

**SUNY Polytechnic Institute:  
2017-2018 Annual Report**





## Executive Summary: Academic Year 2017/2018 Accomplishments

### Message from the Interim President

I am pleased to present you with SUNY Polytechnic Institute's 2017/2018 Academic Year Annual Report, showcasing numerous educational, research, and economic development efforts that make our institution a unique ecosystem for creative, experiential learning, enabling our students to thrive in the 21<sup>st</sup> century economy as we address critical societal challenges through innovation and discovery.

**SUNY Poly continues to be highly ranked**, rising further in the 2018 College rankings by U.S. News & World Report, which listed the institution 15<sup>th</sup> in its 2018 list of *Best Colleges in the Regional Universities North* category—up three positions from 18<sup>th</sup> in 2017. SUNY Poly remained 3<sup>rd</sup> in *Top Public Regional Universities North* for the second year in a row. I am also proud to note that SUNY Poly also rose to 6<sup>th</sup> for *Best Colleges for Veterans—Regional Universities North*.

**SUNY Poly is focusing on growing its student body** as we welcome one of our largest in decades—around 3,000 students—the most since the early 1980's. Offering an exciting, quality education at both of our campuses, we are also thrilled about our newest online programs that allow students an affordable and flexible education from anywhere in the world. Meanwhile, through extensive outreach efforts, we continue to inspire young students in our communities with the opportunities that SUNY Poly offers in areas ranging from the liberal arts to nanotechnology.

**SUNY Poly strives to enable pioneering research and innovation** with growing recognition from the research community and general public. Our faculty researchers have secured millions in funding to advance our knowledge and technologies related to areas such as entrepreneurship or cancer therapy. One nanobioscience professor and his team aim to produce “kill switches” in cancer cells through the manipulation of RNA. Another co-discovered a new lemur species in Madagascar, highlighting the importance of knowledge to sustain biodiversity. A number of our corporate partners created the world's smallest, most powerful computer chip components right on campus, and thanks to technologies developed here by IBM, the U.S. now owns the title to the fastest supercomputer in the world (capable of more than 200 quadrillion calculations per second). By engaging in a wide variety of areas and enabling the cross-pollination of ideas, SUNY Poly continues to make a meaningful global impact.

**SUNY Poly is ready to start a new chapter**, and as the institution's new Interim President, I look forward to working with all stakeholders to initiate a *Framework for a Sustainable Future* to focus our incredible strengths in the areas of research, development, academic excellence, and economic growth. While our society traverses challenging and exciting times, it is reassuring to know that progress is being made on many fronts—and SUNY Poly is at the forefront.

Sincerely,

A handwritten signature in black ink, appearing to read "Grace Wang".

Dr. Grace Wang  
SUNY Poly Interim President



## SUNY Poly 2017-2018 Highlights

### I. Leadership Transition

#### **Dr. Grace Wang Announced as SUNY Poly's New Interim President**

The State University of New York Board of Trustees and SUNY Chancellor Kristina M. Johnson announced the appointment of Dr. Jinliu "Grace" Wang as SUNY Polytechnic Institute Interim President. She is also continuing in her role as senior vice chancellor for SUNY Research and Economic Development. Dr. Wang's appointment was effective July 1, shortly after Dr. Bahgat G. Sammakia stepped down June 30, 2018. She has played a leading role in designing, directing, and expanding the footprint of SUNY's research, graduate education, industry relations, and economic development activities.

### II. Strategic Planning for a Strong Future

#### **SUNY Chancellor Kristina Johnson Visits SUNY Polytechnic Institute to Discuss Opportunities and Framework for a Sustainable Future**

SUNY Chancellor Kristina M. Johnson visited SUNY Poly's Utica campus May 15 when she toured the Center for Global Advanced Manufacturing (CGAM), as well as Danfoss Silicon Power, located in the Computer Chip Commercialization Center (Quad-C). While on campus, Chancellor Johnson, with Dr. Grace Wang, met with faculty, staff, and students to discuss further enabling a positive pathway forward for the institution.

### III. SUNY Poly on the Rise

#### **SUNY Poly Graduates Nearly 700 at 44<sup>th</sup> Annual Commencement**

Continuing its mission to offer students the strongest foundation for their career paths, SUNY Poly hosted its 44<sup>th</sup> annual commencement ceremony at the Wildcat Field House, honoring its nearly 700 members of the Class of 2018. The top three undergraduate degrees awarded at the ceremony by number of students were Business Administration, Mechanical Engineering Technology, and Nursing, respectively.

#### **SUNY Poly Rises Further in 2018 College Rankings by U.S. News & World Report**

SUNY Polytechnic Institute continues to receive increasing national recognition for its top-tier educational offerings, with U.S. News & World Report ranking the institution 15th in its 2018 list of Best Colleges in the Regional Universities North category—jumping up three positions from its 2017 ranking of 18. Additionally, SUNY Poly remained 3rd in Top Public Regional Universities North for the second year in a row. SUNY Poly also rose through the rankings to 6th for Best Colleges for Veterans amid Regional Universities North.



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## **SUNY Poly Nursing Program Ranked #7 in New York State for Academic Quality, Career Results**

SUNY Poly has been ranked number seven among “The 10 Best Colleges for Nursing Majors in New York” by Zippia.com. This ranking puts SUNY Poly in the company of such institutions as NYU (#19), Stony Brook University (#2), and Binghamton University (#1).

## **SUNY Poly Network & Computer Security Degree Ranked in Top 5 for New York State**

As a testament to the top-tier educational opportunities available at SUNY Polytechnic Institute, SUNY Poly has been listed among “the 5 best cyber security degree providers in New York.” Cybersecuritydegrees.com evaluated schools across New York State, taking into account whether institutions are an NSA Center of Academic Excellence, the range of cyber security-related degrees offered, and a wide array of metrics that examine academic quality, affordability, return on investment, and student satisfaction.

## **SUNY Poly Continues its Strong Enrollment Numbers**

While the latest enrollment numbers are unofficial at the time of this publication, it is expected that around 3,000 students will be enrolled at SUNY Poly for the fall 2018 semester, the most since 1982.

## **CGAM Opens**

SUNY Poly students are now able to make use of the Center for Global Advanced Manufacturing, or CGAM, which opens up a world of innovative possibilities. The 19-thousand square foot facility provides an advanced manufacturing center to SUNY Poly faculty, students, and the community at large. There, students and others can do everything from basic prototyping to product testing and use 3D plastic printers, 3D scanners, and the full machine shop, in addition to the collaborative design studio.

## **IV. SUNY Poly Faculty & Staff Excellence Continues**

### **SUNY Poly Faculty & Staff Receive SUNY’S Highest Honor—Four Recognized with 2018 Chancellor’s Awards for Excellence**

SUNY Poly proudly announced that four members of its faculty and staff received Chancellor’s Awards for Excellence from the State University of New York for 2018. Through these awards, SUNY publicly proclaims its pride in the accomplishments and personal dedication of its instructional faculty and professional staff across its campuses. SUNY Poly’s 2018 Chancellor’s Award recipients include:

- Dr. Robert Brainard, Professor of Nanoscience, Award for Excellence in Teaching
- Dr. Nathaniel Cady, Professor of Nanobioscience, Award for Excellence in Scholarship and Creative Activities
- Lisa Capuana, Secretary, Award for Excellence in Classified Services
- Michael Durr, Facilities Supervisor of Grounds and Cleaning Staff, Award for Excellence in Professional Service



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## **SUNY Poly Professor Kathryn Stam Named a ‘Woman of the Year’ by NYS Women, Inc.**

Celebrating outstanding women in the community during the month of March in conjunction with Women’s History Month, Professor of Anthropology Dr. Kathryn Stam was honored with other community members by the Mohawk Valley Chapter of New York State Women, Inc. at the “Women of the Year” awards dinner in March. The event has been honoring professional women of the Mohawk Valley for several decades.

## **SUNY Poly Professor Eric Lifshin Selected for ‘Fellow of the Microanalysis Society’ Position for Significant Contributions to Microanalysis**

Professor of Nanoscience Dr. Eric Lifshin was selected as a Fellow of the Microanalysis Society (MAS), an honor given to the society’s most distinguished members to recognize top scientists, engineers, and technologists in the field of microanalysis who have developed or advanced techniques, applications, or theories.

## **V. SUNY Poly Advances Diversity Efforts**

### **Diversity, Inclusion, and Equity Working Groups**

In the fall of 2017, a group of faculty, staff, and students formed Diversity, Inclusion, and Equity working groups on both campuses with the goal of continuing to further foster a culture of respect, inclusion, equity, and diversity for all members of our campus community. Actions have included the designation of gender-neutral restrooms (also called all-gender restrooms); free feminine hygiene supplies were made more readily available and primarily near classrooms at the Albany campus; a book club, focusing first on the book, *Headstrong, 52 Women who Changed Science and the World* by Rachel Swaby, is planned to be launched; and web pages are being constructed to include important resources and act as a hub for trainings, speakers, and programming, in addition to including a map of gender neutral bathrooms on campus. SUNY Poly is also currently developing an unconscious bias training for employees, with additional education for the campus community planned for the spring 2019 semester.

## **VI. SUNY Poly’s Extensive Outreach Continues**

### **SUNY Poly, FIRST®, National Grid Team-Up for CNY Regional Robotics Competition**

An intensive, six-weeks of designing, building, and programming original robots culminated as 35 teams of students from around the world put their robotic creations to the test at the Central New York 2018 FIRST Robotics Competition at SUNY Poly’s Wildcat Field House in Utica March 2-4, in partnership with FIRST and National Grid.

### **Hundreds of Students Attend ‘NanoCareer Days’ at SUNY Poly’s Albany NanoTech Complex to Gain Hands-on Nanosciences-Based Experience**

Throughout the year, students attended SUNY Poly’s popular “NanoCareer Day” program featuring activities and tours teaching them about exciting nanoscience and science, technology, engineering,



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and mathematics-based (STEM) concepts. Students from a number of schools across the state took part in the event which immerses students in nanotechnology-enabled activities, including the chance to gown up in cleanroom “bunny” suits and learn how small a nanometer is.

### **SUNY Poly’s Annual ‘Pi Day’ Celebration Features Pi-Themed Activities and Pie for Visiting Bronx Academy for Software Engineering Students**

To commemorate the annual mathematical holiday known as “Pi Day,” SUNY Poly hosted 80 High School juniors from the Bronx Academy for Software Engineering and provided them with educational, Pi-themed activities and slices of pies, as well as a tour of the institution’s state-of-the-art facilities and information about SUNY Poly’s academic opportunities on March 14.

### **SUNY Poly Hosts More Than 90 Employers and Grad Schools at Annual Career Fair**

Students, alumni, and other job seekers were invited to join more than 90 employers and graduate school recruiters at SUNY Poly’s Career and Graduate School Fair in March. Local, state, and national employers, as well as representatives from a variety of graduate programs were on hand to meet with students, alumni, and members of the community to discuss current and upcoming job opportunities, internships, and graduate degree programs.

### **SEMI Foundation Sponsors SEMI High Tech U Program at SUNY Poly for Students to Learn About Innovation-Based Educational and Career Opportunities**

SUNY Poly, in partnership with SEMI Foundation, hosted High Tech U (HTU), a career exposure program for high school age students from around the region that helps them better understand how STEM is used to solve “real world” problems. After attending the HTU program, which included mock job interviews and a tour of SUNY Poly’s world-class facilities, students learned about the educational and career pathways that can lead them to find success in high-tech fields.

### **SUNY Poly and 15-LOVE Provide Hands-on, Nano-Based Education to Albany Youth**

Representatives from SUNY Poly shared exciting science, technology, engineering, and mathematics-focused (STEM) concepts as part of a weekly summer program at Albany-based 15-LOVE. Children from local public and charter schools took part in hands-on, nano-centered activities for several weeks.

## **VII. SUNY Poly Alumni Reaching New Heights**

### **SUNY Poly Graduate Student Spinoff and Specialty Pharma Research Company Glauconix Biosciences, Secures Significant Investment from Excell Partners Inc.**

Glauconix Biosciences announced that it raised \$100,000 from Excell Partners Inc. The specialty pharma company, which is a START-UP NY participant based at SUNY Poly, will be able to further accelerate glaucoma drug development as a result of the investment as they continue to focus on their innovative 3D ocular tissue technology.





## SUNY Poly Academic Programs

SUNY Polytechnic Institute enrolled nearly 3,000 students in the 2017-2018 academic year. Accounting for part-time students, SUNY Poly had nearly 2,500 full-time equivalent students. About three-quarters of our students are undergraduates, and 60% of our students are male.

The overwhelming majority of SUNY Poly's students are from New York State: 97% of the undergraduates and 83% of the graduate students. About five percent of our students overall are international students.

Our students are enrolled in 42 different programs. The most popular major areas among undergraduates are Computer Science, Engineering, Business and Health Sciences. Our graduate programs include Ph.D. programs in Nanoscience and Nanoengineering, an MBA program in Technology Management, and MS programs in Accounting, Information Design & Technology, and Family Nurse Practitioner.

Included in this student population in 2017-2018 were 632 students (314 first-time, first-year, and 318 transfer) who started their academic careers at SUNY Poly the previous year, indicating a 77% year-to-year retention rate. We graduated 708 students in 2018, including 289 from the College of Engineering, 98 from the College of Arts & Sciences, 148 from the College of Business Management, and 15 from the Colleges of Nanoscale Science and Engineering. Among these graduates, their average time to degree completion was 4.09 years. Sixty-two percent of our transfer students who entered in 2013 had graduated within a four-year window.

A significant number of our undergraduate students receive financial aid. More than 40% of our undergraduates receive TAP, Pell or both. Three percent of our undergraduate students participate in EOP, and six percent received Excelsior Scholarships last year.

### I. College of Arts & Sciences

- Creation of Interactive Media & Game Design outreach center, VIM (for Visualization, Game Design & Interactive Media). Funded by SUNY Performance Improvement Fund, VIM is a hub of activity that connects students in our new IMGD program with applied learning experiences and industry partners. Funds support full-time staff; professional grade equipment for Virtual Reality, Augmented Reality, and 3D animation; and connections with upstate NY healthcare providers, museums, and K-12 schools. The IMGD program, which started in June 2016, has grown rapidly and now has 120 students enrolled.
- Adam McLain, Assistant Professor of Biology, was part of a research team that discovered a new lemur species in Madagascar. The lemur was named the Groves' dwarf lemur; news of the discovery was featured in international news as well as in National Geographic. The



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research team included scientists from Conservation International, the Madagascar Biodiversity Project, and the Henry Doorly Zoo and Aquarium in Omaha, Nebraska.

- SUNY Poly Professors Andrea Dziubek and Edmond Rusjan published an English-language translation of the book *Tensor Calculus*. The book complements ongoing research where Dziubek and Rusjan are using innovative methods to model blood flow in the human retina. Their work gained financial support from the Slocum-Dickson Foundation, and features collaborators from SUNY Poly's Department of Computer Science as well as researchers at University of Missouri and University of Illinois at Urbana-Champaign. This research feeds into SUNY poly's Advanced Certificate in Computational Mathematical Modeling, as well as ongoing research collaborations among SUNY poly faculty in Albany and Utica.

## II. College of Business Management (CBM)

- SUNY Poly announced three new programs in the College of Business Management. These new programs—leading to a Bachelor of Science in Finance, advanced certificate in forensic accounting and valuation, or providing a concentration in forensic accounting and valuation within SUNY Poly's Master of Science in Accountancy program—will prepare students for the 21<sup>st</sup> century workforce and help connect businesses and agencies with well qualified experts in ever-growing fields of finance and business.
- SUNY Poly welcomed Dr. Xinjian (Arthur) Lu as Dean of the College of Business Management. With a Ph.D. in Management Sciences, two master's degrees (M.S. in Computing & Information Science and M.S. in Systems in Engineering) and a Bachelor of Science in Mathematics, Dr. Lu joins SUNY Poly from the College of Business and Economics at California State University, East Bay (CSUEB), where he was serving as Interim Dean of the College of Business and Economics. With a myriad of publications in refereed journals to his name, Dr. Lu also brings with him industry experience as a software engineer at Mortice Kern Systems and Prior Data Science.
- SUNY Poly created and launched (with its College of Arts & Sciences) the Joint Center for Creativity, Design, and Venturing, along with a Creativity and Ethical Venturing (CEV) Minor and new related curriculum.
- SUNY Poly also created and launched an innovative CBM Advising Center.
- Grants to the College of Business Management include:
  - National Endowment for the Humanities, Humanities Connections – Reimagining Entrepreneurship: An integrated Pathway for Creative and Ethical Venturing, \$99,949 to Dr. Robert Edgell and Dr. Daryl Lee;
  - State University of New York System, Performance Improvement Funds – Joint Center for Creativity, Design, and Venturing (JCVVD), \$40,000 to Dr. Robert Edgell





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and Dr. Daryl Lee;

- And NYSTEC – Entrepreneurial Initiatives at the College of Business Management, \$25,000 to Dr. Robert Edgell.

## III. College of Engineering

- Center for Global Advanced Manufacturing launched, enabling the Engineering Technology programs to broaden their offerings and has launched several clubs, including drones, 3D printing, and fabrication clubs.
- ABET accreditation for Mechanical Engineering.
- Master of Science in Advanced Technology (MSAT) revision and launch in Albany to support paying masters program.

## IV. College of Health Sciences

- The following programs were redesigned in fall 2017 and submitted for review to SED by November 2017. Each was successfully reviewed and approved by April 2018:
  - RN to BS – also approved as a completely online program
  - Accelerated RN to MS in Nursing Education
  - MS in Nursing Education (*SED indicated that it was the “best program they had ever read”*)
- Also submitted to SED this year in nursing was a redesigned Administration program at the MS (*closed in 2014*). It was submitted as Transformational Leadership in late March 2018 and awaiting approval so as to readmit students into this program.
- An MS program in Psych/Mental Health with a certificate for NP’s was reviewed by the Graduate council in Fall 2017 and will be sent to SED this Fall 2018.
- The online nursing courses are being reviewed to be certified for Quality Matters and will be the standard for the campus regarding Quality Matters courses.

## V. College of Nanoscale Engineering and Technology Innovation

- Received ABET approval of Nanoscale Engineering undergraduate program.
- Research expenditures increased by 5% and new funding increased by 46%.



- SUNY Poly announced a new degree program: Master of Science in Advanced Technology with a focus on Semiconductor Processing and Nanomanufacturing Technology, which is unique in the region and saw its first enrollment class in Fall 2018.

## VI. College of Nanoscale Sciences

- Obtained approval for the Nanobiology track for a Ph.D. in Nanoscale Sciences and submitted a proposal to SUNY for a Ph.D. in Nanobioscience.
- New Research Funding Included:
  - Professor Jan Paluh – Healing the contusion-injured spinal cord microenvironment with nanotechnology and stem cell assisted-modulation;
  - Professor Nate Cady – SPX: Collaborative Research: Automated Synthesis of Extreme-Scale Computing Systems Using Non-Volatile Memory; and
  - Professor Kathy Dunn – 2D Grain Boundary Phases: Establishing an Electronic Basis for Engineering Superior Copper Alloy Behavior.



## SUNY Poly Leads in Innovative Research and Economic Development

SUNY Polytechnic Institute's direct and indirect sponsored program expenditures for the cumulative fiscal year ending 6/30/18 totaled \$241,330,012.77, with \$232,884,818.44 in direct volume, out of the \$707,657,105 total for all SUNY University Centers and doctoral degree granting institutions, and \$8,445,194.33 in indirect volume. SUNY Poly received 131 awards during this period and boasts 51 distinct project principal investigators, with federal and state funds supporting nearly 200 organized research projects and everything from fellowships to public service and training.

### I. Organized Research Centers

#### **The American Institute for Manufacturing Integrated Photonics (AIM Photonics)**

AIM Photonics features research, development, and commercialization nodes in Albany, NY, at SUNY Polytechnic Institute, as well as in Rochester, NY, where state-of-the-art equipment and tools are being installed at AIM Photonics' TAP facility. The initiative also includes an outreach and referral network with the University of Rochester, Rochester Institute for Technology, Columbia University, Massachusetts Institute of Technology, University of California - Santa Barbara, University of Arizona, as well as New York State community colleges. In total AIM Photonics includes more than 100-signed members, partners, and additional interested collaborators.

#### **AIM Photonics Highlights:**

- **AIM Photonics Showcases High-Tech Progress at SPIE Photonics West Exhibition**  
A number of the initiative's leading researchers and scientists from a number of its corporate partners as well as supporting staff attended the SPIE Photonics West conference and exhibition January-February in San Francisco, California, to share updates and highlight opportunities for the event's photonics-focused global audience. AIM Photonics representatives met with interested potential partners, as well as others from the industry to provide details and updates on the opportunities that the initiative offers, including updates on the TAP facility.
- **SUNY Poly-Led AIM Photonics and Partners Attend SEMICON West 2018 to Highlight High-Tech Advances, Collaboration, and Future R&D Opportunities**  
SUNY Poly, in partnership with AIM Photonics, The Chemical Mechanical Planarization Users Group (CMPUG), Empire State Development (ESD), and NY Loves NanoTech announced that select scientists from these organizations and a number of the institution's corporate partners, along with New York State economic development experts, shared R&D and economic engagement updates at the globally recognized SEMICON West 2018 conference, held July 10-12 in San Francisco, California.
- **NSF Awards \$1.2M to Rochester Institute of Technology, University of California-San Diego, University of Delaware to Leverage AIM Photonics' World-Class R&D and Foundry Capabilities**



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Academic institutions partnered with AIM Photonics to realize advanced computing architecture using light; develop mobile probes for identifying specific materials; and enable improved manufacturing processes for photonic devices. AIM Photonics announced that three National Science Foundation-funded grants totaling \$1.2 million will enable collaborative photonics-centered R&D with the Rochester Institute of Technology (RIT), University of California-San Diego (UCSD), and University of Delaware (UD), respectively. The research will leverage SUNY Poly and AIM Photonics' resources and cutting-edge tools.

## **New York Power Electronics Manufacturing Center (PEMC)**

The New York Power Electronics Manufacturing Consortium, or NY-PEMC, is helping to develop the next-generation of materials used on semiconductors with an eye toward robustness and energy efficiency, and nodes in Albany and Utica. Helping to deliver on NY-PEMC's mission, Danfoss Silicon Power is located at SUNY Poly's Computer Chip Commercialization Center (Quad-C) on the institution's Utica campus where it packages power electronics for applications ranging from automotive and solar to wind and industrial.

## **The Center for Semiconductor Research (CSR)**

The CSR is a development and prototyping 300mm silicon wafer line that allows companies of all sizes, universities, national laboratories, and other researchers access to an industry-relevant semiconductor tool set for process, equipment, and materials demonstration, evaluation, and development at the current manufacturing scale.

### **CSR Highlight:**

- **CSR Earns World-Class TÜV SÜD AMERICA INC. ISO 9001:2015 Certification**  
SUNY Poly announced that its advanced semiconductor-based research and development efforts at its Albany NanoTech Complex have successfully received ISO 9001:2015 certification from TÜV SÜD AMERICA INC. for its effective quality management system. This certification acknowledges that SUNY Poly's CSR consistently provides products and services meeting the stringent and ever-improving requirements of the internationally recognized ISO 9001 designation, especially as it relates to excellent customer focus, strong top management, and a process-driven approach for the fabrication of test structures on 300mm semiconductor wafers, the platform upon which computer chips are made.

## **II. Faculty Research Highlights**

- **SUNY Poly Professor Awarded \$2,078,000 U.S. Army Research Laboratory Grant to Manufacture Ultra-High Voltage Power Electronics Chips for Next-Gen Military and Commercial Applications**  
Associate Professor of Nanoengineering Dr. Woongje Sung was selected to receive \$2,078,000 in total federal funding from the U.S. Army Research Laboratory (ARL) for advancing the "MUSiC," or the Manufacturing of Ultra-high-voltage Silicon Carbide devices. By developing higher voltages compared to traditional silicon-based devices and enabling more reliable and robust switching devices in SiC, this research will establish a leading-edge



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process for the creation of power electronics chips with a range of military and commercial applications, from solar energy and electric vehicles to the electrical grid, for example.

- **SUNY Poly Professor Awarded \$500,000 National Science Foundation Grant to Develop Next-Generation Memory for Advanced Computing**

SUNY Poly announced that Professor of Nanobioscience Dr. Nate Cady was awarded \$500,000 in funding from the National Science Foundation to develop advanced computing systems based on a novel approach to the creation of non-volatile memory architecture. This research, which will also support student opportunities, aims to advance today's typical computing model, in which processing and memory are separate, by bringing them together to make the entire process faster and more energy efficient.

- **SUNY Poly Professor Awarded \$2.4M by National Institutes of Health for Cutting-Edge RNA-Related Research**

Associate Professor of Nanobioscience Dr. Scott Tenenbaum received nearly \$2.4 million in federal funding by the National Institutes of Health (NIH) National Institute of General Medical Sciences (NIGMS) for the study of the ways in which an RNA's structure can determine a cell's fate, and how delivered RNA can be manipulated to enable functional outcomes in targeted cells when triggered by another RNA from within the cell to provide a nanoscale "kill switch" for targeted cancer cells, for example. This could lead to advanced ways to fight cancer that are complementary to current treatments, in addition to more effective and convenient at-home or point-of-care cancer diagnostics.

- **SUNY Poly Professor Awarded \$320,000 by National Science Foundation for Innovative Materials Research**

Dr. Kathleen Dunn, Associate Head and Associate Professor of the institution's Nanoscience Constellation, received \$320,000 in federal funding by the National Science Foundation's (NSF) Metals and Metallic Nanostructure program under the Division of Materials Research. Dr. Dunn's work focuses on exactly why adding certain metals to copper at the atomic level, such as tin or cobalt, changes copper's characteristics, like its ability to conduct electricity, for example, and will use a suite of SUNY Poly's next-generation electron microscopy and spectroscopy tools.

### III. SUNY Poly Research Partnerships Highlights

- **Tokyo Electron celebrates 15<sup>th</sup> anniversary of TEL Technology Center, America at SUNY Poly**

This year, Tokyo Electron (TEL) celebrated the 15<sup>th</sup> anniversary of TEL Technology Center, America (TTCA). TTCA was founded in 2003 as a partnership with the State of New York, SUNY Poly, and IBM to conduct leading-edge semiconductor research, and it acts as TEL's flagship R&D center in the U.S. TTCA continues to be actively engaged in SUNY Poly's world-class research and development efforts at its Albany-based fabs and now encompasses 16,000 square feet of cleanroom space and 80 TEL tools with full flow integrated processing



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and patterning capabilities.

- **Danfoss Silicon Power**

Danfoss, one of the world’s leading suppliers of power electronics, has set up packaging operations in the Quad-C complex on our Utica campus. The Quad-C facility expands the company’s presence in the United States and supplements the output of its Flensburg, Germany operations. Danfoss’ Quad-C operation will have the capacity to produce 300,000+ power modules and blocks per year for industrial, aerospace, and renewable applications, with planned expansion for automotive.

- **5nm Transistors Developed at SUNY Poly**

IBM, GlobalFoundries, and Samsung produced the most advanced computer chip in the world inside SUNY Poly’s state-of-the-art cleanrooms—the first chip featuring transistors that are only 5 nanometers in width, enabling a computer chip the size of your fingernail to consist of up to 30 billion of them for improved performance, power, and economy.

## IV. NY CREATES

Empire State Development (ESD) and SUNY announced NY CREATES (**New York Center for Research, Economic Advancement, Technology, Engineering and Science**), a new 501(c)(3) non-profit to lead industry-oriented R&D and economic development projects to grow the state’s high-tech economy. NY CREATES builds on reforms implemented at SUNY Poly-affiliated non-profits, ensuring that State supported high-tech projects will continue to operate more effectively and with transparency, integrity and accountability, and assumes control of the operations of Fuller Road Management Corporation (FRMC) and Fort Schuyler Management Corporation (FSMC). It is to be led by Dr. Douglas A. Grose, a veteran industry executive and former CEO of GLOBALFOUNDRIES, with a board that will include the President & CEO of ESD and SUNY Chancellor as non-voting members.

NY CREATES will be headquartered in Albany on the SUNY Poly campus and serve as a resource for high-tech universities, companies and industries within the state by:

- Identifying promising R&D and high-tech development projects;
- Soliciting State, Federal and industry resources to fund projects;
- Collaborating with ESD to negotiate project terms and commitments;
- Developing, operating, maintaining and leasing high-tech assets;
- Contracting with university and industry partners to deliver projects; and
- Partnering with SUNY and other New York State universities to ensure that projects foster education, research, and workforce development benefits.





## STUDENT LIFE

### Residential Life and Housing Highlights:

- Interest in the Resident Advisor positions continues to grow. About 14% of our residents applied for RA positions the following year (about 74 of them); we had four candidates for every open position;
- Residence Halls remain at capacity with FY residents exclusively in triples; programming and attention to RA/resident relationships reinforced increased retention rates;
- Monthly Coffee House programs within the Residential Life Suite builds community amongst faculty and staff, and reinforces support systems for students.

### Athletics and Recreation Highlights:

- Intercollegiate Athletics had a record number of students participating on teams; 221 student athletes.
- In recent years, Athletics has taken the initiative and implemented strategies to assist student athletes with their academic progress. These initiatives have made a difference for our student athletes and shows in their overall performance.
- A record number of student-athletes were honored for their academic success this past year:
  - Overall average fall term GPA: 3.01
  - 34 President's Excellence List (3.80+)
  - 24 President's Achievement List (3.60 – 3.79)
  - 46 Dean's List (3.20-3.59)
  - 121 student athletes (more than half) were above a 3.0 GPA
  - Four Year Graduation Rate is 70% for 2013 cohort
- FY Retention Rates of Student Athletes exceeds institutional average—82%
- SUNY Poly's Men's Cross Country Team won its 5<sup>th</sup> consecutive NEAC Championship; and five-time "Coach of the Year Award" was awarded to Head Coach Bill Tylutki.
- Khristajah Jackson was named NEAC Player of the Year, an NEAC First Team All-Conference Selection, and she made the D3Hoops All Region Second Team.
- Men's basketball player Kevin Williams was named the NEAC Player of the Year and made NEAC First Team All-Conference, D3hoops All-Region First Team, NABC First Team All-District, and was a SUNY Chancellors Scholar-Athlete.
- The SUNY Poly men's lacrosse team set a new single season wins record.

### Wellness Highlights:

- The Wellness Center returned to their Campus Center home following a \$1.4M renovation. The new facility houses medical, counseling and health education services. A relaxation room equipped with a massage chair, essential oils and other relaxation accoutrements are available to students.



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- SUNY Poly was proud to be selected as a site for SUNY’s Tele-Counseling/Psychiatry Pilot Program Grant with Upstate Medical University—the service was greatly needed and provided our students with a different modality, via teleconference to obtain psychiatry and/or counseling services.
- SUNY Poly’s annual College and Community Wellness Expo took place in the spring with over 140 health related exhibits. This event was in collaboration with SUNY Poly and MVCC’s Nursing Departments as well as the Central New York State Office for People with Developmental Disabilities. Hundreds of students, faculty, staff, and community members attended the event.

## Student Activities Highlights:

- SUNY Chancellor Kristina M. Johnson presented 249 SUNY students from across the state with the 2018 Chancellor’s Award for Student Excellence. SUNY students, their families, campus presidents, and faculty convened in the Albany Capital Center to congratulate this year’s awardees. Among the nearly 250 recipients were SUNY Poly students Celine Fucci of Cortland Manor, NY, and Kumari Regmi of Utica, NY.
- Many well-attended and high traffic events (i.e. Dave Coulier from Full House, record Pancake Breakfast attendance with faculty and staff involvement, Student Recognition Banquet)
- Diversity programming included a Community Town Hall with Patrick Johnson and Veronica Tichenor opening a dialog amongst faculty, staff, and students; Nivea Cavic presented to a standing room only crowd of students, faculty, staff and community members on *The Importance of Diversity on College Campuses*.
- Alex Sheen, Founder of *Because I Said I Would* powerfully addressed SUNY Poly’s FY Class of 2021 as part of First Year Seminar challenging them to make and keep promises. *Because I Said I Would* is “a social movement and nonprofit dedicated to the betterment of humanity through promises made and kept.” This was Alex Sheen’s second visit to the SUNY Poly campus.
- The Women Who Inspire initiative started as a recognition luncheon (*which grows in attendance every year*) and has expanded to brown bag sessions, community book readings and receptions. The ability to gather and talk about women at work, life goals, professional competency and being a wife/mother/family member with other women has provided ongoing support and networking.
- SUNY Poly online MBA student Lucas Martin and Interdisciplinary Studies student Hayley Breeyear joined others from across the SUNY System to help with recovery efforts, fixing roofs and making structural repairs in hurricane-ravaged Puerto Rico.
- SUNY Poly’s Utica campus community came together to take part in “Yards for Yeardeley” an event that challenges people to walk, run, and roll toward a campus goal of 1,000,000 yards. Overall, volunteers surpassed that goal, completing 1,067,069.6 yards to raise awareness around violence stemming from relationships. The event was in honor of Yeardeley Love and others who have lost their lives to violence related to a relationship.



## SUNY POLYTECHNIC INSTITUTE

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- More than 100 student-led teams from across New York State pitched their business ideas as they sought to take home one of 18 overall prizes being offered at the 9th annual New York Business Plan Competition (NYBPC) Final presented by SEFCU, which was held at SUNY Poly in April. The road to the 2018 NYBPC Final included local competitions in each of the 10 economic development regions of New York State; the top teams from each region advanced to the final round of the statewide competition where they went head-to-head for the \$25k grand prize.
- Creativity, invention, and resourcefulness came together as SUNY Poly and Sculpture Space teamed-up to host the Mohawk Valley Mini Maker Faire at the SUNY Poly Student Center in Utica in April. The Mohawk Valley Mini Maker Faire is a celebration of the creativity, ingenuity, and diversity of makers throughout the Mohawk Valley region. The 2018 event was a community-based collaboration between SUNY Poly and a growing range of individual makers and participating institutions that included Sculpture Space, thINCubator, Munson Williams Proctor Arts institute, The Community Foundation of Herkimer and Oneida Counties, and the Utica Children’s Museum.