



CENTRAL

SCHOOL OF ENGINEERING, SCIENCE, AND TECHNOLOGY

# SESTCONNECT

December 2025

## SESTFEATURE

### Advancing Excellence: Cybersecurity National Rankings

Central Connecticut State University's cybersecurity programs have been recognized among the nation's best in Cybersecurity Guide's newly released 2026 Rankings, with the Bachelor of Science program ranking #14 in the Top 25 Best Cybersecurity Bachelor's Degree Programs and the Master of Science program ranking #17 in the Top 25 Most Affordable Cybersecurity Master's Degree Programs.

The recognition is particularly notable for CCSU's new Cybersecurity MS program, which launched this fall and has already earned national recognition for delivering advanced cybersecurity education at an exceptional value for students and families.

"These rankings validate what we've built at CCSU - nationally recognized cybersecurity programs that don't force students to choose between quality and affordability," said **Dr. Chad Williams**, Associate Professor and Point of Contact for CCSU's Cybersecurity Center. "Our students graduate with elite credentials, real-world experience, and without the crushing debt that often comes with graduate education."

CCSU's national rankings reflect a broader commitment to cybersecurity excellence. The university is the only institution in New England designated by the National Security Agency as both a Center of Academic Excellence in Cyber Defense (CAE-CD, through 2028) and a Center of Academic Excellence in Cyber Operations (CAE-CO, through 2029).

- Excerpt submitted by Dr. Chad Williams, Computer Science Faculty

Best Cybersecurity  
Bachelor's Degree Programs

—Cybersecurity Guard

Most Affordable Cybersecurity  
Master's Degree Program

—Cybersecurity Guard

### Honoring Faculty Promotions and Tenure



SEST celebrates the outstanding accomplishments of our faculty members whose dedication to teaching, research, and service continues to strengthen our academic community and inspire our students. Thank you for your excellence and leadership. Please join SEST in applauding their well-deserved achievements.

Learn more about our promoted and tenured faculty with an abbreviated note on their achievements throughout this issue of SEST Connect.

## Endowment Invests in Biology Scholars



Dr. Denis M. Medeiros

Central is proud to celebrate Dr. Denis M. Medeiros '74 and his wife Susan, whose generosity has established the Denis and Susan Medeiros Graduate Research Fund, a new endowed fund that will empower future generations of graduate researchers in the field of Biology.

Denis's distinguished career began in the classrooms of Central. Now, through this endowed fund, he and Susan are ensuring that

today's students will have the same opportunity to pursue meaningful research, discover their passions, and shape the future of their fields. Their generosity is more than a gift; it is an investment in knowledge, opportunity, and the next generation of scholars.

- Excerpt from *Blue Devil Journey*, Institutional Advancement Office

## Central – Industry Collaboration Drives Innovation in Complex Chemical Testing



Dr. Sourav Chakraborty

New collaborative method enhances precision in detecting and quantifying compounds within complex industrial mixtures, strengthening ties between academia and industry. A team of researchers from **Dr. Chakraborty's** lab of Department of Chemistry & Biochemistry, working in collaboration with a Connecticut based industry partner, has achieved a breakthrough in chemical analysis.

The group has developed a sophisticated hyphenated mass spectrometry method

capable of identifying and quantifying multiple target compounds from a complex industrial mixtures. Conducted over the summer, the work marks a significant advancement in the precision and reliability of complex analytical testing.

In partnership with recent chemistry graduate **Brittany Blair** and an industrial chemist, Dr. Chakraborty successfully advanced the project from concept to execution.

Beyond the immediate findings, the project demonstrates the value of combining advanced instrumentation with creative problem-solving. By tailoring solvent systems, introducing filtration technology, and

- Continued

## SEST Promotions

### PROMOTED TO PROFESSOR



**Dr. Myungjin (Andy) Chae**

*Manufacturing & Construction Management*

Dr. Chae is a highly regarded educator and has been recognized with the EIT Honor Roll (2018) and the Dean's Outstanding Teaching Award (2024). His prolific research record includes 14 funded grants, 7 patents, 1 book, 32 journal articles, and 46 conference papers, with more than 1,000 citations.



**Dr. Betsy Dobb-McAuliffe**

*Biomolecular Sciences*

Dr. Dobb-McAuliffe's research focuses on embryonic development and tissue regeneration. In her lab, zebrafish are used to investigate the cell signaling pathways that drive cell division and differentiation during embryogenesis, as well as the impact of drug toxicity on development.



**Brittany Blair**

leveraging both photodiode and mass spectrometric detection, the researchers created a robust framework for tackling analytical challenges that often arise in industrial chemistry. The study's success has broader implications. Industries that rely on precise chemical formulations—such as coatings, adhesives, and polymers—stand to benefit from methods that can reliably detect and quantify ingredients at trace levels.

The project was developed in collaboration with Academic Affairs, Central's Workforce Innovation Hub, and Contract Compliance, with former Dean Dr. Steven Minkler and **Dr. Thomas Burkholder** guiding the early phases of communication.

- Excerpt submitted by Dr. Sourav Chakraborty, Chemistry/Biochemistry Department Chair

## Construction Management Best in Connecticut

Best College for Construction  
Management in Connecticut  
—College Raptor

Congratulations to Construction Management for this milestone. The collective efforts and tireless dedication to students set a new benchmark for excellence by Citizens: College Raptor.

## Student Cybersecurity CTF Competition Crowns Champions



**Dr. Shushan Zhao** and **Dr. Xiaobing Hou** from the Computer Electronics and Graphics Technology Department (CEGT) successfully organized the 4th annual CCSU Student Cybersecurity CTF

Competition on October 31, a thrilling capstone to celebrate National Cybersecurity Awareness Month. Dedicated students embarked on an intensive 7-hour lab challenge, requiring participants to hack and defend targets while navigating complex scenarios involving cybersecurity methods, strategy, policy, and ethics. After a highly competitive contest, we are proud to announce 1st place winner **Nicolas Ojeda** (CS), four 2nd place winners: **Ishrak Rahman** (CYS), **Andrew Sargis** (CYS), **Michael Gola** (NIT), **Ateeb Shahbaz** (NIT), and three 3rd place winners: **Giovanni DiCenso** (CYS), **Logan DiPaola** (CYS), **Elerd Likaj** (CYS). This annual event has been supported by the Central Information Technology Department.

- Excerpt submitted by Dr. Shuju Wu, CEGT Department Chair

# SEST Promotions

## PROMOTED TO PROFESSOR



**Dr. E. Daniel Kirby**

*Manufacturing & Construction  
Management*

Dr. Kirby's scholarship emphasizes applied process and operations optimization, including Lean/Six Sigma improvements in e-commerce warehousing, machining optimization using Taguchi methods, and Industry 4.0 automation and process control.



**Dr. Mohammad Mahjoob**

*Engineering*

A recipient of the CCSU Faculty Research Award, Dr. Mahjoob's expertise spans dynamic systems, biomechanics, and assistive technologies. He has authored over 170 peer-reviewed publications, holds two patents, and has achieved an impressive H-index of 30.



## Women in Cybersecurity Established



We are excited to introduce CCSU's official WiCyS (Women in CyberSecurity) student chapter, co-founded by cybersecurity student **Sadie Simek** and computer science/finance student **Chris Deeb**, with **Dr. Ramyapandian Vijayakanthan** as the faculty advisor. WiCyS connects students to national networks, mentorship programs, conferences, technical

workshops, and opportunities that directly address the gender gap in cybersecurity and computing.

Despite the name, Women in STEM is not a women-only organization. It is a pre-professional community open to all students and allies who believe that talent, opportunity, and support should be accessible to everyone. The goal is simple: to create a space where ambitious students can grow, lead, and realize their full potential—technically, professionally, and personally.

Whether you are writing your first line of code, designing a Minecraft server for profit, or simply eager to learn, you have a place here. Women in STEM brings together multiple student-led initiatives, including Girls Who Code, and is building pathways to launch IEEE Women in Engineering and ACM-W chapters on campus—all under one umbrella, united by a shared mission.

- Excerpt submitted by Dr. Ramyapandian Vijayakanthan, Computer Science Faculty

## Earth and Space Sciences Take the Lead



The ESS department will co-host the 2026 Meeting of the Northeastern Section of the Geological Society of America on March 22-24 in Hartford, CT. ESS faculty, **Drs. Mark Evans, Michael Wizevich, and Jennifer Piatek** will serve as meeting organization, technical, and student volunteer co-chairs, respectively.

*The GSA is a global scientific society with members from academia, government, and industry in more than 100 countries.*

- Information recieved by Earth and Space Sciences Department

## SEST Promotions

### PROMOTED TO PROFESSOR



**Dr. Mohammad Anwar Rahman**

*Manufacturing & Construction Management*

Dr. Rahman's research integrates supply-chain modeling, Bayesian statistics, stochastic processes, and Lean Six Sigma, with publications in leading outlets such as the European Journal of Operational Research and the Journal of the Operational Research Society.



**Dr. Rahul Singhal**

*Physics & Engineering Physics*

Dr. Singhal's research focuses on rechargeable batteries, supercapacitors, ZnO nanomaterials, and biosensors. He has published more than 80 peer-reviewed papers in these fields and he is a recognized scholar and teacher for over 15 years.

### Biology Faculty Pens Pioneering Works



Dr. Thomas Mione

Congratulations to **Dr. Thomas Mione** on his publications along with Central student, **Tomasz Lukaszczyk**, and international cooperation (Bernardello and Leiva Gonzalez), a member of the Argentina National Academy of Sciences and Peruvian professor (emeritus), respectively. In less than two months since publication, the ebook has been downloaded 50 times in ResearchGate.

*Mione T, Lukaszczyk TC, Abbas SY, Bernardello G, Anderson GJ. 2025. Working with nectar: For researchers new to working with nectar and a teaching laboratory exercise.*

Dr. Mione is the first of three authors of a short ebook, "Parallel Evolution of Floral Nectar Troughs in the genus *Jaltomata* (Solanaceae)" with second author, a professor (emeritus) in Peru.

*Mione T, Leiva González S, Yacher L. 2025. Parallel evolution of floral nectar troughs in the genus Jaltomata (Solanaceae).*

He is also the first author of a paper (journal article), or book about the trichomes of the genus *Jaltomata*, the group of plants that is most closely related to the potato genus.

*Mione T. 2025. Trichomes of the genus Jaltomata (Solanaceae).*

All works available on Amazon.

- Submitted by Dr. Thomas Mione, Biological Sciences Faculty

### MCM Faculty Secures Funding for Safety



Dr. Talat Salama

**Dr. Talat Salama** secures \$100K grant from the Mine Safety and Health Administration of the US Department of Labor. The grant will enable the program to educate, train, and retrain miners employed in the public and private sectors in the state of Connecticut to reduce injuries and occupational illnesses, and eliminate fatalities. The program assists mine operators in developing safety and health programs and is a training material resource.

- Information received from Central's Office of Post-Award Grants

### PROMOTED TO ASSOCIATE PROFESSOR



**Dr. Melissa Gunter**

*Mathematical Sciences*

Dr. Gunter has extensive experience as the former Mathematics Curriculum Coordinator for the public schools in Norman, OK. Her work has been published in *Mathematics Teacher: Learning and Teaching PK-12*, the leading practitioner journal in mathematics education.



**Dr. Christopher Potter**

*Biological Sciences*

Dr. Potter's research centers on the genetic and molecular mechanisms that regulate skin development and disease. He investigates the role of Homeobox (HOX) transcription factors in hair follicle cycling, uncovering how these regulatory genes influence tissue regeneration and differentiation.

### Mechanical Engineering Student Earns Level 1 High-Power Rocketry Certification



Aidan Bowser

On October 25th Mechanical Engineering student **Aidan Bowser**, the founder and president of the Central Space Exploration Architecture and Research (SEAR) Club, (faculty advisors **Drs. V. Naoumov and R. Ghodsi**) became the first engineering student from Central to earn Level 1 High-Power Rocketry Certification through the Tripoli Rocketry Association.

Over the past year, he has worked to create a collaborative, student-driven aerospace systems

research and design program that now brings together more than 30 students from several engineering and science disciplines.

This certification supports SEAR's ongoing work on Project 'Eos', a thrust-vector-controlled rocket targeting a 2,000-ft apogee. This structure enables students to collaborate effectively on complex engineering challenges while gaining industry-relevant hands-on experience. SEAR plans to participate in the NASA Student Launch competition, continuing to expand opportunities for CCSU students to apply their knowledge and ingenuity as they design, build, and test propulsion systems and space technologies.

Aidan contributes to the Hybrid Propellant Rocket Engine project led by Dr. Viatcheslav Naoumov in the SEST Rocketry and Combustion laboratory studying combustion of advanced bio-derived fuels in the rocket motor.

*The Tripoli Rocketry Association is an international organization and one of the two major organizing bodies for high power amateur rocketry in the United States.*

- Excerpt submitted by Dr. Viatcheslav Naoumov, Engineering Faculty
- Photos by Matthew Bowser



### PROMOTED TO ASSOCIATE PROFESSOR



**Prof. Karen Santoro**  
*Mathematical Sciences*

Prof. Santoro demonstrates outstanding leadership and dedication to developmental mathematics. She developed online materials to support student success. As course coordinator, she oversees over 30 sections of developmental math courses each semester.

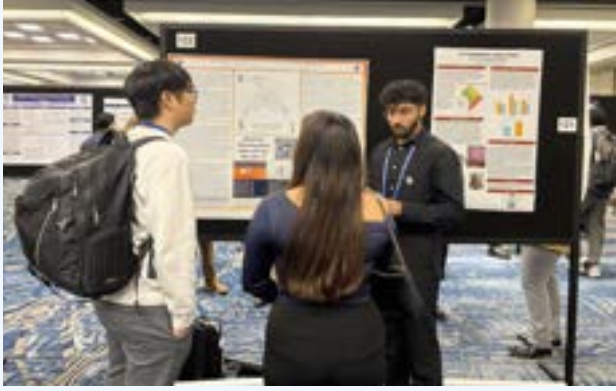


**Dr. Viktoria Savatorova**  
*Mathematical Sciences*

Dr. Savatorova is a leader in national efforts to improve differential equations instruction and has published in the journal CODEE, with her latest article titled "Project-Based Learning with ODEs: Modeling Straw Rocket Motion with Air Resistance." She is an active contributor to the DEEP MATH outreach program and a regular presenter at departmental colloquia.



## SEST Students Attend National S-STEM Scholars Meeting in San Diego



Seven SEST students recently represented CCSU at the 2025 National S-STEM Scholars Meeting in San Diego, hosted by the American Association for the Advancement of Science (AAAS). The group included **Shahzad**

**Rumman** (Computer Science), **Fuad Amin** (Software Engineering), **Karissa Wiggins** (Computer Science and Robotics & Mechatronics), **Ashley Carter** (Mathematics and Psychology), **Tess E. Mai** (Physics and Computer Science), **Tram Q. Briggs** (Computer Science), and **Gabriel**

**Garcia** (Physics). The event brought together scholars and faculty from across the country to share research, network, and explore career pathways in STEM. All seven students are supported



by two NSF-funded scholarship programs: CSMP: Computer Science, Mathematics, and Physics Scholars Program and AGILE: Advancing Graduate and Industry Learning Experiences Program. Their participation reflects CCSU's growing national presence in STEM education and its strong commitment to student success through research, mentoring, and professional development.

- Submitted by Dr. Stan Kurkovsky, Computer Science Department Chair

## Reflection: Women in Engineering



I'm excited to share highlights from my recent experience at the IEEE WIE Forum USA East, where I had the privilege of attending alongside undergraduate students from Central: **Tram Briggs** (Computer Science), **Tessa Masi** (Physics and Computer Science), **Karissa Wiggins** (Computer Science and Robotics & Mechatronics), **Dea Konjusha** (Software Engineering), and **Rumman Shahzad** (Computer Science).

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## SEST Promotions

### GRANTED TENURE



**Dr. Mahdiah Zabihimayvan**  
*Computer Science*

Dr. Zabihimayvan's research focuses on cybersecurity and network science, particularly on proactive cyber threat intelligence, privacy protection, and applied machine learning. She has published papers on topics including phishing detection, fraud in mobile payment systems, Web crawler navigation, and structural analyses of the dark Web and Tor networks.

**Dr. Melissa Gunter**

**Dr. Mohammad Mahjoob**

**Dr. Christopher Potter**

**Dr. Viktoria Savatorova**

**CONGRATULATIONS!**





These students are supported by two NSF-funded scholarship programs: CSMP: Computer Science, Mathematics, and Physics Scholars Program and AGILE: Advancing Graduate and Industry Learning Experiences Program. The forum was a vibrant and inspiring event, packed with insightful panels and energizing discussions focused on innovation, leadership, and empowerment in engineering and technology.

One session that truly stood out was Innovate2Elevate by Dr. Rhonda Farrell. She offered a powerful perspective on how AI can be leveraged to “hack” our careers—allowing us to

delegate repetitive tasks to machines and focus on the creative, strategic work that only humans can do. Her message about blending technological advancement with human creativity was both thought-provoking and motivating.

Our students gained meaningful takeaways from a variety of sessions, including the DiSC behavioral workshop, personal branding workshop, and keynote presentations. These experiences helped them better understand diverse communication styles, foster stronger collaboration within teams, and develop greater self-awareness. They left with a clearer sense of their individual strengths, how they’re perceived by others, and areas for continued growth.

*The IEEE Women in Engineering (WIE) Forum USA East is dedicated to fostering leadership development for professionals at every career stage.*

- Submitted by Dr. Ramyapandian Vijayakanthan, Computer Science Faculty

## Design & Prototype Competition and Demonstration Day



The SME (Society of Manufacturing Engineers) Student Chapter at Central held two events on Tuesday, December 2:

- 2025 SME Design & Prototype Competition: Participants showed their design and prototype for motorized rotary stage based on predetermined specifications.
- Prototype Demonstration Day: students in ME 463 (Engineering of Additive Manufacturing Processes) designed and prototyped a motorized linear translation stage that met a set of defined requirements.



Four participants were recognized as this year’s competition winners (in alpha order):

**Hasan E. Aburumi**  
**Christopher Gabow**

**Lars Gorczyca**  
**Anthony D. Pierce**

- Submitted by Dr. Reza Vaziri, Engineering Faculty



## End of Semester: Living Learning Community



The SEST Academic Living Learning Communities (LLC) in the Mid-Campus Residence Hall.

The LLC offers collaborative hands-on programs and activities to enhance a sense of community. SEST students assembled "anti-gravity" structures from 3D-printed parts and nylon thread with **Dr. Michele Dischino (TechEd)**. This process is commonly referred to as a "tensegrity table," a design that strategically uses tension and compression forces some parts to appear to float in mid-air.

The final workshop allowed students to explore cybersecurity with **Dr. Ramyapandian Vijayakanthan (CS)**. They learned the basics of ethical hacking through Capture the Flag (CTF) challenges—fun, puzzle-based tasks that teach how to uncover hidden flags using skills in cryptography, web security, and digital forensics.

Programs are open to all SEST students. Invite your students to be part of this learning environment. Stay tuned for program announcements. Faculty, staff, and students are encouraged to attend.

- Submitted by the SEST LLC Leadership Team



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## Integration Bee Awards Top Honors



The Department of Mathematical Sciences held its 14th annual Integration Bee (like a spelling bee, but with calculus problems) on Friday, November 7. The program began with over 30 participants and ended the evening with a nail-biting round that produced the following top four winners:

1st place: **Joshua Plaag**, a senior majoring in mathematics with an honors mathematics concentration.

2nd place: **Joshua Davis**, an honors senior majoring in mathematics with an honors mathematics concentration.

3rd place: **Max Grant**, a sophomore majoring in computer science with a concentration in software engineering.

4th place: **Josephine Dameus**, an honors freshman majoring in physics with a concentration in engineering physics.

Sponsored by the CSMP (Computer Science, Mathematics, and Physics) Scholarship, the Math Club, and the SEST Dean's Office. The Integration Bee Committee includes **Drs. Ivan Gotchev, John Koomson, Luis Recoder-Núñez, Viktoria Savatorova, and Rachel Schwell**.

- Information received from the Department of Mathematical Sciences



**Dr. Sourav Chakraborty**  
(Chemistry/Biochemistry),  
UG Open House, October 2025



**Engineering Faculty and Students, STEM Expo,**  
**Bloomfield High School (CT), October 2025**



**Dr. Michele Kraczkowski (Biology),**  
**STEM Expo, Bloomfield High School**  
**(CT), October 2025**



**Manufacturing & Construction**  
**Management Industry Advisory Board**  
**Meeting, October 2025**



(Left) SEST faculty and administrators, **Dr. Oyetunji Olaniba** (MCM), **Dr. Ravindra Thamma** (Associate Dean), **Dr. Christine Benz** (MCM), **Dr. Anna-Maria Heredia** (Assistant Dean), and **Dr. Sangho Park** (CEGT), attended the ATMAE national conference in Memphis, TN, October 2025.



**Luis Quinones (NIT, BS) and Justin**  
**Hasler (CIT, MS), Cyber Nutmeg**  
**Conference, October 2025**



**Dr. Shushan Zhao (CEGT),**  
**Cyber Nutmeg Conference, October 2025**

CEGT students and faculty, **Drs. S. Zhao and X. Hou** presented interdisciplinary research work on CyberCARED project which is supported by a federal grant from the Department of Education, October 2025.

# DID YOU KNOW

## Dean's Office Welcomes New Administrative Operations Assistant



**Kelly Leahy** is the new Administrative Operations Assistant for the Dean in the School of Engineering, Science, and Technology at Central Connecticut State University. A proud Central graduate, Kelly brings a diverse professional background to the Dean's Office, including experience in administrative support, marketing, client service, and operational support.

Before stepping into this role, Kelly spent over a decade as a Client Services Manager at a financial firm. Prior to that, she held various marketing positions, gaining strong experience in communication, relationship-building, and supporting others. These experiences helped shape her friendly, welcoming approach and genuine passion for helping people feel supported.

Known for being warm, approachable, and always happy to connect, Kelly is excited to contribute to the Dean's Office and be part of the vibrant Central community once again. Please stop by and say hello—she'd love to meet you!

### FUN FACT:

Kelly isn't the only Blue Devil in her family! Several of her relatives are Central graduates who've gone on to build exciting, successful careers, adding even more pride and energy to her connection to the Blue Devil community.



## Seasons Greetings

Wishing All Students, Faculty, and Staff a  
Safe and Healthy Holiday Season!



## SESTCONNECT

Submit your features, programs, events, and questions:  
[SESTDeansOffice@mail.ccsu.edu](mailto:SESTDeansOffice@mail.ccsu.edu)

