SUNY POLY

2025-26 Annual Report

OFFICE OF RESEARCH



Building on Momentum: A Year of Connection and Collaboration

The 2025–26 academic year has been a defining one for research at SUNY Polytechnic Institute, marked by significant growth in sponsored research activity, expanding interdisciplinary collaborations, and new opportunities to connect faculty, students, and external partners. Together, these achievements reflect the continued development of SUNY Poly's research enterprise and its growing contributions to innovation, discovery, and economic development.

A major milestone came in June 2026, when SUNY Poly received a historic $60.9 million contract from the U.S. Department of Defense, the largest research award in university history. The achievement reflects years of strategic investment in research infrastructure, faculty expertise, and external partnerships, positioning the university to compete for increasingly complex and impactful research opportunities.

Beyond this historic award, SUNY Poly's 14 Research Centers demonstrated significant progress, collectively submitting 81 proposals for external funding, nearly double the prior year's total. This increase reflects growing faculty engagement in sponsored research and the university's expanding ability to pursue competitive funding opportunities. We look forward to reporting on award outcomes and are confident this increased activity sets the stage for continued growth in sponsored research.

Equally important is the breadth of research taking place across SUNY Poly. From artificial intelligence, quantum technologies, and advanced manufacturing to healthcare, biomedical engineering, and sustainable energy, our faculty and students are addressing complex challenges with real-world implications. These efforts are creating opportunities for interdisciplinary collaboration, strengthening partnerships with industry and other institutions, and providing students with meaningful hands-on research experiences.

In the fall, the Office of Research launched SUNY Poly's inaugural Week of Research and Innovation, a campus-wide celebration open to students, faculty, staff, alumni, and community partners. Organized around themes such as Communicating Science, Entrepreneurship, and Student Research & Internships, the week featured guest speakers from Florida State University and Syracuse University, faculty presentations of SPARK-developed white papers, career development sessions, and a lively Elevator Pitch Competition that put students, faculty, and staff on stage to pitch their best research and business ideas for Wildcat dollar prizes. The inaugural week was a strong proof of concept for an event we intend to grow in the years ahead, further weaving research and innovation into the fabric of campus life.

Building on this same spirit of connection, SUNY Poly hosted its second annual SPARK Workshop, June 22–25, 2026. Standing for Synergy in Partnerships, Advanced Research, and Knowledge, SPARK brought together faculty and external collaborators from industry, government, academia, and community organizations to explore opportunities for interdisciplinary research and innovation.



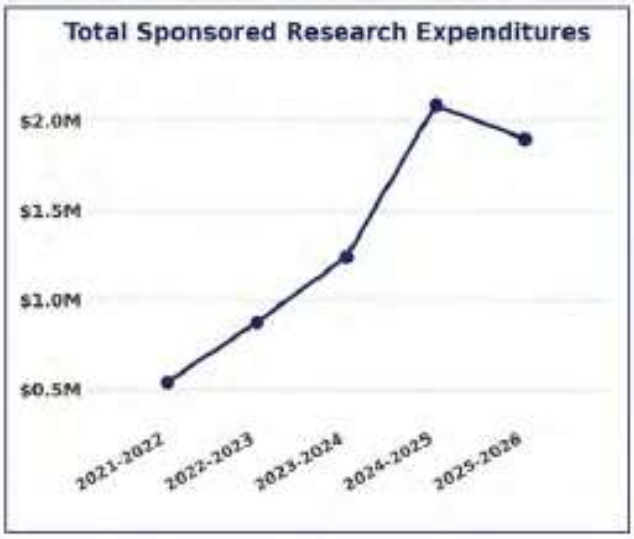
From left, Dr. Michael Carpenter, Susan Head, Sabrina Doré, Nicolette Lamascola, and Rebecca Willsey.

This year's workshops drew 27 external collaborators over four days, alongside strong faculty participation from across SUNY Poly's academic departments. The event strengthened connections among researchers and external partners, creating opportunities for future collaborative projects, student engagement, and sponsored research initiatives.

Taken together, this year's achievements reflect a research enterprise that continues to grow in capacity, collaboration, and impact. From major federal investments and increasing research activity to new partnerships and opportunities for student engagement, SUNY Poly is building a strong foundation for sustained innovation. That foundation is already visible in a doubling of proposal submissions in 2025–26. And while research expenditures held steady compared to 2024–25, the new DoD contract, along with additional awards being finalized as this report goes to press, positions SUNY Poly for substantial growth in both expenditures and scholarly outcomes in 2026–27. We are grateful to the faculty, staff, students, and partners who made this progress possible, and we look forward to building on this momentum in the year ahead.



SURP students work alongside Lecturer Dr. Pallavi Gupta-Bouder, studying the effects of per- and polyfluoroalkyl substances (PFAS), often referred to as "forever chemicals," on plant growth.



Annual sponsored research expenditures, compared year-on-year.

Scholarly Works	2024-25	2025-26
Active Contracts	35	32
Proposals Submitted	41	81
Technology Disclosures	6	6
Patent Filings	2	1

Annual count of scholarly works of SUNY Poly faculty, compared year-on-year.



Historic Defense Award Accelerates Research Growth

SUNY Poly significantly expanded its research portfolio during the 2025-2026 academic year with the award of a $60.9 million contract from the U.S. Department of Defense to develop next-generation artificial intelligence technologies for the U.S. Army. One of the largest research awards in university history, the contract reinforces SUNY Poly's leadership in applied AI and defense-focused research, while marking a major milestone in the institution's continued research growth.

Led by SUNY Poly in partnership with the University of South Florida and the University System of Maryland, the project will develop advanced, data-driven analytical tools that combine generative AI, foundation models, active inference, and predictive analytics to improve military planning and decision-making across land, air, space, and cyberspace. The work directly supports the U.S. Army Transformation Decision Analysis Center (TDAC).

The contract builds upon a $3.9 million FY25 Defense Appropriation, championed by U.S. Senators Charles Schumer and Kirsten Gillibrand, that launched the first phase of the initiative. Over the past two years, Principal Investigator Dr. Bill Thistleton and Co-Principal Investigators and contributors Dr. Arjun Singh, Dr. Amit Sangwan, Dr. Andrea Dziubek, Dr. Steve Schneider, Dr. Mahmoud Badr, and Dr. Emilio Cobanera worked closely with Department of Defense program managers and TDAC scientists to develop white papers, align SUNY Poly's research strengths with Army priorities, and position the university for this transformational opportunity. The successful pursuit of the award also reflected collaborative leadership from the Office of Research and Office of External Relations, which have helped define SUNY Poly's research strategy and cultivate key federal partnerships.



A press conference was held in June to celebrate this historic $60.9 million contract.



The award reflects the broader momentum of SUNY Poly's expanding research enterprise. Over the past two to three years, the university has made strategic and intentional investments to strengthen its research ecosystem, establishing 14 interdisciplinary research centers that foster collaboration across engineering, healthcare, advanced manufacturing, cybersecurity, artificial intelligence, and other high-impact fields.

Those investments are translating into significant growth in research activity, with SUNY Poly on track to exceed $5 million in annual research expenditures in the coming years. The recent Defense award represents a defining milestone in that trajectory, further establishing SUNY Poly as a trusted national partner in delivering innovative solutions through science, engineering, and artificial intelligence.



SUNY Chancellor John B. King Jr. addresses press conference attendees.



SUNY Poly President Winston Soboyejo talks about this historic milestone.

Mohawk Valley Biotech Collective Advances Regional Research Collaboration

SUNY Poly, the Masonic Medical Research Institute (MMRI), and Mohawk Valley Health System (MVHS) formally established the Mohawk Valley Biotech Collective through the signing of a Memorandum of Agreement in November 2025, creating a strategic partnership designed to accelerate biomedical research, innovation, and economic development across the region.

The Collective brings together the complementary strengths of the three institutions—MMRI's foundational biomedical research, MVHS's clinical expertise, and SUNY Poly's academic and research enterprise—to create an integrated ecosystem that supports discovery, translation, and workforce development. SUNY Poly's contributions to the collaboration include expertise and resources from the Center for Healthcare Innovation and Humanitarian Engineering (CHIHE), led by Dr. Joanne Joseph, and the Global Center for Advanced Materials and Manufacturing (GCAMM), led by President Wole Soboyejo.

By fostering a unified, cross-institutional approach, the partnership enables faculty, clinicians, scientists, researchers, and students to collaborate more effectively on interdisciplinary research initiatives. The Collective is designed to strengthen competitiveness for external funding through joint grant proposals, expand opportunities for translational research, and accelerate the movement of scientific discoveries from the laboratory to real-world healthcare applications.

A key priority of the partnership is leveraging emerging technologies, including artificial intelligence, to advance biomedical discovery while supporting entrepreneurship, commercialization, and the growth of new biotechnology companies. Together, the three organizations are working to position the Mohawk Valley as a recognized hub for biomedical research and innovation.

As the partnership moves forward, the Collective is establishing collaborative committees and developing coordinated three-, five-, and ten-year strategic plans that will guide research priorities, shared infrastructure, talent development, and regional investment in the life sciences.



SUNY Poly President Winston Soboyejo, MMRI Executive Director Maria Kontaridis, and MVHS President/CEO William LeCates following November's MOA signing.

Expanding Vision Care Through Academic Partnership

This past spring, SUNY Polytechnic Institute established a new partnership with the SUNY College of Optometry through a Memorandum of Understanding designed to expand educational pathways, strengthen experiential learning, and foster collaboration in vision science, healthcare, and community engagement.

The agreement creates clearer pathways for SUNY Poly students interested in pursuing a Doctor of Optometry degree while enhancing advising and access to SUNY Optometry's expanding program in Syracuse. The partnership also supports joint workshops, guest lectures, faculty engagement, and future collaborative research initiatives in vision care and related disciplines.

A key component of the collaboration is its connection with the Central Association for the Blind and Visually Impaired (CABVI), which will provide internships, externships, and community-based learning experiences focused on low vision care and accessibility.

The partnership builds on SUNY Poly's longstanding relationship with CABVI through its Humanitarian Engineering program, where students have developed innovative accessibility solutions, including Braille Blocks, an educational tool that supports tactile learning. These efforts have expanded through the university's Center for Health Innovations and Humanitarian Engineering, led by Dr. Joanne Joseph.



SUNY Poly President Winston Soboyejo and SUNY Optometry President David Troilo signed an MOU this past spring, opening additional pathways for SUNY Poly students.

By connecting academic preparation with clinical experience, community engagement, and future research opportunities, the partnership strengthens SUNY Poly's role in preparing the next generation of healthcare professionals while addressing workforce needs in vision care and expanding access to services across Central New York.

SPARK Workshops Fuel Interdisciplinary Research and Innovation

In June, SUNY Polytechnic Institute hosted its annual Synergy in Partnerships, Advanced Research, and Knowledge (SPARK) Workshops, bringing together faculty, students, postdoctoral researchers, and leaders from industry, healthcare, government, and academia for a week of knowledge sharing and research engagement.

Now in its second year, SPARK welcomed 27 external collaborators representing organizations including Munson, Upstate Medical University, Mohawk Valley Health System, Masonic Medical Research Institute, the Air Force Research Laboratory, IBM, Indium Corporation, Danfoss, Wolfspeed, Assured Information Security, Andro, Polyhedron Productions, Cyborg Interactive, Sculpture Space, and others. Through presentations, panel discussions, poster sessions, laboratory tours, and networking opportunities, participants explored new avenues for research and innovation.

The workshops highlighted SUNY Poly's research strengths in health sciences, biomedical research, quantum technologies, cybersecurity, advanced materials, manufacturing, artificial intelligence, and the convergence of technology and the liberal arts. Graduate students and postdoctoral scholars also had opportunities to showcase their work and engage with external research and industry leaders.

As SUNY Poly continues to expand its research portfolio, SPARK serves as a catalyst for new research initiatives, strategic partnerships, and future sponsored research opportunities, while reinforcing the university's commitment to advancing discoveries that benefit New York State and beyond.



SPARK Workshops brought together members of the SUNY Poly campus, as well as industry and academic partners, in a week of knowledge sharing and research engagement.

WINGS Student Stories



John Pertell '26

John Pertell graduated from SUNY Polytechnic Institute this past May with a Master of Science in Computer Science, leaving behind a research portfolio that helped advance next-generation wireless communications while preparing him for a career in one of the nation's fastest-growing technology fields.

As a student researcher in SUNY Poly's Wireless Intelligent Next G Systems (WINGS) Research Center, Pertell worked alongside Electrical and Computer Engineering faculty member Dr. Priyangshu Sen on technologies designed to support the rapidly growing number of connected devices and increasing data demands. His research explored how wireless signals can be used not only for communication, but also to sense and understand their surrounding environment, enabling stronger, more efficient and adaptive wireless networks.

"The goal is to learn the environment so we can establish stronger, more efficient connections," Pertell said.

His work culminated in a peer-reviewed paper accepted to the European Conference on Antennas and Propagation, where he presented his findings to an international audience. The experience provided hands-on research opportunities while strengthening his knowledge of signal processing, wireless communications and artificial intelligence.

A native of Northville, New York, Pertell accelerated his education by completing SUNY Poly's 4+1 computer science program, earning both his bachelor's and master's degrees in just four years after transferring credits from Fulton-Montgomery Community College.

The skills he developed through WINGS research led directly to his role as a software engineer at Black River Systems Company in Utica, where he develops signal processing and wireless communication technologies supporting Department of Defense applications. Reflecting on his SUNY Poly experience, Pertell encourages students to embrace research opportunities early. "Pick what you like and what you're really good at, and become the best at what you do," he said. "Be as specific as possible."



Justin Osmond '26

Justin Osmond graduated from SUNY Polytechnic Institute this past May with a Bachelor of Science in Electrical and Computer Engineering after building an undergraduate research portfolio that prepared him for a career developing next-generation communication systems.

As a student researcher in SUNY Poly's Wireless Intelligent Next G Systems (WINGS) Research Center, Osmond worked alongside faculty mentors Dr. Arjun Singh and Dr. Priyangshu Sen on wireless terahertz communications and technologies expected to power 6G networks and beyond. Through the Summer Undergraduate Research Program, he gained hands-on experience with advanced radio frequency systems, signal processing and near-field characterization, applying classroom concepts to cutting-edge research.

"Getting hands-on with real systems and research helped everything click," Osmond said.

His work resulted in two research publications and the opportunity to present at the IEEE International Conference on Communications in Montreal. Those experiences strengthened his technical expertise and helped him secure internships before ultimately leading to a full-time position with MITRE, where he now serves as a Communications Systems Engineer supporting advanced government-sponsored communications projects.

Osmond credits SUNY Poly's accessible faculty and research opportunities with preparing him for his career. "You're able to actually connect with professors," he said. "Those relationships opened doors to research, internships and career opportunities that prepared me for where I am today."

His experience reflects how undergraduate research at SUNY Poly gives students the opportunity to contribute to emerging technologies while building the skills and professional experience needed to succeed in highly competitive engineering fields.

Student Spotlights

For rising junior Marie-Jinoue Plantin, research has become much more than a summer opportunity. It has evolved into a meaningful part of her academic journey and reinforced her passion for using science to improve people's lives.

A biology major, Plantin is participating in the Summer Undergraduate Research Program (SURP) for the second consecutive year, continuing her work alongside Lecturer Dr. Pallavi Gupta-Bouder, studying the effects of per- and polyfluoroalkyl substances (PFAS), often referred to as "forever chemicals," on plant growth.

Her research has expanded significantly since her first summer in the program. Last year, the team germinated basil seeds on agar plates to observe how they changed after a 30-minute exposure to varying concentrations of perfluorooctanoic acid (PFOA), a type of PFAS. This summer, the project advanced by growing basil seeds in soil while conducting both 30-minute and 24-hour exposure trials. The research also expanded to include microgreens, allowing the team to compare how different plants respond to PFAS exposure.

Beyond SURP, Plantin continued her research during the academic year through an independent research course with Gupta-Bouder and also contributed to a PFAS review paper being prepared by Associate Professor of Biology Dr. Lauren Endres. The opportunity to work in the laboratory has strengthened both her technical skills and confidence as a young scientist.

"Through the hours I spent in the lab conducting experiments, I gained hands-on proficiency with a range of techniques and instruments," Plantin said. "Dr. Gupta-Bouder ensured that we engaged with material that would support any future research we pursue. This experience not only reinforced what I learned in the classroom but also broadened my understanding of the many scientific pathways available to me, all while deepening my commitment to serving the communities around me."

As she prepares for her junior year, Plantin says the experience has strengthened her passion for scientific discovery while providing practical research skills that will help shape her future career. Through SURP, she is building a strong foundation in biology while contributing to research addressing important environmental challenges.



Marie-Jinoue Plantin
Biology

As one of the first three graduates of SUNY Polytechnic Institute's inaugural Doctor of Nursing Practice (DNP) in Psychiatric Mental Health Nurse Practitioner program, Stacey Flenory is helping shape the future of nursing while addressing one of healthcare's most pressing challenges: ensuring patients understand the care they receive.

Flenory, who earned her doctorate in May 2026, centered her doctoral project on health literacy and the role clear communication plays in improving patient outcomes and advancing health equity.

"Not everyone has a healthcare provider in their family to help them advocate for themselves," Flenory said. "Understanding how we communicate is central to improving care. Health disparities often begin with miscommunication or a lack of understanding, and we have the opportunity to change that."

The doctorate marks another milestone in Flenory's long relationship with SUNY Poly. After becoming a registered nurse and gaining experience in critical care and emergency medicine, she enrolled in SUNY Poly's accelerated BS/MS Family Nurse Practitioner program, graduating in 2016. She later returned as a member of the inaugural Psychiatric Mental Health Nurse Practitioner doctoral cohort.

Today, Flenory serves as a Clinical Operations Manager and Nurse Practitioner with Maximus, leading a team of nurse practitioners and physician assistants who provide in-home assessments for patients throughout New York State. Her leadership role, combined with her doctoral education, has strengthened her ability to improve patient care while mentoring future healthcare professionals as an adjunct nursing instructor.

Reflecting on her journey, Flenory credits SUNY Poly's faculty for supporting her through both professional growth and personal challenges, helping prepare her to become a compassionate clinician, educator and healthcare leader.



Dr. Stacey Flenory '16
G'23 DNP'26

Experiential Learning Strengthens Student Research and Innovation

Four SUNY Polytechnic Institute students, Jackson Beckmann, Noa Lolona Haro, Tanner Hill and Spencer Therrien, demonstrated the value of experiential learning by competing in Lockheed Martin's Ethics in Engineering Case Competition, where one SUNY Poly team earned a top-eight national finish.

The month-long competition challenged students to solve evolving engineering and ethics scenarios related to command, communication and control (C3) systems. Success required technical research, ethical reasoning, and interdisciplinary collaboration while adapting to changing conditions throughout the competition.

Working alongside faculty mentors John Szwakob and Dr. Jim Staihar, alumni and industry professionals, the students strengthened their abilities in research, critical thinking, communication and teamwork while applying classroom knowledge to a real-world challenge.



SUNY Poly's Dr. Jim Staihar (second from left) and students Spencer Therrien and Tanner Hill (third and fourth from left) at last spring's competition.

"The on-your-feet critical thinking and problem solving was one of the most valuable parts of the competition," said Tanner Hill. "It was a great way to practice skills that apply across many sectors of business and industries."

The experience highlights SUNY Poly's commitment to preparing students through hands-on learning opportunities that connect research, technology and industry. Supported by faculty mentorship, alumni engagement and donor investments, including the NYSTEC Business Center of Excellence, students gain the practical skills and professional experience needed to address complex challenges across engineering, business and national defense.

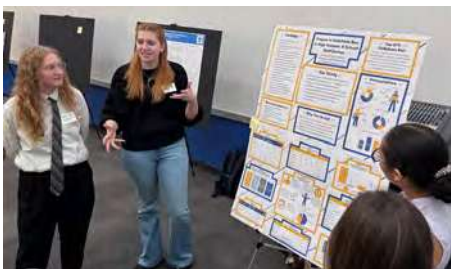
Students Conduct Community-Focused Research on New York's Cellphone Ban

At SUNY Poly, undergraduate students are conducting research that addresses real-world challenges while contributing meaningful insights to their communities. Senior students in the Community & Behavioral Health (CBH) program recently completed one of the first local studies examining the early effects of New York State's bell-to-bell cellphone ban in Oneida County high schools.

Led by Assistant Professor Dr. Jarrett Rose, the mixed-methods study combined interviews with school administrators and educators and survey responses from 111 teachers, administrators, and staff members across the county. The research found broad support for the policy and identified perceived improvements in student engagement, classroom focus, social interaction, and behavior, while also highlighting the need for continued study of long-term academic and behavioral outcomes.

The project provided students with hands-on experience in research design, data collection, analysis, and community engagement. The research team included recent CBH graduates Hannah C. Reese, Cullen Elliott, Dezeraiah Bellamy, Samantha Dee, Isabella Schaffer, Ashton Paul, and Madison Altamura, with SUNY Poly Postdoctoral Researcher Dr. Winnie Mkandawire serving as data analyst.

The findings will be shared with local educational leaders and state policymakers and are being developed into a manuscript for submission to a peer-reviewed education journal. The project demonstrates SUNY Poly's commitment to undergraduate research that informs public policy while preparing students to address complex challenges through applied scholarship.



SUNY Poly CBH students discuss their research at the Project Showcase.



The cell phone study was shared with local educational leaders and state policymakers.

SURP Program Flourishes

Nearly 30 students participated in SUNY Polytechnic Institute's 10-week Summer Undergraduate Research Program (SURP), working alongside faculty mentors on projects spanning foundational science, engineering, and artificial intelligence.

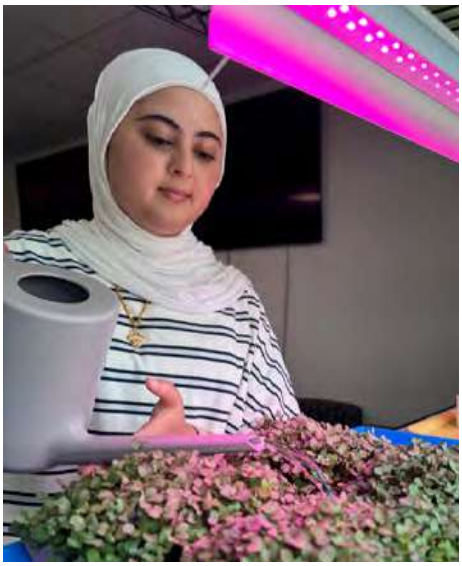
The program was coordinated by SUNY Poly faculty members Dr. Shing Chi Leung and Marye Ianno, and provided students with the opportunity to gain hands-on research experience while contributing to meaningful scientific discovery.

Harmony Kyle, who worked with Dr. Ahmed Abdelaal on a project estimating atmospheric ice loads caused by freezing rain, said the experience transformed the way she approaches problems. "Research has really helped me become more curious," she explained. "It taught me how to connect the dots, ask better questions and dig deeper into understanding the why and how behind what I'm studying."

Everett Groat, who conducted research with Dr. Kazi Imran through SUNY Poly's Center for Intelligent Manufacturing, said the experience provided valuable insight into what it takes to succeed as a researcher. "I learned not only the research process itself, but also the importance of being self-motivated, managing my time and approaching problems with a disciplined, methodical mindset," he explained. "Those are skills I'll carry with me throughout my career."

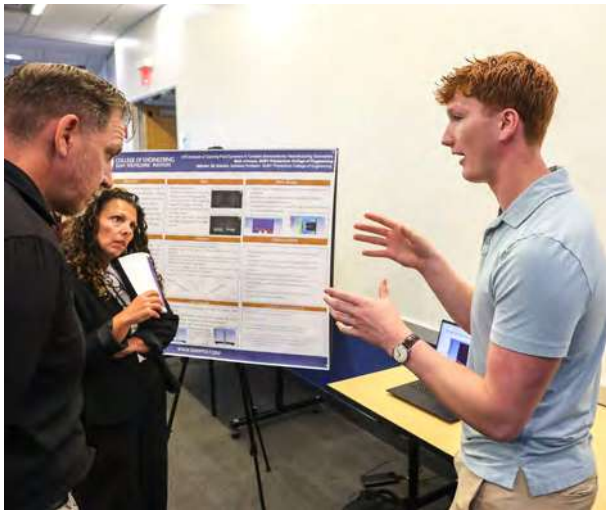
Mechanical engineering student Pierre-Alain Gbalou returned to SURP for a second consecutive summer, once again working with Dr. Leung. After researching earthquake prediction during last year's program, Gbalou stepped outside his comfort zone this summer to explore physics through DNA simulations and the manipulation of DNA.

"Each project has challenged me in a different way," Pierre noted. "This experience has made me more resilient, helped me develop new technical skills and given me a much broader perspective on research and problem solving."









Nearly 30 students participated in this year's Summer Undergraduate Research Program working on projects spanning several disciplines.

SUNY Poly & Xallent Advance Semiconductor Inspection Technology

SUNY Poly's Applied Electromagnetics and RF Circuits (AE&RFC) Research Center, led by Interim Provost Dr. Abdullah Eroglu, is partnering with New York-based technology company Xallent to develop a next-generation semiconductor inspection platform designed to improve manufacturing reliability, reduce material waste, and strengthen domestic microelectronics production. The project is supported by a $60,000 grant from FuzeHub's New York State Microelectronics Innovation Challenge, administered by The Research Foundation for SUNY.

The initiative addresses a critical challenge in semiconductor manufacturing by developing a non-contact, non-destructive inspection system that uses terahertz (THz) radiation to identify microscopic defects in advanced semiconductor materials before they lead to device failures or costly production losses. The technology is particularly relevant as manufacturers increasingly adopt materials such as silicon carbide (SiC) and gallium nitride (GaN) for electric vehicles, aerospace, telecommunications, defense, and other high-performance applications.

Using terahertz time-domain spectroscopy, researchers will generate wafer-scale maps that measure electrical conductivity, film thickness, and structural uniformity, while detecting buried defects that conventional optical inspection methods often miss. The system is designed to provide real-time quality control data that improves production yields and accelerates manufacturing processes without risking damage to fragile semiconductor surfaces.

The collaboration combines SUNY Poly's expertise in terahertz sensing, electromagnetic modeling, and semiconductor characterization with Xallent's capabilities in automation engineering and manufacturing integration to create an inspection platform compatible with existing semiconductor fabrication environments.

Over the next year, the team will integrate automated wafer scanning, advanced signal processing, and defect detection capabilities while developing tools for wafer-scale analysis and manufacturing quality control. The project supports New York State's growing semiconductor ecosystem and broader national efforts to strengthen domestic microelectronics manufacturing and supply chain resilience.



Dr. Abdullah Eroglu

Dr. Singh Collaborates with Partners on AI Research

Associate Professor of Electrical and Computer Engineering and Director of SUNY Poly's Wireless & Intelligent Next Gen Systems (WINGS) Research Center, Dr. Arjun Singh, is also part of a $200,000 NSF AI-Planning project, "Collaborative Research: Planning: AI-Ready: DHARMA.AI – Digital Hardware + Analog-RF for Multifunctional Apertures with AI."

Led by Florida International University with Northeastern University and Princeton University as partners, the project will develop an AI-enhanced wireless testbed and is part of the NSF's recent initiative on expanding AI-ready testbeds. SUNY Poly faculty are taking the lead on near field THz and intelligent channel design.



Dr. Arjun Singh

SAEC Reaches New Heights in Aerospace Research

SUNY Polytechnic Institute's Sustainable Aerospace Energy Center (SAEC), an initiative that grew out of a 2024-2026 SUNY Poly seed grant awarded to Principal Investigator Dr. Robert A. Edgell, professor of technology management, continues to strengthen its national and international research profile through new publications, conference presentations, and interdisciplinary collaborations focused on the future of sustainable aviation and aerospace systems. SAEC brings together expertise from SUNY Poly's Colleges of Business and Engineering.

Co-Principal Investigators Dr. Felipe Henao and Dr. William Durgin contribute complementary expertise in management science, renewable energy, aerodynamics, and aerospace engineering to address challenges, including decarbonization, sustainable aviation fuels, commercial space systems, and public-private innovation.

Among the center's recent achievements is the acceptance of a review article in the Journal of Air Transportation examining two decades of decision-support research for sustainable aviation. The study identifies interdisciplinary collaboration, governance, and systems-level planning as essential to advancing aviation's transition to a lower-carbon future.

SAEC researchers also continue to shape discussions on aerospace policy and commercialization. Dr. Edgell recently published an invited essay in Aerospace America, participated in New York's Space Technology Symposium, and will present research at the 77th International Astronautical Congress.



From left, Dr. Robert A. Edgell, Dr. William Durgin, and Dr. Felipe Henao

Additional work exploring governance models for commercial space systems, coauthored with SUNY Poly alumnus Jeffrey R. Olney, highlights how cross-sector collaboration can accelerate innovation in emerging space industries.

By integrating expertise across engineering, business, and policy, the Sustainable Aerospace Energy Center is advancing research that positions SUNY Poly as a leader in sustainable aerospace innovation while expanding opportunities for external collaboration and sponsored research.

AI in Action Showcase Explores the Future of Artificial Intelligence

In April 2026, SUNY Poly hosted its inaugural AI in Action Showcase, a three-day event that convened researchers, industry leaders, healthcare professionals, educators, and students to examine the rapidly expanding role of artificial intelligence across research, education, and industry.

The showcase featured presentations, interdisciplinary panel discussions, poster sessions, and a keynote address by Dr. Gerard Puccio, director of Buffalo State University's Center for Applied Imagination, exploring the vital role of creativity and imagination in an AI-driven world. Sessions highlighted applications ranging from machine learning for materials discovery and next-generation energy technologies to cancer detection, bioinformatics, engineering, business, nursing, and ethical AI.

Designed to encourage collaboration across disciplines, the event underscored SUNY Poly's commitment to integrating artificial intelligence into both research and education while preparing students and professionals to lead in an AI-enabled future.



SUNY Poly's Inaugural AI in Action Showcase back in April featured presentations from researchers, health care professionals, educators and workforce development partners. This included various panels, such as the one pictured above.

The showcase reinforced SUNY Poly's commitment to advancing artificial intelligence in ways that complement, rather than replace, human expertise. Building on Dr. Puccio's message, speakers emphasized that while AI is transforming research, education, and industry, its greatest potential lies in augmenting human creativity, critical thinking, and decision-making. By bringing together leaders from academia, healthcare, industry, and government, the showcase highlighted SUNY Poly's role in preparing students and professionals to shape the future of AI with imagination, purpose, and ethical responsibility.

Researcher Spotlight:
Dr. Tabiri Asumadu



Dr. Tabiri Asumadu is associate director of SUNY Poly's Global Center for Advanced Materials and Manufacturing (GCAMM).

Since joining SUNY Polytechnic Institute in 2023, Dr. Tabiri Asumadu has helped advance the university's Global Center for Advanced Materials and Manufacturing (GCAMM) as a hub for interdisciplinary research spanning biomedical engineering, advanced materials, artificial intelligence, and sustainable energy technologies.

As associate director of GCAMM, Asumadu works alongside SUNY Poly President Dr. Winston Soboyejo (PI) to coordinate the center's growing portfolio of research projects while fostering collaboration among faculty, postdoctoral researchers, and students from engineering, computer science, biology, and related disciplines. Since its launch, GCAMM researchers have produced more than 16 peer-reviewed publications, patents, conference presentations, and industry collaborations.

Asumadu's own research focuses on developing advanced materials for biomedical and engineering applications. Current projects include hydroxyapatite-coated titanium implants designed to improve healing following orthopedic and dental procedures, as well as machine learning approaches to breast cancer detection and targeted nanoparticle drug delivery. His work also extends to next-generation energy systems, including solid-state batteries and flexible solar technologies, and advanced materials such as graphene for aerospace and manufacturing applications.

Equally important to Asumadu is mentoring the next generation of researchers. Through GCAMM, undergraduate and graduate students work alongside faculty on interdisciplinary projects, gaining hands-on experience with emerging technologies while contributing to research that addresses challenges in healthcare, energy, and advanced manufacturing.

As GCAMM continues to expand its research portfolio and external partnerships, Asumadu is helping position SUNY Poly as a destination for collaborative materials science and biomedical engineering research.



Research and Workforce Development: An EPIIC Partnership

As SUNY Polytechnic Institute (SUNY Poly) continues to grow its research enterprise, the university is also strengthening the connection between research, education and the workforce needs of New York State and beyond. Increasingly, that work has brought together SUNY Poly's Office of Research and newly launched Office of Workforce Development, combining research expertise with workforce programming to help translate innovation into opportunities for students, industry and the region.

One example is SUNY Poly's $400,000 National Science Foundation Enabling Partnerships to Increase Innovation Capacity (EPIIC) award. The three-year initiative is designed to strengthen the university's capacity to build industry partnerships and develop workforce programming in emerging fields. Through the project, SUNY Poly established a satellite training site focused on advanced communications in partnership with the Griffiss Institute and is working with Upstate Caring Partners (UCP) to establish a second site focused on health care. Additional efforts are focused on creating training opportunities in the semiconductor industry.

That work is supported by SUNY Poly faculty, whose expertise has been instrumental in developing and delivering high-quality training opportunities for external partners. By bringing faculty knowledge and research expertise into workforce programming, the university is helping ensure that training responds to evolving technologies and the real-world needs of employers.

The connection between research and workforce development was further strengthened in June 2026 through a subcontract from the Northeast Network for Microelectronics Education (NNME), supporting workforce development for the semiconductor industry. The initiative builds on SUNY Poly's expertise in semiconductor research and education while expanding opportunities to prepare learners for careers in a sector that is increasingly important to New York State and the nation.

The collaboration between research and workforce development extends beyond individual grants. The offices are working together to identify opportunities where SUNY Poly's research strengths align with emerging workforce needs, particularly in areas such as semiconductors, advanced manufacturing, artificial intelligence and other rapidly evolving technologies. Those efforts complement the Office of Workforce Development's broader work to expand employer partnerships, develop training programs and create stronger connections between students and industry.

During the year, that work included efforts to expand paid internships and work-integrated learning opportunities. Initiatives supported internships for students in SUNY Poly's ACE and Educational Opportunity Program, while the SUNY Paid Internship Initiative provided broader funding for experiential learning and helped strengthen the university's internship infrastructure. The university also continued developing industry-connected learning opportunities through employer-sponsored projects and capstone experiences across academic programs.

The partnership has also helped SUNY Poly respond to workforce needs beyond campus. Efforts include developing an eight-week advanced semiconductor training program with industry partners, expanding semiconductor and artificial intelligence education for K-12 students, and working with Herkimer County to provide professional development and explore new training opportunities, including in AI.

The partnership is also strengthening SUNY Poly's competitiveness for future external funding, as federal opportunities increasingly emphasize workforce development, education and industry engagement alongside research and innovation. By bringing the Office of Research and Office of Workforce Development together early in the proposal process, SUNY Poly can connect its research strengths with meaningful training and career pathways, helping ensure that investments in innovation also prepare the workforce needed to carry that innovation forward.


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