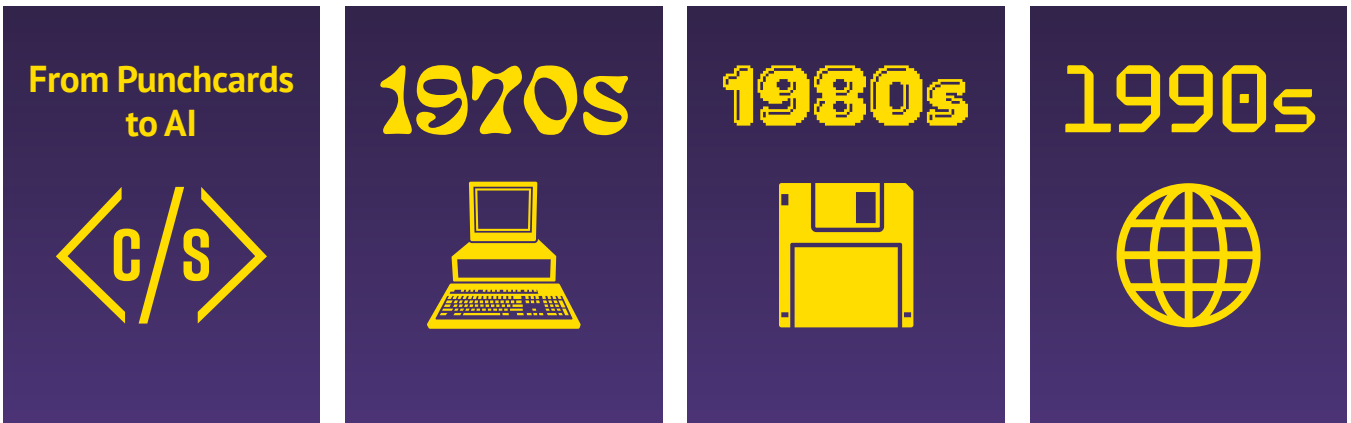
Within the software development industry, however, the term retro carries another meaning, the agile retrospective. In that context, a "retro" is a time to reflect on what is working well, what needs improvement and how we should move forward. It is a practice that I hope all of us engage in regularly.

The stories you will find in this edition of Eagle Drive have a distinctly retro feel in both senses of the word. In one sense, the look and feel of the magazine reflects the visual style of earlier decades while sharing stories that reconnect us with graduates and faculty from our past. At the same time, the magazine captures the present and points toward the future through stories that highlight the achievements of our students and the faculty who inspire them.

In the other sense of the word, this magazine serves as a kind of departmental retrospective. Within these pages you will find stories about our new degree programs, including the B.S. in artificial intelligence and Ph.D. in computer science. You will also read about research successes, new partnerships and the continued growth of the department. Along the way, you will find snapshots of student life, including clubs, hackathons and other activities that reflect the energy and creativity of our community today.

Finally, I would like to thank SAIC for their sponsorship of this magazine, as well as Amy Davis ['00, '23] and Rebecca Hahnert ['23] for their work in assembling its contents. I also want to thank the many contributors, including retired faculty members Martha Kosa and David Hume and several alumni, who shared updates and stories with the department.

GERALD C. GANNOD, PH.D.
DEPARTMENT OF COMPUTER SCIENCE CHAIR



CONTENTS

READY FOR A JOURNEY THROUGH TIME?

Tennessee Tech's Department of Computer Science, established in 1986, celebrates its 40th anniversary in 2026. While the department officially began four decades ago, the computer science major goes back to the 1970s. To mark this milestone, we're traveling through time, revisiting where it all began and exploring what lies ahead.

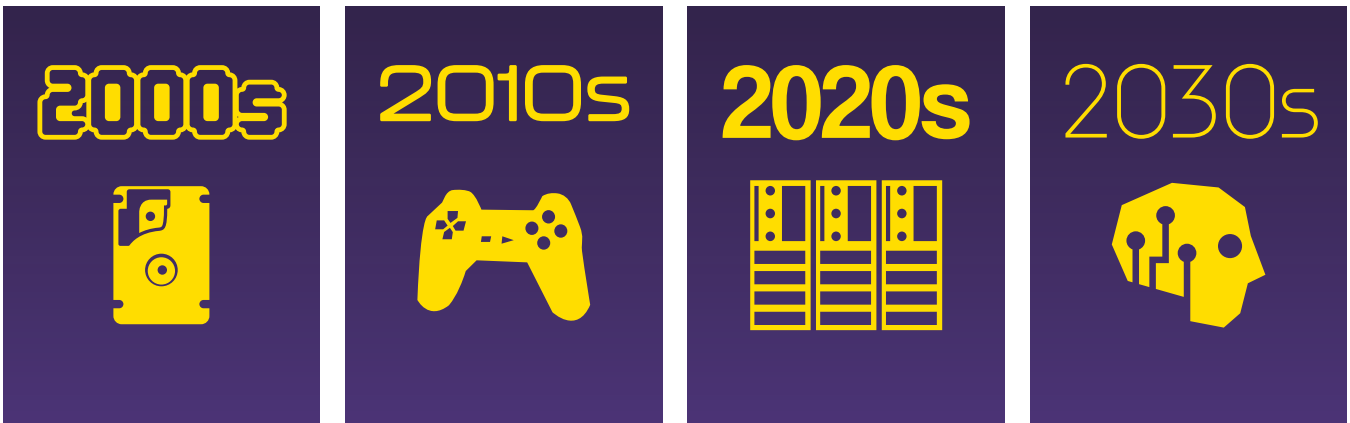
ACKNOWLEDGMENTS

- **Gerald Gannod, Ph.D.**, Department Chair
- **Amy Davis, MPS**, Communications & Marketing Specialist
- **Rebecca Hahnert, BFA**, Graphic Designer
- **Additional Contributors:** David Hume, Ed.D., Martha Kosa, Ph.D., Jonathan Frank, Tracey Hackett

AWARDS: Eagle Drive magazine, produced annually by Tennessee Tech's Department of Computer Science, is the recipient of three Tennessee College Public Relations Association communication awards for cover illustration (2024, 2025) and "A Word From the Chair" illustrated portrait (2025).

SPECIAL THANKS to SAIC for continued support of Eagle Drive magazine since 2020.

Tennessee Tech University
Department of Computer Science
Campus Box 5101, Cookeville, TN 38505
931.372.3691 | csc@tntech.edu | www.tntech.edu/csc



COMPUTER SCIENCE: 40 YEARS STRONG

GROWING. INNOVATING. LEADING. For more than four decades, computer science at Tennessee Tech has evolved alongside a rapidly changing field, building a strong foundation for discovery, innovation and leadership. Today, the department stands as one of the two largest in the College of Engineering, with impact that extends across campus and into industry, research and communities beyond.

That momentum is reflected in expanded academic pathways designed to meet emerging needs. In addition to established undergraduate and graduate programs, the department now offers a standalone Ph.D. in Computer Science and supports the new B.S. in Interdisciplinary Computing, housed in the College of Emerging and Integrative Studies. Looking ahead, a B.S. in Artificial Intelligence launches in fall 2026, further strengthening opportunities in one of computing's fastest-growing areas.

Faculty research and outreach amplify this impact through centers such as CEROC, MInDS and ASCEND, where advances in cybersecurity, artificial intelligence and high-performance computing take shape.

As it marks 40 years of excellence since its founding in 1986, the Department of Computer Science remains focused on what comes next—growing opportunity, innovating with purpose and leading the future of computer science.

JARVIS ['25]

WALKER ['25]

VELA HERNANDEZ ['25]

EXCEPTIONAL GOLDEN EAGLES: Abby Jarvis ['25], Gavin Walker ['25] and Daniela Vela Hernandez ['25] are the three newest computer science graduates to receive Tennessee Tech's prestigious W.A. Howard Award, recognizing a perfect 4.0 GPA throughout their undergraduate studies. Jarvis plans to pursue a career in IT/cybersecurity with graduate school as a future goal after gaining industry experience. Walker accepted a software engineer position at Dollar General. Vela Hernandez plans to continue in the master's program in cybersecurity at Tennessee Tech, conducting research in drone security and serving as president of the university's Women in CyberSecurity (WiCyS) student chapter.

ACADEMIC PROGRAMS:

- B.S. & M.S. IN COMPUTER SCIENCE
- PH.D. IN COMPUTER SCIENCE*
- B.S. IN ARTIFICIAL INTELLIGENCE
- B.S. IN INTERDISCIPLINARY COMPUTING

Concentration Options

- Information Assurance & Cybersecurity
- High-Performance Computing

*Formerly Ph.D. in Engineering with a concentration in Computer Science

RECORD CS DEGREES CONFERRED

174 GRADS | BS – 152 | MS – 18 | PH.D. – 4

Fall 2024 - Summer 2025

ENROLLMENT FALL 2025 > 793

- Undergraduate CS majors – 671
- Undergraduate CS interest – 31
- Master's – 43
- Ph.D. – 48

IMPACTFUL RESEARCH

- $3.3M new awards
- $3.25M continuing grant activations
- $11.8M new proposals

CS FACULTY-LED CENTERS

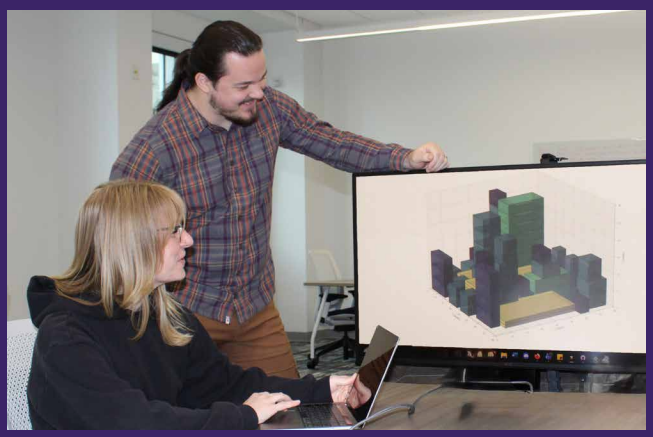
- CEROC: Cybersecurity Education, Research & Outreach Center
- MInDS: Machine Intelligence & Data Science
- ASCEND: Advanced Scalable Computing, Extreme Networks & Data

UNIVERSITY HIGHLIGHTS

- #1 public university in Tennessee, according to 2025 ratings from Money.com
- A top-ranked national university by U.S. News & World Report
- Lowest debt burden: Tech grads leave with the least debt of all public universities in the state, according to the Tennessee Higher Education Commission.
- Highest ROI: Tech provides students with the highest return on investment for any public university in Tennessee, according to Payscale.
- Record-breaking research: Tech topped $47.9 million in externally funded research for fiscal year 2025.

BUILDING THE INTELLIGENCE THAT BUILDS THE FUTURE

TENNESSEE'S FIRST: **TECH DEBUTS B.S. IN AI**



Computer science majors Claudia Nething ['25] and Michael Albert ['25], who both graduated in December 2025 with a concentration in data science and artificial intelligence, collaborate on a project. The DSAI program is being elevated to a standalone major in AI in fall 2026.

> This isn't an applied AI degree. Our students want to build it, code it and understand the inner workings of it. We're developing a program that **emphasizes the foundations** and engineering behind intelligent systems.
>
> - Bill Eberle, professor of computer science

ARTIFICIAL INTELLIGENCE IS NO LONGER A CONCEPT OF THE FUTURE – it's a field Tennessee Tech is helping to define. This fall, the university will become the first institution in the state to offer a baccalaureate-level degree in the theories, systems and development behind the emerging technology.

The new major, housed in the Department of Computer Science, further positions Tennessee Tech as a statewide leader in AI. The program was approved by the Tennessee Higher Education Commission on Oct. 26, 2025, and builds upon what was formerly the data science and artificial intelligence concentration within the computer science major.

"We've seen steady growth in that concentration over the past several years," Gerald Gannod, department chair and professor, said. "With the confluence of everything happening within artificial intelligence, both nationally and here on campus, it really became the right time to do this."

While the new degree will initially build on existing coursework, Tech faculty have already begun developing an expanded curriculum to reflect the depth and breadth of modern AI.

"This is an elevation, so we're not changing it drastically on day one," said Doug Talbert ['91], professor of computer science and co-director of Tech's Machine Intelligence and Data Science (MInDS) Center. "But we are beginning a planned evolution."

Talbert said the curriculum will include the addition of courses in parallel programming, deep learning and human-AI interaction, with further expansion over the next three years.

Bill Eberle, professor of computer science and co-director of the MInDS Center, added, "We'll be rolling out even more advanced AI topics that are not currently covered in any courses on campus.

That distinction of offering a foundational AI program, rather than an applied AI emphasis, makes Tech's new major the only one of its kind in the state of Tennessee.

The new degree will complement the work of the MInDS Center, an on-campus hub launched in 2024 to address a national focus on AI education and workforce development. The center brings together faculty, students and industry partners to advance machine learning, data science and ethical AI applications.

"MInDS is a focal point for AI on campus," Talbert said. "So, you'll see that many of the ideas that inform where the major goes will come out of faculty associated with the center and from our advisory board, which has great expertise in artificial intelligence."

Gannod said he hopes the program will raise the visibility of Tech's computer science excellence and further strengthen the university's standing as a leader in AI education and research.

"This is a great way for us to position ourselves within the state as a leader in AI talent development," he said. "We're building something distinctive—something that will attract students who see their future in this field and want to help shape it."

Associate Professor of Computer Science Susmit Shannigrahi discusses a research project with Tennessee Tech Ph.D. students Jemima Owusu-Tweneboah, left, and Sepideh Abdollah.

TENNESSEE TECH LAUNCHES PH.D. IN COMPUTER SCIENCE

This milestone represents a significant achievement for our department and university, reflecting the strength of our faculty, quality of our research and our ongoing commitment to advancing computer science education and innovation.

- Gerald Gannod, Department of Computer Science Chair and Professor

BEFORE FALL 2025, doctoral study in computer science at Tennessee Tech lived within an engineering concentration.

Today, it stands on its own.

Students can now pursue a Ph.D. in computer science, marking a natural evolution for a department whose research and graduate enrollment have continued to expand.

"This milestone represents a significant achievement for our department and university, reflecting the strength of our faculty, quality of our research and our ongoing commitment to advancing computer science education and innovation," Gerald Gannod, department chair and professor, said.

The former computer science concentration within the Ph.D. in engineering was phased out in August 2025 and replaced by the new independent doctoral program.

"Tennessee Tech's new Ph.D. in computer science further strengthens our standing as Tennessee's premier STEM university while equipping our students with the tools to lead in an industry increasingly driven by advanced computing, AI and cyber technology," Tech President Phil Oldham said. "The Department of Computer Science, College of Engineering, College of Graduate Studies and Division of Academic Affairs worked collaboratively to design a doctoral program that sets Tech apart, offers solutions to real-world challenges and ensures our graduates are ready to claim the mantle of leadership in technology-driven research and study."

For the computer science department, the transition to a standalone doctoral degree is about more than structure – it's about momentum.

"This program is one of many steps taken by the Department of Computer Science on its path to national preeminence," College of Engineering Dean Joseph Slater said. "I'm excited about the future of the department and the meaningful contributions graduates of this Ph.D. program will make for all humankind."

Elevate your career with a Ph.D. in Computer Science from Tennessee Tech >

https://www.tntech.edu/majors/engineering_computer-science.php

HISTORIC FIRSTS

TECH'S FIRST COMPUTER SCIENCE DOCTORAL GRAD LEADS NEW INTERDISCIPLINARY COMPUTING PROGRAM

ONE GRADUATE. TWO HISTORIC FIRSTS.

Moumita Kamal, Ph.D. ['25], made history at Tennessee Tech as the first student to complete the requirements for the university's new standalone Ph.D. in computer science. She now marks another first as the inaugural program coordinator of a new interdisciplinary computing program, launched in spring 2026 during the Department of Computer Science's 40th anniversary year.

"Being the first graduate of the Ph.D. in computer science program is a special milestone in my journey, which began in Dhaka, Bangladesh, and led me to my current home in Cookeville," said Kamal, who successfully defended her dissertation, "Lost in Compression: Novel Metrics for Assessing the Faithfulness of Compressed Neural network Models," in September 2025.

While pursuing her doctorate, Kamal served as a graduate assistant and researcher. In her new leadership role, she helps guide the growth and success of the interdisciplinary computing bachelor's degree program, housed within in the College of Emerging and Integrative Studies. The program pairs a strong foundation in computer science with customizable concentrations that allow students to apply computing to fields such as healthcare, education, justice, business and more.

"I am thrilled to continue my career at Tech," Kamal said. "I get to wear many hats – from developing the curriculum and managing the program to recruiting students and handling outreach. I love the variety of the work, though teaching remains close to my heart."

Reflecting on her time as a student, Kamal said her fondest memories center on her advisors and the students she has taught.

"Tennessee Tech did more than just educate me; it ignited my passion for teaching," she said. "The computer science faculty showed me so much kindness and support during my studies, and that has shaped how I interact with my own students. I strive to pass that same kindness and mentorship on to them."

One moment stands out.

"At Tech, graduating students receive a challenge coin to give to the mentor who made the biggest impact on them," Kamal said. "Recently, I received my very first coin from a student. It was one of the most meaningful and rewarding moments of my teaching journey so far, and it perfectly captures why I love what I do."

For Kamal, making history at Tech is just the beginning.

Moumita Kamal holds the distinction of being the first to earn a standalone Ph.D. in computer science from Tennessee Tech in 2025. Previously, students earned a Ph.D. in engineering with a concentration in computer science.

NATIONALLY RECOGNIZED

CEROC SECURES ELITE NSA RESEARCH DESIGNATION

✔ NCAE-CD ✔ NCAE-R

TWO DOWN, ONE TO GO.

Tennessee Tech's Cybersecurity Education, Research and Outreach Center has checked off two of three major national designations for cybersecurity excellence. The latest is a National Centers of Academic Excellence in Cybersecurity–Research designation awarded by the National Security Agency.

"The new NCAE-R designation places the university among an elite group of institutions and demonstrates that CEROC is a trusted partner in developing technologies and strategies to protect critical infrastructure, secure emerging technologies and train the next generation of cybersecurity experts," Joseph Slater, Ph.D., College of Engineering dean, said.

Tennessee Tech already holds the NCAE-CD (Cyber Defense) designation, which highlights excellence in cybersecurity education and workforce development. With the addition of the NCAE-R designation, the university is now recognized for both educational leadership and research innovation.

Next, CEROC plans to pursue a third designation, NCAE-CO (Cyber Operations), which focuses on advanced technical skills for defending against sophisticated cyber threats. Achieving all three designations will position Tech as one of the most comprehensive cybersecurity centers in the nation.

"This designation reflects Tech's commitment to advancing cybersecurity research that addresses real-world challenges," Muhammad Ismail, Ph.D., CEROC director, said. "Our students, faculty and research partners are working together to develop solutions that strengthen national security and prepare the next generation of cybersecurity leaders."

Computer science student Carrie Houston works on CEROC's entanglement distribution testbed, which enables researchers to develop and test secure quantum communications and networking protocols. As a National Center of Academic Excellence, Tennessee Tech's CEROC supports hands-on research and competition-ready learning across areas such as quantum networking, AI for cyber defense and advanced intrusion detection, preparing students for real-world cybersecurity challenges.

FROM PUNCH CARDS **TO AI**

Department loading... please wait (until 1986)

BEFORE COMPUTER SCIENCE BECAME A DEPARTMENT, it was already powering a new direction for Tennessee Tech. Momentum built in 1970, when the university introduced its first computer science course, offering students an entry point into a discipline rapidly transforming industry and research. By 1974, a computer science major was in place, setting the stage for the department's formal creation in 1986.

As Tennessee Tech celebrates 40 years of its Department of Computer Science, this Eagle Drive commemorative edition invites readers on a journey through time — how the department began, how far it has come and the innovations still ahead. Alumni Ray McCay ['79], Karen Ryan ['79], David Mills ['88], David Sisterman ['92], April Crockett ['01, '04], Ben Eckart ['08], Christa Cody ['15], Jesse Holland ['22] and Dior Burchfiel ['25] have shared what it was like to study computer science across the decades and how those experiences shaped their careers. Professors emeritus David Hume and Martha Kosa have also offered insight into the department's formative years.

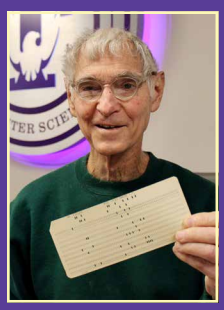
From its beginnings, computing at Tennessee Tech has evolved through the eras of desktop computers and laptops, the rise of the internet and the shift to cloud computing. Now, in the mid-2020s, the field is being reshaped once again by artificial intelligence, quantum research and autonomous systems.

The next pages will take you back — and forward.

Your Time Travel Journey Starts Here

COMPUTER SCIENCE IN THE 1970s

By Professor Emeritus David Hume



In 1970-71, the first computer course at Tennessee Tech was taught: Fortran programming. Course offerings developed in the early 1970s to include courses in math application areas, electrical engineering and business management. Fortran, COBOL and Basic were used. The Tech administrative mainframe (successively IBM, Xerox and Burroughs) was used with punched card input and green-bar paper output; all contact with "the computer" was in the computer center (Clement Hall). Faculty within the Math Department who taught computer science were James Harris, Roger Lessman, Leland Long and Don Ramsey. In 1974, the first computer science majors graduated. The 1976-77 catalog first described a major in CSC. In 1977, the Department of Mathematics became the "Department of Mathematics and Computer Science."

As 1980 approached, the CSC curriculum was organized into two options: Option I (Software and Scientific Applications) and Option II (Information Systems). Option I required the full calculus sequence, matrices, probability and statistics and a year of physics as one of the natural sciences. Option II had a reduced math requirement, no physics requirement, a year of accounting and sufficient courses for a concentration in business. Students who did not like the math requirement (and physics!) often went for Information Systems; Option I was definitely considered to be more rigorous. Recruiters from industry sought graduates from both options.

The number of computer science majors increased through the 1970s to 115 in 1978. During this decade, computer science was recognized in academia and wider society as a discipline of fundamental importance with a very bright future. Both students and faculty shared the excitement of being in a new and vibrant field, one which also led to excellent job prospects.

'70s Time Capsule

- Fortran, COBOL and Basic
- "The Computer" in Clement Hall computer center
- Punch card readers and key punch machines
- Greenbar printer paper
- CRT (cathode ray tube) terminals
- Removable disk drives
- Batch processing operating systems
- Text-based interfaces

First Faculty

Mathematics faculty taught Tennessee Tech's first computer science courses:

- James Harris
- David Hume
- Roger Lessman
- Leland Long
- Larry Neal
- Don Ramsey
- Vason Srini ['71]

1970s CS grads: Where are you now?

Email updates to csc@tntech.edu

Destination: 1970s

From machine rooms to microchips

COMPUTER SCIENCE IN THE 1970s LOOKED NOTHING LIKE IT DOES TODAY. Programs were submitted on stacks of punch cards. Terminals were rudimentary, and removable disk drives were barely able to store 6 million characters of data — versus 14 trillion characters in 2 percent of the same physical space.

For Ray McCay, who graduated from Tennessee Tech in 1979, those early days were less about the limitations of the machines and more about the possibilities they represented.

"In the late 1970s, computer science as a profession was just starting to take shape," he said.

Over the next 45 years, McCay would witness—and help lead—transformative change across the IT industry, working in areas ranging from global product strategy and cloud management.

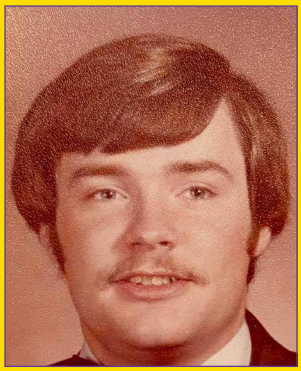
"In the 1970s, machines that occupied large rooms could process about a million instructions per second," he said. "Today, a single chip can execute over 3.5 million instructions per second – even more when you factor in artificial intelligence and high-performance computing technologies."

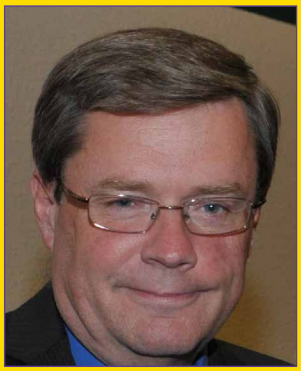
Yet, in McCay's view, the essence of the field has remained consistent.

"No matter what the technological advance, the key is how to apply that technology to solve real problems," he said. "That is the field of computer science—in 1979 and in 2026."

ALUMNUS PERSPECTIVE

RAY MCCAY ['79]





ViON Federal Solutions (retired)
Private Cloud General Manager

Ray McCay graduated from Tennessee Tech in 1979 and went on to build a 45-year career spanning IT solutions, sales and executive leadership. He held leadership roles with Burroughs, Boise Cascade, McDonnell Douglas, Hitachi and ViON Federal Solutions. At Hitachi, he served as senior vice president of global product strategy and later as senior vice president and global general manager of Hitachi Solutions. He concluded his career as a private cloud general manager at ViON Federal Solutions before retiring in 2024.

1970	1973	1974	1977	1978
First computer science course appears in Tennessee Tech catalog: FORTRAN Programming	Computer science is offered as a minor, with a major in mathematics.	Tennessee Tech awards first two computer science degrees to Diane Coleman and Sally Walker	Department of Mathematics is renamed Department of Mathematics and Computer Science.	Number of computer science majors increases to 115.

ALUMNUS PERSPECTIVE

KAREN RYAN ['79]

Y-12 National Security Complex (retired)
IT and Cybersecurity

Karen Ryan graduated from Tennessee Tech in 1979, when the computer science major was offered within the mathematics department. She began her career that same year as an IT developer at the nuclear facilities in Oak Ridge and Paducah, Ky. Over the course of her career, she advanced from development into database support and later into management. Several years later, she continued leading database support at Science Applications International Corporation (SAIC) before returning to the nuclear facilities, where she ultimately worked in cybersecurity until retiring in 2022. Alongside her full-time IT career, she also spent nearly 35 years working in the fitness industry.

The 1970s: Computing at a 'crawl'

PUNCH CARDS. OVERNIGHT JOB RUNS. NO PERSONAL COMPUTERS. That was computer science at Tennessee Tech in the 1970s, when Karen Ryan chose a major few people understood – including her.

At the time, computer science was housed within the Department of Mathematics, not yet a standalone department until 1986. Ryan hadn't even planned on studying computer science, but her love of math opened the door.

"Math was my favorite subject in high school," she said, noting that Tech's math department offered two majors: math and computer science. "I didn't really know much about computer science—or that it even existed—but I thought I would give it a try."

That decision launched Ryan into a field on the brink of rapid change – even if it didn't seem that way at the time. In those days, programs were written on punch cards and submitted in carefully ordered stacks.

"It was usually overnight to get results from job submissions," Ryan said. "The early days of computer science seemed like crawling compared to the fast pace of today's world of computing."

One of the most influential figures during her time at Tech was Roger Lessman, Ph.D., who taught several of her computer science classes.

"He was a great teacher and mentor," Ryan said. "I enjoyed all his classes and can give him credit for keeping me in this field."

Despite the slower pace and limited technology of computer science at Tennessee Tech in the 1970s, Ryan's experience taught her something lasting – that computer science is a continuously changing field.

"It was a great major to prepare for later life," she said, "where computers are so integrated into daily living."

'80s Time Capsule

- Fortran, Pascal and C
- Shared computer labs as the hub of student work
- Long hours and late-night collaboration at terminals
- "Dumb" terminals connected to central systems
- Line printers producing stacks of program output
- Limited remote access to campus computing systems
- Few personal computers among students
- Floppy disks
- Unix

Leadership

Department Chairpersons:

- Leland Long (1986-1987)
- Frank Hadlock (1987-1995)

Faculty:

- Barbara Briggs
- Ruth Hofstra
- David Hume
- Hugh Kerr
- Steve Khleif
- Roger Lessman
- Larry Neal
- Rama Ramaraj
- Don Ramsey
- Joel Seber ['81]
- Arsalan Shokooh

Fun Fact:

GRACE HOPPER (1906-1992) computer pioneer, originator of the term "computer bug" and a principal designer of COBOL, gave a talk at Tennessee Tech in 1980.

Destination: 1980s

A discipline comes into its own

THE 1980s MARKED A TURNING POINT for computer science at Tennessee Tech. Enrollment was increasing, and with that momentum came growing pains and logistical challenges for what was then the Department of Mathematics and Computer Science.

The growth made one thing clear: Computer Science was ready to stand on its own at Tennessee Tech. Professor Emeritus David Hume, who served on the faculty from 1979 to 2014, drafted the proposal that would set the department's future in motion. He wrote:

> *"The discipline of computer science has emerged in the last 20 years as an area of fundamental importance... Application of the computer as a tool has affected every area of study from business and science to medicine, law and the arts; the computer is making possible new avenues of research in many areas. Computer competency will be assumed increasingly as a necessity in tomorrow's world."*

That vision became reality in 1986 with the formation of the Department of Computer Science. Leland Long, Ph.D., served as its first chairperson, and the department remained housed in Bruner Hall as new faculty joined the growing program and the curriculum continued to expand.

As the decade progressed, the department produced an increasing number of graduates. By the end of the 1980s, Computer Science had a roster of 313 alumni—strengthening Tennessee Tech's presence in a growing field.

COMPUTER SCIENCE IN THE 1980s

By Professor Emeritus David Hume

By 1980, computer science experienced logistical problems due to increased enrollment: from 1978 to 1983, the number of majors increased from 115 to 442. This enrollment boom peaked in 1986 and subsided throughout the later 1980s. Computer science degrees awarded rose from 11 in 1979-80 to 69 in 1985-86. CSC graduates were aggressively recruited; former CSC graduates provided the best recommendation for hiring new Tennessee Tech graduates. The career accomplishments of our graduates would fill a large book.

In 1986, Computer Science became a separate department, with Leland Long, Ph.D., as chairman. Things remained the same in Bruner Hall in terms of classroom, lab and office space. CSC faculty hired during the 1980s include Frank Hadlock, Ruth Hofstra, David Hume, Hugh Kerr, Steve Khleif, Larry Neal and Arsalan Shokooh. The curriculum added courses as new areas of computing developed: VAX assembly, operating systems, networks, database, architecture and graphics. Roger Lessman, Ph.D., used Unix and C in his systems courses, which was very beneficial to students. Software design courses (two quarters) gave students valuable experience in group projects. Oral and written communication was emphasized in addition to technical subjects. Pascal was used as the beginning "structured" programming language, replacing Fortran. Later, C became the main programming language.

In 1982, the DEC VAX 780 time-sharing computer replaced the Burroughs mainframe. This revolutionized the programming environment with keyboard input, via an editor, for creation and storage of programs and files. CRT's provided output, and files could also be stored on 5.25" and 3.5" disks. Each student had an account with password and an allocation of disk space on the VAX. Rainbow dumb terminals were located in labs, each lab with a printer, provided access to VAX facilities. Email was provided and became very popular. Over time, the Rainbows were replaced by PCs. Wordstar and then Microsoft Word transformed document preparation in all fields. This new environment provided for interaction among students and facilitated social skills among students. Frank Bush of the Computer Center established the TTU ACM student chapter in 1981; this club was very active with programs and other events. Remember the pizza and homemade chocolate chip cookies!

As the 1980s ended, we knew computing was on the verge of great developments via sophisticated GUI interfaces, hypertext documents and internet connectivity. The curriculum continued to emphasize timeless fundamentals: logic, math, languages, programming techniques, architecture and software design.

Photo provided courtesy of David Hume

Leland Long, Ph.D., served as the first chairperson of Tennessee Tech's Department of Computer Science.

1981

ACM student chapter forms at Tennessee Tech.

1982

DEC VAX 780 replaces Burroughs mainframe in Clement Hall.

1986

★ Department of Computer Science is established.

DAVID MILLS ['88]

NTA, Inc.
Senior Software Engineer

David Mills was a computer science major at Tennessee Tech in 1986—the same year Computer Science became a standalone department. Four decades later, his career reflects the strong foundation built in those early years. He has spent almost 38 years in the defense and aerospace industry and currently works at NTA, Inc., developing and maintaining rocket flight software for the U.S. Army's Guided Multiple Launch Rocket System. His career spans four Huntsville-based companies, including NTA, Inc., Teledyne Brown Engineering, DRS Technologies, and SAIC.

The 1980s: Foundations in a formative decade

WHEN DAVID MILLS ARRIVED AT TENNESSEE TECH IN THE FALL OF 1982, the Department of Computer Science didn't officially exist – and neither did his plan to major in the discipline.

Mills began his college career in electrical engineering, completing Tech's first-year basic engineering program and a couple of CO-OP assignments. After returning to campus in January 1986, he made a pivotal decision: he changed his major to computer science—the same year the department was formally established.

"I'm not sure how much the computer science program evolved, but I know I evolved quite a bit!" Mills recalled.

Before 1986, computer science and mathematics were intertwined, sharing faculty and space in Bruner Hall. From Mills' perspective, the transition into a separate department felt gradual.

Student life looked different in the 1980s, with few organized activities specifically for computer science majors. Even so, strong connections formed in the computer labs.

"I remember spending quite a bit of time with fellow CS students in computer labs doing team projects, homework and all-night study sessions," Mills said.

One standout experience was a software design course in which his team designed an airline ticket system, an exercise he now sees as valuable preparation for real-world work.

Some of his first courses introduced programming concepts using the Pascal programming language before progressing to UNIX and C in the more advanced courses. He also recalls taking some interesting courses such as Ada 83, Fortran 77, COBOL and Microcomputer Architecture. Some classes felt purely academic at the time but proved useful years later. Mills has used C throughout his 38-year career, and Ada 83, once assumed forgettable, continues to shape his work.

Mills said personal computers "were in their infancy" during his time at Tech.

"Most students didn't have them, and the computer science department wasn't networked for them anyway," he said. "I'm sure that sounds primitive. This was all before the Internet was a thing – no Google, no email, no AI."

Mills likes reflecting on how dramatically computing has changed.

"When I first took a class in Fortran 4 in 1982, we used the punch card system to write programs," he recalled.

Each line of code was typed onto a punch card, and an entire program consisted of a carefully ordered stack.

"To run your program, you had to take it over to the computer center in Clement Hall," Mills said. "You had to be careful not to drop your stack of cards!"

Even as the department was just getting started, Mills said the computer science foundation he received at Tennessee Tech prepared him for every job that followed.

'90s Time Capsule

- Networked desktop computers
- Pascal, C and Java in programming courses
- Computer labs across campus
- CD-ROM drives and removable storage
- Windows and Unix/Linux
- Websites for online presence
- Early web browsers such as Netscape Navigator
- Department web servers and course websites
- Search engines like Google and Yahoo
- Multimedia websites with text, images, video, audio and animations
- Early online shopping with websites such as Amazon and eBay.
- More convenient email attachments
- Client-server model
- Dial-up and cable modems

Leadership

Department Chairpersons:

- Frank Hadlock (1987-1995)
- Leland Long (1995-1997)
- Panagiotis Linos (1997-2000)

Faculty:

- Jonathan Blake
- Rama Chakrapani
- Mary Eberlein
- Ruth Hofstra
- David Hume
- Hugh Kerr
- Steve Khleif
- Martha Kosa
- Roger Lessman
- Rama Ramaraj
- Srini Ramaswamy
- Don Ramsey
- Arsalan Shokooh

Destination: 1990s

Logging into a new world

BY THE 1990s, COMPUTING WAS BECOMING CONNECTED, no longer confined to isolated machines.

This was the decade when "information superhighway," "www." and "surfing the web" entered everyday language, and the World Wide Web transformed how information was created, shared and accessed. Email began replacing handwritten notes and phone calls. Websites emerged as digital front doors. The idea of a global network was shifting from theory to reality.

At Tennessee Tech, the 1990s brought rapid technological growth and expanded access. Computer labs multiplied, technology became more widely available, and students gained resources beyond hardcopy books on library shelves. Online databases and early web pages reshaped how students like **David Sisterman** ['92] (page 16) learned, researched and collaborated and how professors like **Martha Kosa, Ph.D.**, (page 17) taught courses. Programming, networking and systems knowledge took on new urgency as the discipline adapted to a connected world.

By the end of the decade, the rhythm of computing had changed. It was no longer just about writing programs to run on a single machine. The screen before a student had become a window into a networked future — setting the stage for the digital world that followed.

1990

Frank Hadlock, Ph.D., is first advisor to ACM ICPC programming teams.

1994

Eric Brown ['93,'06] is hired as the first full-time systems administrator.

1995

Department of Computer Science joins the World Wide Web with first web server.

1997

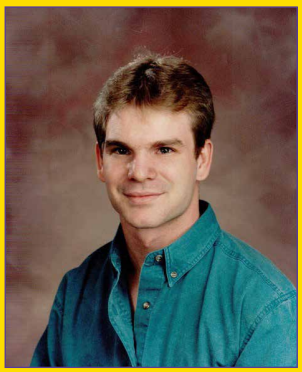
First Java course is offered as a special topics class.

1998

Tech launches B.S. in Computer Engineering, requiring 25 credit hours of CS coursework, significantly impacting the Computer Science program.

OK

DAVID SISTERMAN ['92]



Bayer (retired)
North America Data Steward Lead

David Sisterman dedicated most of his career to technology leadership in St. Louis, Mo., joining Monsanto, now part of Bayer. In his 25 years with the company, he built and led an operations team focused on streamlining application deployments and monitoring batch systems for data flows. He later co-managed a team of approximately 100 developers before moving into the infrastructure department, where he oversaw web and database servers, email systems and other data transfer platforms. He designed and delivered seminars on creative problem-solving and integrating emerging mobile technologies into business strategy. Prior to his retirement in 2026, he served as a lead data steward.

The 1990s: Dial-up, determination and a fast-moving field

THE 1990s DIDN'T WAIT FOR ANYONE – and neither did David Sisterman.

When he graduated in December 1992, computer science was already entering a new era.

"By the late 1980s, the computer science labs at Tennessee Tech were no longer using punch cards – thank goodness!" he recalled.

Sisterman worked in Tech's computer lab, sorting printouts from massive line printers and helping fellow students navigate the VAX (Virtual Address eXtension) systems running the VMS (Virtual Memory System) operating system – back when computing meant shared mainframes, just before personal computers became widespread. His first programming courses were in Fortran and Pascal, languages that reflected a discipline transitioning from its earliest foundations into modern computing.

But the technology wasn't the only thing evolving. Tech's Department of Computer Science, established in 1986, was still working toward accreditation. When Sisterman switched from electrical engineering to computer science in his third year, the four-year schedule threatened to delay his graduation. So, he convinced the dean and faculty to allow him to complete the curriculum in two years—a decision that led to one of his proudest Tech memories.

"I studied Unix over Christmas break, staying in the lab instead of going home," he said. "On the first day of the next term, I had to pass the Unix final to be allowed into its successor class. If I failed, I'd have to wait a year for the class to be offered again."

He and a classmate passed, earning seats in the next-level course the following day.

"I remember the professor thinking it was impossible and afterward treating us both pretty well," he said. "I'm very proud of that accomplishment. I believe presenting my case to the dean and demonstrating how the standard schedule didn't really support transfer students helped the department adapt and grow."

The 1990s brought rapid technological change. Sisterman's first "college computer" was an IBM 8088 desktop with a monochrome monitor. He saw computing evolve through EGA and VGA graphics, 286 to 486 processors and increasingly powerful motherboards, culminating in Intel's Pentium processor in 1993, which provided a more stable, longer-lasting architecture.

Outside the classroom, Sisterman and his classmates connected to Bulletin Board Systems (BBS) using dial-up modems for games and chats with people around the world – often tying up the phone line in the process.

After graduation, he began his career at a small defense company in Huntsville, Ala., just as the commercial internet was emerging. Configuring companies for internet access meant working in uncharted territory: "No one knew all the answers back then. Everything was too new."

Looking back, Sisterman said changing his major to computer science was one of the best decisions of his life.

His advice to today's students reflects lessons learned in a decade of constant change: "Don't think you have to be good at only one area of IT. Try to work across many domains: networking, server management, development, middleware, database management, mobility and more. They broaden how you think about related technologies and make you a stronger asset in every new role you take on."

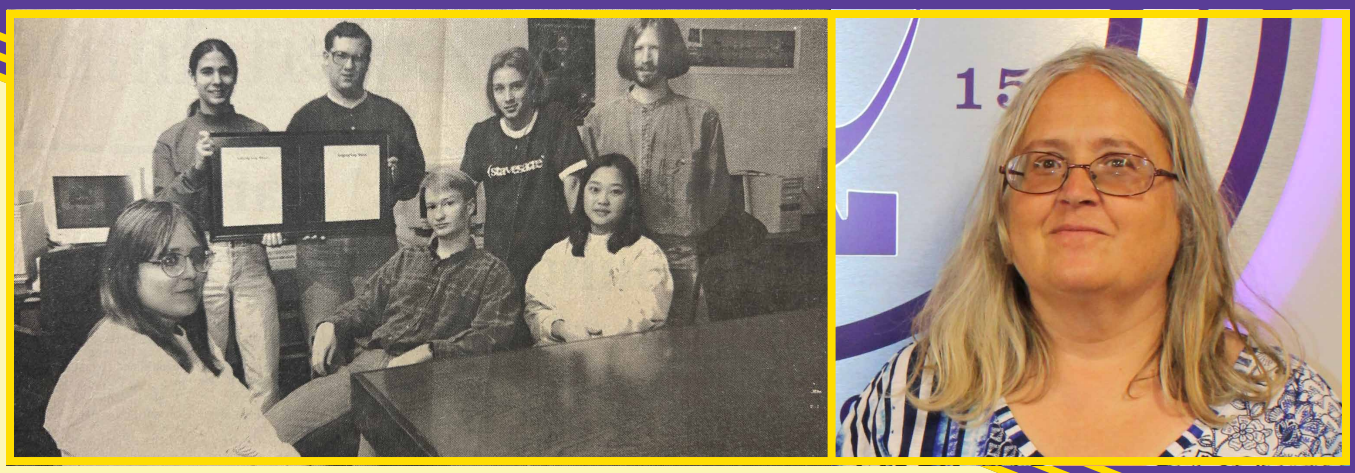


Photo published in The Oracle, Feb. 7, 1997.

THEN & NOW: Martha Kosa, Ph.D., poses with award-winning computer science programming teams she coached in a 1996 competition, and now, after retiring in 2021.

PROFESSOR KOSA COMES ONLINE

ENTER PROFESSOR MARTHA KOSA.

One of Tennessee Tech's most influential professors of computer science "logged in" to the department in 1993, as the university strived to hire faculty with Ph.D. degrees in computer science. Previously, faculty members had advanced degrees in mathematics. Kosa, who retired in 2021, was one of the first three tenure-track faculty members, along with Panos Linos and Jonathan Blake, hired with that credential.

"Class sizes were small in the 1990s," Kosa recalled. "It was rare for a class to have more than 30 students, and only one section was available for most courses in a semester. In my first semester, I taught a senior-level course with only five students. The students were the reason why I stayed in academia for as long as I did."

Even so, the decade saw significant academic development. Computer Science began teaching its own discrete mathematics course and expanded its theory curriculum with courses such as Design of Algorithms and Foundations of Computer Science—changes that helped Tech students consistently score above the national average on the theory portion of the Major Field Achievement Test.

As for student life, the department supported two student organizations: Association for Computing Machinery (ACM) student chapter and Tennessee Tech Microcomputer Association (TTMA), a student-driven group with its own workspace on the top floor of Bruner Hall, where members experimented with computer systems and networking. Alumni also returned to share experiences. One memorable ACM event featured Stephen Shaw ['91] speaking about his work in the California video game industry.

Programming competitions were another point of pride. In 1990, a team from Tennessee Tech that included Shaw placed first in the Southeast Regional for the ACM International Collegiate Programming Contest and went on to the national finals. "Often, at least one team placed in the top four locally and in the top 20-30 percent in the region, and several times, a team placed in the top 10 teams in the region," said Kosa, who advised the teams from 1993 to 2020. In 1997, the university began hosting a local site for the Mid-Central Regional contest—a tradition that has continued almost every year since.

The 1990s also brought rapid technological change. As personal computers became more common, the department updated its curriculum and infrastructure. C replaced Pascal in the introductory programming sequence, Intel replaced VAX as the target architecture for the assembly language course, and the department established an advanced core of upper-level courses.

In 1994, Eric Brown ['93, '06] returned to his alma mater as the department's first full-time systems administrator, replacing VAX terminals with PCs and supervising the creation of a networked computer lab.

The department joined the World Wide Web with its first web server in 1995.

"Graphical web browsers like Netscape and Internet Explorer were new," Kosa recalled. She and three other computer science faculty members were among the first to put course materials online.

The department introduced its first Java course in 1997 as a special topics class, in which students experimented with building early web tools.

"By the end of the 1990s, it was clear that the combination of PCs, networking and the World Wide Web was fundamentally changing our everyday lives," Kosa said. "With search engines and email, the famous adage 'It's a small world after all' became reality."

'00s Time Capsule

- Laptops common among students
- Mature and diverse software development tools
- Networking and internet access across labs and dorms
- Software Automation and Intelligence Laboratory (SAIL) at Tennessee Tech
- C, Java, C++, Python
- Smartphones and Texting
- Multipurpose mobile devices such as iPods
- Early streaming services such as Netflix and Amazon Prime
- Increased broadband internet access
- Web-based email such as gmail
- Open-source software
- Version-control software
- Early learning management systems such as Moodle
- Social media such as Myspace, Facebook, Youtube and Skype

Leadership

Department Chairpersons:

- Panos Linos (1997-2000)
- Srini Ramaswamy (2000-2005)
- Doug Talbert ['91] (2005-2015)

Faculty:

- Joseph Barjis
- Mark Boshart
- Rama Chakrapani
- Bill Eberle
- Jeremy Ey ['05, '07]
- Sheikh Ghafoor
- David Hume
- Martha Kosa
- Don Ramsey
- Mike Rogers
- Ambareen Siraj
- Luis Velazco

Destination: 2000s

Learning to think algorithmically

COMPUTER SCIENCE DIDN'T CLICK FOR BEN ECKART AT FIRST — UNTIL SUDDENLY, IT DID. Then he couldn't get enough. The turning point came in a data structures course (taught by Mark Boshart, Ph.D.) that reshaped how he approached problems and set him on a path from struggling programmer to AI researcher. "What I learned in that class changed my life," he said.

A comment from his algorithms professor, Martha Kosa, stuck with him: "She said it might be more accurate to rename the computer science major to something like 'structured problem solving,'" Eckart recalled. "I think that's exactly right. Studying data structures and algorithms completely transformed how I think."

Between 2008 and 2010, Eckart earned three degrees and received Tech's prestigious Derryberry Award in 2008. His experience reflected computing in the 2000s: object-oriented programming dominated coursework, with Java, C and C++ forming the foundation while Python quickly became his preferred language. Even so, he wrote most of his code in a simple text editor. "For some reason I only coded in raw Notepad for the entirety of my CS degree," he said. "Yikes."

Now a senior research scientist at NVIDIA, Eckart credits Tennessee Tech with giving him the education to thrive in a rapidly evolving field.

"Being able to really think 'algorithmically' is such a foundational skill," he said. "Once you learn to problem solve in the abstract, you can adapt to anything new."

ALUMNUS PERSPECTIVE

BEN ECKART ['08,'09,'10]

NVIDIA

Senior Research Scientist

Ben Eckart earned three degrees from Tennessee Tech: B.S. in computer science and computer engineering and M.S. in electrical engineering. He also holds an M.S. and Ph.D. in robotics at Carnegie Mellon University, where his research on GPU-accelerated AI for 3D perception earned him an NVIDIA Graduate Fellowship in 2014. Now a senior research scientist, Eckart works on 3D world models, perception, inverse rendering and generative AI. He remains connected to Tech on the Machine Intelligence and Data Science (MInDS) Center advisory board.

THE EARLY 2000s MARKED A PERIOD OF MODERNIZATION for computer science at Tennessee Tech. Computing was no longer experimental—it was essential. As the field matured, so did the department. Then part of the College of Arts and Sciences, it expanded its graduate offerings and, in 2004, celebrated its first Master of Science graduate in computer science, an important step forward in advancing research and graduate education.

FIRST MASTER OF COMPUTER SCIENCE GRAD

APRIL CROCKETT ['01,'04]

Tennessee Tech University
Senior Lecturer

April Crockett is a central figure in Tennessee Tech's Department of Computer Science introductory curriculum. She has taught core courses dozens of times, leads the department's teaching assistant hiring and training efforts and is a co–principal investigator on a National Science Foundation–funded project focused on modernizing introductory computing education. She is also pursuing her Ph.D. in computer science.

April Crockett on her graduation day in 2004, when she became the first to receive an M.S. in computer science at Tech, and now.

The 2000s: A first that lasted

APRIL CROCKETT MADE TENNESSEE TECH HISTORY IN 2004, earning not only her second degree from the university but the first master of science in computer science.

The milestone secured a special place for Crockett in the story of the computer science department. She first arrived as an undergraduate, earning her bachelor's degree in computer science in 2001 before entering the new graduate program with three other students in August 2002. Back then, computer science was housed in the College of Arts and Sciences rather than College of Engineering.

"I was almost always the only female in my CS classes," she recalled.

In her graduate studies, Crockett gravitated toward internet computing and human-computer interaction, learning from faculty members who would leave a lasting impact, including professors Roger Lessman, David Hume and Martha Kosa. She balanced graduate work with major life milestones—getting married during her first semester and welcoming her first child in 2003. A turning point came through her graduate assistantships. As a research assistant in the Software Automation and Intelligence Laboratory, directed by Srini Ramaswamy, she gained experience supporting regional industry projects. As a teaching assistant, she co-instructed a programming lab—her first teaching experience and the beginning of a career centered on student success. "If it weren't for those assistantships, my entire life path would have been different," she said.

That path led her back to Tech. Since joining the faculty full-time in 2018, Crockett has become a cornerstone of the department's introductory curriculum, teaching CSC 1300 more than two dozen times and shaping courses across the program. Her work emphasizes inclusive, experience-based learning, helping students build confidence early in their computer science journeys.

In 2021, she received the T.S. McCord Engineering Faculty Award, one of her proudest achievements. She now chairs the department's TA committee, overseeing the hiring and training of teaching assistants, and serves as co-principal investigator, along with department chair Gerald Gannod, Ph.D., on a National Science Foundation project focused on modernizing introductory computing education. Crockett is also pursuing a doctorate in computer science at Tech as she continues to help shape the program that shaped her more than 20 years ago.

2002

Martha Kosa teaches the first master's course in computer science.

2004

Tennessee Tech awards first M.S. in computer science to April Crockett.

2005

Software & Scientific Applications concentration achieves ABET accreditation.

'10s Time Capsule

- Java, C++ and Python
- Enrollment and faculty growth
- Concentrations in data science, high-performance computing and cybersecurity
- Greater emphasis on research, outreach and interdisciplinary collaboration
- Virtualized servers and cloud-based computing resources
- Internet of Things
- Mobile devices and apps
- Digital signage across campus
- Modern learning management systems like Piazza and iLearn

Leadership

Department Chairpersons:

- Doug Talbert ['91] (2005-2015)
- Kenneth Wiant (2015-2016)
- Gerald Gannod (2016-current)

Faculty:

- Mohammad Alam
- Mark Boshart
- David Brown
- Travis Brummett
- April Crockett ['01, '04]
- Bill Eberle
- David Elizandro
- Jeremy Ey ['05, '07]
- Sheikh Ghafoor
- Maanak Gupta
- Tristan Hill ['13]
- David Hume
- Muhammad Ismail
- Rachel Jennings
- Martha Kosa
- Beata Kubiak
- Akond Rahman
- Ashiq Rahman
- Stephen Scott
- Susmit Shannigrahi
- Ambareen Siraj
- Denis Ulybyshev

Destination: 2010s

Growth, leadership and a new era

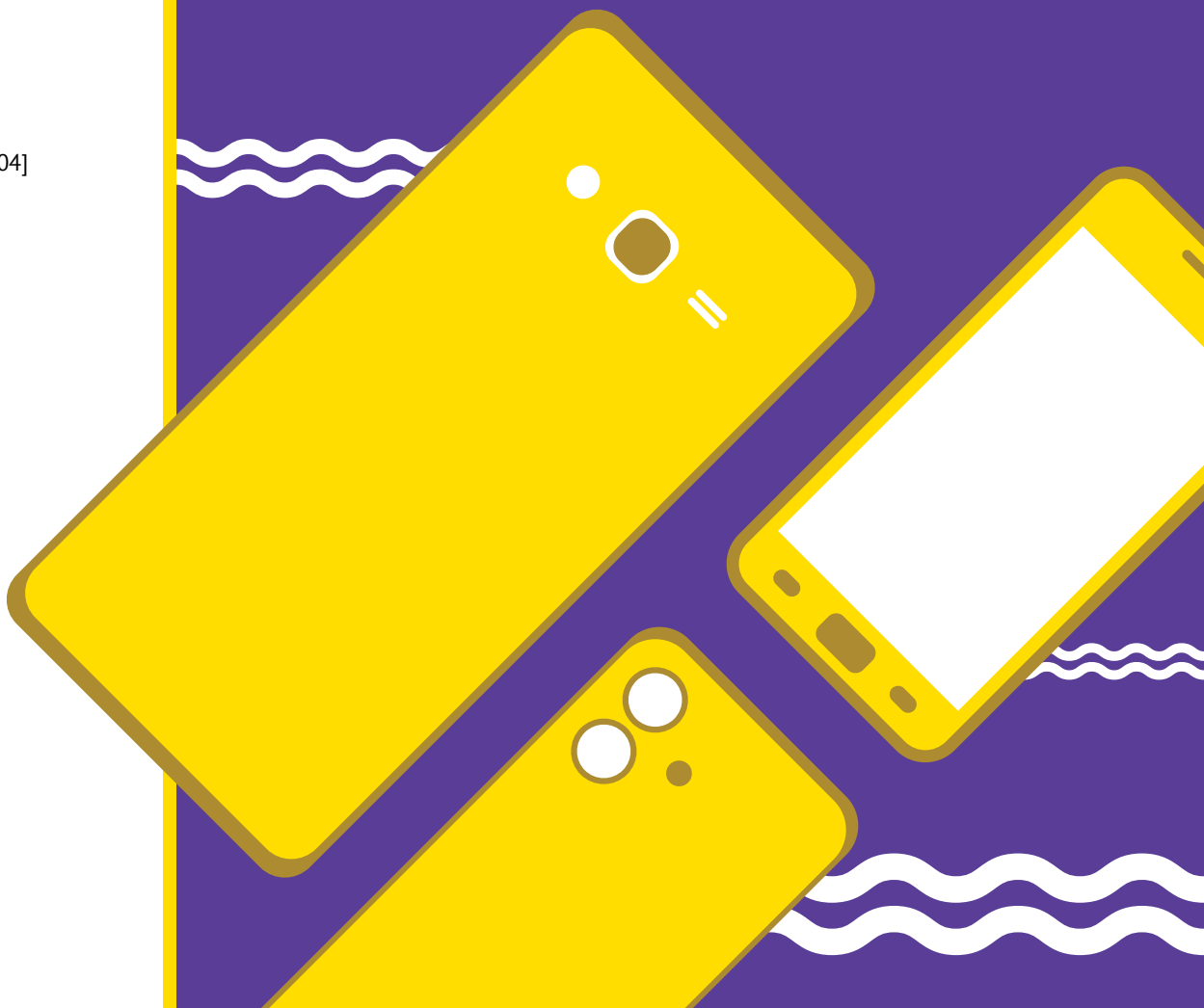
THE 2010s WERE A DECADE OF TRANSFORMATION for computer science at Tennessee Tech. As computing became central to nearly every discipline and industry, student interest surged—and the department expanded to meet it.

In 2010, computer science became housed within the College of Engineering, reflecting its increasingly applied, research-driven role. The establishment of the Cybersecurity Education, Research and Outreach Center (CEROC) in 2015 further signaled the department's expanding focus on emerging and high-impact areas.

A new chapter began in 2016, when Gerald Gannod, Ph.D., joined the faculty and assumed leadership as department chair. Under his direction, enrollment climbed steadily, academic offerings evolved, and research activity accelerated. Students engaged more deeply with cybersecurity, software systems and interdisciplinary computing, preparing for careers in a rapidly changing technological landscape.

This era saw computer science fully embedded in the modern university experience. Courses evolved to keep pace with industry needs, research activity expanded and students like **Christa Cody** [2015] (page 21) arrived with higher expectations and stronger technical foundations than ever before. Computing was no longer just a field of study; it was a driver of discovery, entrepreneurship and societal change.

By the end of the decade, Tennessee Tech's Department of Computer Science was positioned not just to respond to the future but to help shape it.



2010	2013	2015	2016
Computer Science becomes part of the College of Engineering.	WiCyS (Women in Cybersecurity) founded by Ambareen Siraj, Ph.D., through an NSF grant	Cybersecurity Education, Research and Outreach Center (CEROC) is established.	Gerald Gannod, Ph.D., becomes CS department chairperson.

ALUMNUS PERSPECTIVE

CHRISTA CODY, PH.D. ['15]

SAS Institute

Senior AI and Machine Learning Data Scientist

Christa Cody earned a B.S. in computer science from Tennessee Tech in 2015 and went on to complete an M.S. (2018) and Ph.D. (2020) in computer science at North Carolina State University. Now she's a senior AI and machine learning data scientist at SAS, where she leads teams in building interactive analytics and applied machine learning experiences that bridge research and real-world deployment in engaging, accessible ways. Cody remains connected to Tennessee Tech, supporting the MInDS (Machine Intelligence and Data Science) Center and mentoring computer science students through industry-backed capstone projects in collaboration with SAS. She works remotely in Raleigh alongside her husband, Zach Cleghern [Computer Science '14].

The 2010s: Building a foundation for a changing field

COMPUTER SCIENCE WAS EVOLVING FAST IN THE 2010s, and Christa Cody found herself right in the middle of that transformation at Tennessee Tech.

A 2015 graduate, she saw expanding possibilities for students in the concentration areas of cybersecurity, high-performance computing and data science. At the same time, the core major placed a strong emphasis on the theory of computer science, giving her a solid foundation for graduate school and research at North Carolina State University.

"It helped me stand out among students with more software engineering-focused backgrounds, particularly because my work often required efficiently managing computing resources while developing machine learning models and having a deep understanding of how those models function at a fundamental level," she said.

Cody remembers the department as small and close-knit, with far fewer majors than today's nearly 800 students.

"Most of my classes had the same group of people, and everyone pretty much knew each other," she said.

Cybersecurity research was also beginning to gain momentum in the department. Around the time she graduated, the university launched the Cybersecurity Education, Research and Outreach Center (CEROC), creating new opportunities for students interested in the field.

"It was exciting to watch cybersecurity really start to take off," she said.

Cody values her time working on cybersecurity research with faculty mentor and CEROC's founder and first director, Ambareen Siraj, Ph.D. "Even though I didn't directly benefit from (CEROC), I like to think that participating in the early research and clubs helped, in a small way, contribute to what it has become."

She also fondly remembers then-department chair Doug Talbert, Ph.D. ['91], who taught the experimental research course where she met her husband, Zach.

"Dr. Talbert was such a constant presence in Bruner Hall—you'd always see him bustling around," she said. "It was always clear how much he cared about the students. Even now, as I'm part of the advisory group for the CS and data science programs, I can see that same dedication. He was always focused on making sure the program evolved with the field and that student voices were part of shaping where it went next."

Cody also credits other faculty who guided her along the way—support that was vital for a first-generation college student.

"It meant a great deal to be in a department where faculty genuinely cared about their students as individuals," she said. "Dr. Siraj was an exceptional advisor who first introduced me to research, and professors such as Dr. (Martha) Kosa, Dr. Talbert and Dr. (Bill) Eberle were consistently supportive and deeply invested in their students' learning and success. I truly can't thank them enough."

'20s Time Capsule

- C++, Java and Python
- Cloud computing and virtualized environments
- Generative AI tools such as ChatGPT and Copilot
- Remote learning and collaboration through platforms like Zoom and Microsoft Teams
- Machine learning frameworks and data science platforms
- Cybersecurity tools and large-scale computing systems
- Interdisciplinary work spanning AI, data science and emerging fields
- Exploration of next-generation technologies, including quantum computing

Leadership

Department Chairpersons:

- Gerald Gannod (2016-present)

Faculty:

- Mohammad Alam
- Mark Boshart
- David Elizandro
- Cyril Focht ['17]
- Rachel Jennings
- Martha Kosa
- Rajesh Manicavasagam ['23]
- Akond Rahman
- Stephen Scott
- Ambareen Siraj
- Denis Ulybyshev

★ **Current faculty: Page 25**

Destination: 2020s

Resilience, scale and the age of intelligence

THE 2020s OPENED WITH UNEXPECTED CHALLENGES. A global pandemic reshaped how people learned, worked and connected, accelerating the adoption of remote computing, online collaboration and digital platforms like Zoom and Microsoft Teams. These changes revealed that computing was no longer supporting the world—it was sustaining it.

At Tennessee Tech, the decade has been defined by resilience and growth. Facilities are being modernized, programs are expanding and enrollment has reached historic levels. In 2023, Tech housed the largest undergraduate computer science program in Tennessee and in 2024, computer science was the most-enrolled major on campus.

New computer science faculty-led centers like MInDS (Machine Intelligence and Data Science) and ASCEND (Advanced Scalable Computing, Extreme Networks and Data) and new degree programs such as Ph.D. in computer science and B.S. in artificial intelligence – the first of its kind in Tennessee – reflect the field's rapid evolution. As generative AI tools like ChatGPT and Copilot enter everyday use, students are not only learning to use them, but to shape and advance them.

The 2020s are still unfolding, but computer science at Tennessee Tech is already operating at a new scale, preparing graduates like **Jesse Holland** ['22] and **Alexandria Dior Burchfiel** ['25] (page 23) for an intelligent, connected future.

ALUMNUS PERSPECTIVE

JESSE HOLLAND ['22]

Tennessee Valley Authority
Cybersecurity Analyst

Jesse Holland is a cybersecurity analyst II at Tennessee Valley Authority, where he has built his career over the past five years. He joined TVA as an intern while studying at Tennessee Tech and transitioned into a full-time role shortly after graduation. Today, he works on the incident response and operations team, partnering with groups across the organization to help secure cloud posture. More recently, he has worked to improve security posture for operations technology. Holland is particularly proud of being part of the team that won the Department of Energy's Boss of the SOC competition, hosted by Splunk, for the past two years.

Building in the cloud, securing what's next

BY THE TIME JESSE HOLLAND GRADUATED IN 2022, computing had moved beyond the lab and into the cloud.

"While I was a student, I'd say the largest emerging technology was the shift to cloud computing," the Tennessee Tech alumnus said. "Companies across the country were beginning to explore their options."

That change has continued as Holland has started his computer science career at Tennessee Valley Authority.

"These days, we are seeing more and more companies move at least part of their infrastructure to the cloud," he said. "It's important to be aware of how this technology works because it doesn't appear to be a trend that is going away soon."

Holland's time at Tennessee Tech overlapped briefly with the COVID-19 pandemic, though its impact on his experience was relatively limited. When he began his master's program in 2021, he took one semester of remote classes before returning to in-person instruction.

"I was unable to truly meet my peers and make friends, but that was quickly resolved the following semester," he said. "That being said, my education was what I cared about more than anything as I was surrounded by family during that time, and I feel my education was not largely impacted by remote learning."

Beyond the classroom, some of his most memorable experiences came through competitions. In 2021 and 2022, he and his teammates competed in the Collegiate Penetration Testing Competition, spending long hours sharpening their cybersecurity skills.

"I remember being 'locked' in Eric Brown's basement for the competition," he joked, referring to the remote setup used by Tech's team. Competitors worked from the home of Eric Brown, senior lecturer, transforming the space into a temporary cybersecurity operations center. "I learned a lot that day and had a ton of fun."

The team's dedication paid off as they went on to place third at the global level—an achievement Holland considers one of his proudest moments.

Looking ahead, he sees cybersecurity and artificial intelligence becoming increasingly intertwined.

"I personally am excited to see how the security tools we use are going to continue to evolve over the next decade," he said.

"AI is likely to continue to change the information technology field and have a large impact on cybersecurity. We are already seeing adversaries leverage AI to both develop new exploits and to help find potential targets for those exploits. I suspect we will start to see more AI built into defensive tools as a result – machine learning is already heavily used in behavioral analysis – and we may one day see a future where AI models are commonplace for both offensive and defensive cybersecurity."

2021

Renovation of Bruner Hall is completed.

2023

Tennessee Tech houses largest undergraduate computer science program in Tennessee.

2024

Computer science is Tech's most-enrolled major.

2024

Ashraf Islam Engineering Building is completed, housing CEROC and new computer science classrooms and labs.

2024

Machine Intelligence and Data Science (MInDS) Center is approved.

2025

ASCEND Center is approved, advancing high-performance computing and networking.

2025

Computer science ranks within Tennessee among the top three programs overall and the top two among public universities. *(U.S. News & World Report)*

2025

Standalone Ph.D. in Computer Science launches.

2026

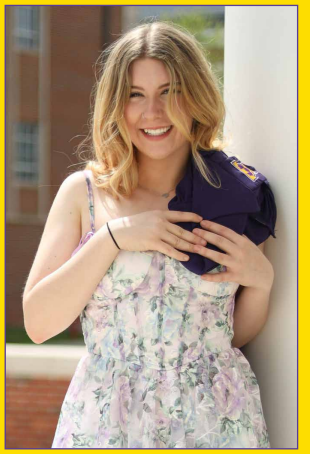
B.S. in Interdisciplinary Computing is introduced.

2026

B.S. in Artificial Intelligence launches, the first of its kind in Tennessee.

ALUMNUS PERSPECTIVE

DIOR BURCHFIEL ['25]



DIOR BURCHFIEL LAUNCHED HER COMPUTER SCIENCE CAREER at an age when most students are just starting college – joining Amazon at 18 after graduating from Tennessee Tech in 2025.

As a software development engineer in Arlington, Va., she contributes to large-scale data systems within Amazon Ads. Her team builds platforms that process massive volumes of data—more than five petabytes a day—to deliver insights and performance recommendations to advertisers.

Although her academic focus was cybersecurity, the transition into advertising infrastructure was smooth.

"That experience reinforced something I learned at Tech," she said. "If you understand systems and fundamentals, you can adapt to any domain."

Burchfiel's time at Tech coincided with a major shift in the field: the rise of AI-assisted development. While these tools transformed how students learned, debugged and prototyped, they also raised expectations.

"It wasn't enough to generate code," she said. "You had to understand systems deeply enough to evaluate and refine it."

That foundation was central to Burchfiel's education. Through coursework in operating systems, networking, automata theory and systems programming, she built the kind of knowledge that remains relevant even as technologies evolve.

"When technologies change quickly, those core principles are what allow you to pivot confidently," she said.

Looking ahead, Burchfiel sees AI becoming even more deeply embedded in the daily work of engineers—not just as a tool, but as part of the development process itself.

"The engineers who thrive will be the ones who can think critically, understand system-level trade-offs and build responsibly alongside AI," she said.

For Burchfiel, being a computer science student in the mid-2020s meant experiencing a pivotal moment in real time.

"Watching how quickly these tools evolved—and learning how to use them responsibly—felt historic," she said. "I'm grateful I got to grow alongside that shift."

Amazon
Software Development Engineer

Dior Burchfiel is a software development engineer at Amazon, where she helps power the large-scale data systems within Amazon Ads. As part of the Bidding Analytics and Metrics (BAM-IMPACT) team, she builds systems that process data to provide advertisers with actionable insights and performance recommendations. It's a fast-paced, data-heavy environment focused on large-scale analytics and distributed systems.

Faculty Research

Jesse Roberts, Ph.D.

CHEROKEE VOICES PRESERVED WITH AI

COMPUTER SCIENCE FACULTY RESEARCH IN THE 2020s is redefining what impact looks like—even linguistically.

At the forefront is the work of Jesse Roberts, Ph.D., whose research in natural language processing is helping safeguard the Cherokee language.

Inspired by AI-driven Gaelic preservation efforts abroad, Roberts and collaborators are applying computational linguistics to one of the most endangered Indigenous languages in the United States.

Cherokee's polysynthetic structure—in which long, complex words express entire English sentences—poses unique challenges for AI. With fewer than 140 first-language speakers remaining, digital resources are scarce, making traditional machine-learning approaches difficult.

Roberts' team is tackling this head-on by developing models that don't just record Cherokee but interact with it, laying the groundwork for future learning tools, museum installations and immersive educational experiences.

Collaboration is central to the project. Roberts works closely with linguist Ben Frey of UNC Asheville and Cherokee community leaders like James "Bo" Taylor to ensure cultural depth informs every technological step.

As languages vanish worldwide at an alarming pace, Roberts sees AI as a powerful ally in revitalization.

NEW RECRUITS Q&A

CAL STEWART, M.S. – INSTRUCTOR

After graduating with her master's degree in computer science in fall 2024, Cal Stewart put on a different hat for the spring 2025 semester – that of instructor. In her new role in the Department of Computer Science, she teaches Computer Organization and Assembly Language Programming and Object-Oriented Programming and Design.

Q. What drew you to Tennessee Tech?

A. "The student-faculty connections here are incredible. Getting to know all the faculty members as a student gave me plenty of opportunities to build relationships with my teachers and see the positive impact that makes on your education. There's a friendly and familiar environment here that makes it a very enticing place to work. I'm really looking forward to building those connections with my own students now."

Q. Advice to CS students?

A. "You can go your entire education feeling like computers still run on magic. Don't let the fear of not knowing enough stop you from learning anyway."

REGIS BILLINGS, M.S. – INSTRUCTOR

Regis Billings brings a wealth of expertise in cybersecurity, digital forensics, secure communications and national security to the Department of Computer Science. After earning his bachelor's degree in computer engineering from Tennessee Tech in 2006 and a master's degree in cybersecurity from the University of Maryland Global Campus in 2012, he returned to Tech as an instructor in fall 2025. He teaches IT Security, Intro to Cybersecurity, DevOps with Unix and Cyber Operations.

Q. What drew you to Tennessee Tech?

A. "The culture plus quality of students and professors. I felt like I was able to use my degree immediately upon entering the workforce, and I've always thought positively of Tennessee Tech. When I had the opportunity later in my professional career to work with faculty and students, I was amazed at how much Tennessee Tech had continued to evolve and placed an emphasis on professionalism and technological skills. I see the next generation of technological professionals coming from this university, and it's something I want to be a part of building!"

Q. Advice to CS students?

A. "Don't be afraid to accept a challenge and to say 'yes.' You'll often find you're more capable than you realize, and it opens up surprising opportunities."

FACULTY

- Amani Altarawneh, Ph.D.
- Regis Billings ['06]
- Eric Brown ['93, '06]
- Travis Brummett
- Ben Burchfield ['06, '07]
- April Crockett ['01, '04]
- William Eberle, Ph.D.
- Gerald Gannod, Ph.D., Chair
- Sheikh Ghafoor, Ph.D.
- Prantar Ghosh, Ph.D.
- Maanak Gupta, Ph.D.
- Amr Hilal, Ph.D.
- Muhammad Ismail, Ph.D.
- Beata Kubiak
- Zulkar Nine, Ph.D.
- Mir Pritom, Ph.D.
- Stacy Prowell, Ph.D.
- Cristina Radian
- Jesse Roberts, Ph.D. ['14, '17]
- Mike Rogers, Ph.D.
- Susmit Shannigrahi, Ph.D.
- Tony Skjellum, Ph.D.
- Jacob Strickler ['21, '23]
- Cal Stewart ['23, '24]
- Doug Talbert, Ph.D. ['91]
- Brandon Vandergriff ['21, '23]

ADJUNCTS

- Corbin Cawood
- Barbara Gannod, Ph.D.
- Toufiqul Islam ['16]
- Dennis Jump
- Travis Lee ['19, '23]
- Michele Niec ['22, '24]
- Riley Shipley

ADVISORS

- Mary Daniels
- Robin Eberle
- Danyelle Hawkins ['99]
- Jennifer Murphy ['00, '05, '09]

STAFF

- **Amy Davis ['00, '23]**
  Communications & Marketing Specialist
- **Emily Disbrow ['20, '24]**
  Administrative Services Coordinator
- **Rebecca Hahnert ['23]**
  Graphic Designer
- **Sonya Haney** – Budget Planning & Management Coordinator

INDUSTRY PERSPECTIVES

For more than 40 years, Tennessee Tech's computer science graduates have adapted alongside a rapidly changing industry. To look ahead, we asked members of our **Computer Science External Advisory Board**—leaders across technology, business and innovation—what will matter most for the next generation of computer scientists, and what they hope to see from the department in the decade ahead.

What will matter most for computer science graduates entering the field over the next decade and beyond?

STRONG FOUNDATIONS THAT ENDURE

Foundational computer science knowledge—systems, security, data and problem-solving—remains essential, even as technologies evolve.

- "A grounded foundation in computer science – across security, AI, systems design and data management – is essential." — Jill Brodie
- "Foundational and technical skills include problem-solving and programming proficiency." — Chris Smith

ADAPTABILITY, CURIOSITY AND LIFELONG LEARNING

The ability to evolve alongside emerging technologies is just as important as mastering today's tools.

- "Being curious and a lifelong learner are critical to adapting and succeeding in the future." — Edward Smith

HUMAN SKILLS IN A TECHNICAL WORLD

Communication, collaboration and interdisciplinary thinking are critical as technology integrates into every field.

- "Soft skills like collaboration, communication and critical thinking will be critical as technology integrates with business objectives. — Jill Moffitt

ETHICAL THINKING AND SYSTEMS AWARENESS

Future leaders must think beyond code to consequences, context and impact.

- "Students must learn to think in systems to understand… the upstream and downstream effects of the technology they create." — John Mason
- "As technology evolves, those who can reason clearly about what should be built, not just what can be built, will shape the future most responsibly." — Mark Rigney

EXPERIENCE THAT TRANSLATES TO IMPACT

Hands-on projects, internships and applied learning help students demonstrate readiness.

- "Students that build a strong project portfolio…demonstrate these skills to employers." — Chris Smith

VISION FOR THE 2030s

Agility and urgency in AI and machine learning education, national recognition, strengthened leadership in AI and cybersecurity

- "Most businesses are utilizing machine learning and AI to reduce costs and improve responsiveness, accuracy and innovative solutions…This is happening now—and waiting to plan or create is in the rearview mirror." — Frank Dixon
- "Tech's computer science department has accomplished so much in the last few years… I'd love to see the department increase its national recognition." — Andrea Brackett
- "I hope to see a strong and successful AI department and cutting-edge education in cybersecurity." — Angela Smith-Mull

ANDREA BRACKETT ['93]
Tennessee Valley Authority
Retired: Vice President, Cybersecurity & Chief Information Security Officer

JILL BRODIE
Netflix
Strategic Partnership Engagements & Product Innovation Lead

FRANK DIXON ['84]
Frank's Smart Home Automation
Owner, Home Networking & IT Consultant

JOHN MASON ['88,'96]
Tempo Technology Services
President

JILL MOFFITT
SAIC
Cloud Computing Engineer Director

MARK RIGNEY ['86]
Independent Executive and Business Advisor

ANGELA SMITH-MULL ['95]
ArchWell Health
Information Technology Security Systems and Cyber Risk Analyst

CHRIS SMITH ['81]
Cognizant Workday Practice
Install Base Sales Senior Director

EDWARD SMITH ['93]
eviCore Healthcare
Senior IT Talent Development Manager

CODING FOR A CAUSE

DURING THEIR FINAL SEMESTER at Tennessee Tech, computer science students Thomas Robertson ['25], Gavin Walker ['25] and Aidan Gillespie ['25] volunteered their skills to create a website for the Bridge of Aspirations Foundation – no class credit, just community impact.

"They built a site that explains our mission and values," said founder Noah Doerflinger. "I'm thankful for their dedication."

Doerflinger launched the foundation in February 2025 to honor his mother, Christi, who was paralyzed in a 2001 accident and passed away in 2023. The nonprofit advances healthcare equity through mobile outreach, rehabilitation for neurological and spinal trauma, and scholarships for nursing students.

Robertson said this "passion project" gave the team real-world experience in client communication, cloud deployment and full-stack development. He managed the project and back-end work, Walker led front-end design, and Gillespie handled server infrastructure and deployment.

The foundation plans to build the Christi Doerflinger Memorial Hospital, one of the nation's few independent spinal rehabilitation facilities. "Her legacy will live on in the love, kindness and resilience she taught us," Doerflinger said.

Thomas Robertson, Gavin Walker and Aidan Gillespie, from left, review the new Bridge of Aspirations Foundation medical outreach website they volunteered to build for the nonprofit.

> **WE BRING MOBILE CARE TO UNDERSERVED COMMUNITIES AND PROVIDE WORLD-CLASS INPATIENT RECOVERY – RESTORING LIVES WITH COMPASSION, DIGNITY AND PURPOSE.** www.bridgeofaspirations.org

U.S. PATENT FOR CYBER INNOVATION

WHAT BEGAN AS A MASTER'S THESIS for Tennessee Tech Ph.D. student Bradley Northern has grown into a U.S. patent. Northern, along with fellow Ph.D. students Trey Burks and Marlana Hatcher and faculty advisors Michael Rogers, Ph.D., and Denis Ulybyshev, Ph.D., (formerly of Tech) earned patent approval in September 2025 for a cybersecurity technology focused on vulnerability and risk management.

"Our invention modifies a user's system based on publicly known vulnerabilities," Northern explained. The system gathers global software and hardware data, calculates risk scores using CVE and CVSS standards, and returns a single score to the user. Burks added, "We can then automatically enhance system security based on those results."

The project began in 2020 under Ulybyshev's guidance and grew from Northern's thesis and published research. Burks contributed to the component that strengthens insecure software, while the team discovered that downgrading software can sometimes improve security.

Supported by Tennessee Tech's Department of Computer Science and CEROC, the patent highlights the university's commitment to turning classroom research into real-world innovation.

Ph.D. students Trey Burks, center, and Bradley Northern, right, and faculty advisor Mike Rogers, Ph.D., show their cybersecurity innovation that was recognized by the U.S. Patent and Trademark Office.

EXPERIENTIAL LEARNING

PARTNERSHIP SPARKS INNOVATION THROUGH AI HACKATHON

Tennessee Tech students work together to develop innovative AI solutions during a hackathon hosted by Portobello America in partnership with Tech's Department of Computer Science and MInDS (Machine Intelligence and Data Science) Center.

WHEN GLOBAL TILE MANUFACTURER PORTOBELLO AMERICA opened its U.S. headquarters near Tennessee Tech, leaders envisioned becoming a catalyst for innovation and collaboration in the Upper Cumberland.

That vision took shape through an artificial intelligence "hackathon" with 25 Tech students.

"We are committed to being a leading brand in design and innovation here in the United States, and this event enables us to foster a culture driven by innovation and collaboration," said João Oliveira, CEO of Portobello America.

The 24-hour hackathon, held during Tech's fall break in October 2025, challenged student teams to solve real operational problems the company faces daily — including quality control, warehouse logistics, predictive maintenance and materials tracking — and develop viable AI-driven solutions.

Gerald Gannod, chair of Tech's Department of Computer Science, said the collaboration with Portobello America advanced the university's mission to connect classroom knowledge with practical industry experience.

> **EVENTS LIKE THIS EMBED STUDENTS IN REAL BUSINESS NEEDS AND CREATE EXPERIENTIAL LEARNING OPPORTUNITIES, LIKE CO-OPS AND INTERNSHIPS, THAT STRENGTHEN WHAT STUDENTS LEARN IN THE CLASSROOM.**
>
> – Gerald Gannod, Department of Computer Science chair

William Eberle, professor of computer science and co-director of Tech's Machine Intelligence and Data Science (MInDS) Center, said the event demonstrated how AI is transforming industries far beyond big tech.

"Every company has its own problems to solve, and AI is everywhere," he said. "These kinds of real-world situations teach students how to apply artificial intelligence in a professional setting."

Tech students and faculty, along with company mentors, worked side by side throughout the overnight competition,

refining ideas and exploring solutions together.

Students on Team Tile earned top honors for developing an AI-based system that evaluates and flags boxes of tile that may contain broken pieces requiring removal, a solution designed to improve quality control and reduce material loss.

Another team, Pallet Packers, won the best technology award tackling one of Portobello America's most complex logistics challenges: how to stack pallets efficiently and map the best routes for workers moving through the warehouse. The students built a system that tests thousands of possible pallet layouts to find the most stable arrangement, then generates a clear, step-by-step path for workers with less backtracking. They packaged the process into a lightweight interface designed to run directly on warehouse floor machines to improve speed, safety and efficiency.

Quantiflow, chosen as the best feasibility team, designed an AI-driven materials-tracking system capable of forecast alerts and streamlined reordering to support warehouse accuracy and operational flow.

For many students, the experience was a crash course in solving problems shaped by real-world constraints.

"We had several impossible problems — logistics, weights, patterns, locations — all baked into one challenge," Silas Sylvester said. "We were up until 4 a.m. optimizing the algorithm and trying to make everything fit. It was tough but exciting."

Participants said the hackathon pushed them to think not only as programmers but also as engineers, business analysts and practical problem solvers while working under high-pressure, real-world conditions.

Gannod said the collaboration reflects Tech's longstanding effort to build meaningful industry relationships.

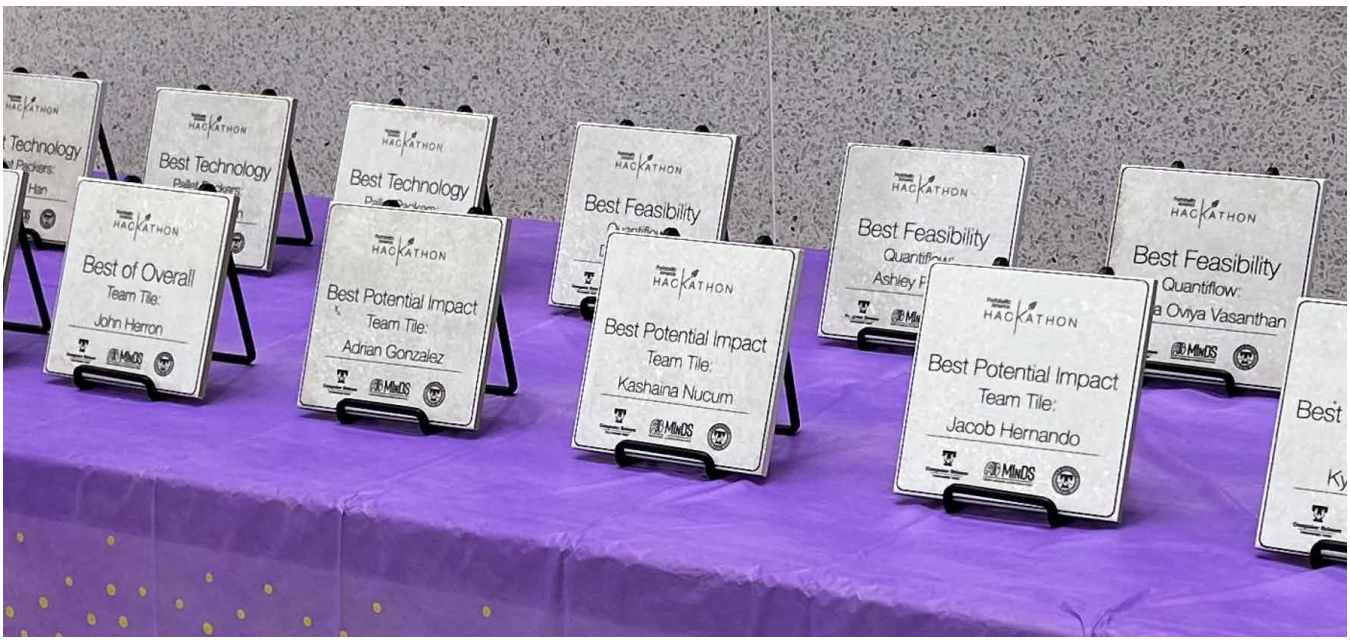
"When we get a partner here in Cookeville or the Upper Cumberland, it becomes very special to us. Portobello America shares that same vision," he said.

Eberle said the hackathon is already opening new pathways for future projects: "It gives us a chance to engage with companies that have issues that can be solved with AI — not just through student events like this, but through faculty doing research in AI, robotics and mechatronics."

Daniel Mathias, chief information officer for Portobello Group, said the greatest strength of the event for Portobello America was the diversity of skills, experiences and perspectives coming together in one space.

"Everyone learned from each other," he said. "Innovation comes from diversity — of ages, of skills, of ideas. That's what made this event and this collaboration so powerful."

Tech students gather in a work station at Portobello America to devise AI solutions to real-world operational issues. Participants said the overnight event pushed them to think not only as programmers but also as engineers, business analysts and practical problem solvers while working under high-pressure conditions.



STUDENT ORGANIZATIONS & COMPETITION HIGHLIGHTS

- Autonomous Robotics Club
- Association for Computing Machinery (ACM & ACM-W)
- Computer Science House System: Borg, Dijkstra, Hopper, Lovelace, Turing, von Neumann
- ACM Special Interest Group for Graduate Students
- Cyber Eagles & Cyber Interest Groups: Capture the Flag, Defense, Offense, Competition Club
- Data Science League
- eSports Club
- Game Development Club
- Institute of Electronics & Electrical Engineering (IEEE)
- National Society of Black Engineers
- Society of Hispanic Professional Engineers
- Society of Women Engineers
- Software Development Club
- Quantum Eagles ★ New!
- Women in Cybersecurity (WiCyS)

COMPETITION SUCCESS

IEEE

- **1st** – Region 3 IEEE Southeast Conference Software Competition (2025)

AUTONOMOUS ROBOTICS CLUB

- Design Award, Innovative Award – VEX U Monroe Michigan Push Back Competition (2026)
- Excellence Award, Tournament Finalist, Innovative Award: VEX U Louisville University Push Back Competition (2026)
- Outstanding Student Organization – Tennessee Tech Student Government Association (2025)
- Quarterfinalist – Auburn VEX U Competition (2025)
- Design Award, Quarterfinalist – Illini Cornfield Clash VEX U Competition (2025)
- Top 10 World Skills Ranking – VEX U World Championship (2025)
- 6th – Engineered for Destruction 12 BattleBots Competition (2025)

CEROC's Collegiate Cyber Defense Competition team members, captained by Gabriel Adams, celebrate their first-place finish at the Southeastern Collegiate Cyber Defense Competition. The rest of the team includes Landon Byrge, Nate Dunlap, John Bretlinger, Landon Foister, Carter Haney, Joey Milton and Trey Owen.

CHAMPIONS OF CYBER DEFENSE

WHEN IT COMES TO STUDENT SUCCESS, Tennessee Tech's Cybersecurity Education, Research and Outreach Center teams continue to shine – including the Collegiate Cyber Defense Competition team, which took top honors at the Southeastern CCDC in spring 2025 in Tampa, Fla.

In the competition, student teams assume the role of an IT security organization tasked with defending a simulated corporate network. Competitors must maintain critical services, respond to cyberattacks and implement security measures, all while managing business operations. The event tests a wide range of real-world skills, including network defense, incident response, system administration and business continuity planning.

"Our team is extremely grateful to have won CCDC regionals, especially with all the other great programs and schools who were present," team captain Gabriel Adams ['25] said. "We were honored to represent both Tennessee Tech and the southeastern region at nationals for the first time in Tech history."

CEROC supports student participation in cybersecurity competitions throughout the year, including the Collegiate Penetration Testing Competition, Hivestorm, Naval Surface Warfare Center's Cyber Resiliency and Measurement Challenge and games within the National Cyber League. In 2025, CEROC launched a competition interest group to better prepare students for the environments and challenges they encounter at these high-stakes events – further strengthening Tech's pipeline of career-ready cybersecurity professionals.

CEROC COMPETITION SUCCESS – 2025

- **1st** – Collegiate Cyber Defense Competition (region)
- **3rd** – Collegiate Penetration Testing Competition (region)
- **3rd** – Department of Energy CyberForce Competition
- **3rd** – InfoSec Nashville Capture the Flag

Logan Sanders ['25] speaks with students in CSC 3040, sharing how this computer science professionalism and communication course helped him prepare for interviews and secure a role on HCA Healthcare's IT internal audit team.

GUEST SPEAKER AT A STUDENT CLUB MEETING | CLASSROOM VISIT | LUNCH & LEARN | CAREERS & COFFEE | COMPUTER SCIENCE CAREER FAIR

ALUMNI CONNECTIONS

JOIN OUR CS ALUMNI SPEAKER DIRECTORY

It's awesome when alumni come home to inspire.

Our computer science student organizations benefit greatly from alumni who are willing to share their experiences, career paths and insights. If you're interested in speaking to a student club, serving on a panel or connecting with students in your area of expertise, we invite you to join our Computer Science Alumni Speaker Directory. Alumni in the directory may be contacted by student organization leaders throughout the year as opportunities arise.

Learn more and sign up here:

https://tntech.co1.qualtrics.com/jfe/form/SV_2gBZcx5ExMpbdki

Building a computer science community.

Computer science at Tennessee Tech has always been about more than code – it's about people. As we celebrate 40 years, alumni remain a vital part of our community. Here are a few ways to stay connected:

- **SAVE THE DATE:** Join us for Celebrate CS on April 30 – a special event honoring alumni and new graduates. Watch your email for an invitation and event details.
- **GIVE BACK:** Support the next generation by contributing to the Boshart Kosa Academic Excellence Scholarship fund.

  tntech.edu/giving | select "other" | enter scholarship name: Boshart Kosa Academic Excellence Scholarship
- **WHERE ARE YOU NOW?** We'd love to hear your story. Share career updates and photos at csc@tntech.edu.

Tennessee Tech University Department of Computer Science | @tntechcsc | @tntechcsc | @tntechcsc | @tntechcomputerscience

Computer Science
TENNESSEE TECH

Tennessee Technological University
Department of Computer Science
1000 N. Dixie Ave.
Campus Box 5101
Cookeville, TN 38505-0001