

WINTER 2023

NJIT
MAGAZINE

RISE OF THE RESEARCH UNIVERSITY

'ASÍ SE HACE' (THIS IS HOW YOU DO IT)

AN ENGAGED FORCE

STUDENT VOLUNTEERS BREAK RECORDS IN SERVICE



SOARING TO NEW HEIGHTS

My first six-plus months as NJIT's president have been an amazing experience, and our university has exceeded my expectations time and again. I have attended hundreds of events and meetings where I have had the opportunity to meet NJIT students, alumni, faculty, staff, and friends, as well as corporate and government partners. In doing so, I have enjoyed the opportunity to hear their individual and collective NJIT stories, learn about their experiences and better understand their passion for NJIT.

In this issue of *NJIT Magazine*, you will join me in learning the NJIT stories of several community members. Our Abstracts section highlights research advancements, a record-setting Career Fair and the dedication of the Lenda and Vince Naimoli Turf Room. Our features spotlight the first recipients of the Hispanic and Latinx Leadership Council Scholarships as well as the incredible work of our community-engaged Department of Public Safety, in addition to the truly impressive volunteerism of our students. We also chronicle the rise of NJIT to its current status as a premier research university. This issue also introduces the winners of our Overseers Excellence in Research awards, profiles the work of a faculty member who garnered an Edison Patent Award and marks the anniversary of the establishment of the Hillier College of Architecture and Design.

I feel incredibly fortunate to be leading our great university. "NJIT Makes" is a phrase we frequently use to describe the soul of this institution, because we are a community of individuals who make things happen, make things better and make opportunities possible. The NJIT stories in this issue, as well as the thousands I have heard in recent months, are those of makers and innovators. I hope you enjoy reading them! ■

Sincerely,

NJIT MAGAZINE

Winter 2023

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On the Cover: NJIT's Life Sciences & Engineering Center is a \$19 million state-of-the-art research facility, of which approximately \$13.5 million was funded by the State of New Jersey Higher Education Capital Facilities Grant Programs and the remainder by NJIT.

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A NEW METHOD TO TEST PROTEIN-BASED DRUGS

Conventional methods for testing and producing protein-based drugs are time consuming and costly. NJIT researchers have unveiled a new technique that could get the work done in a fraction of the time.

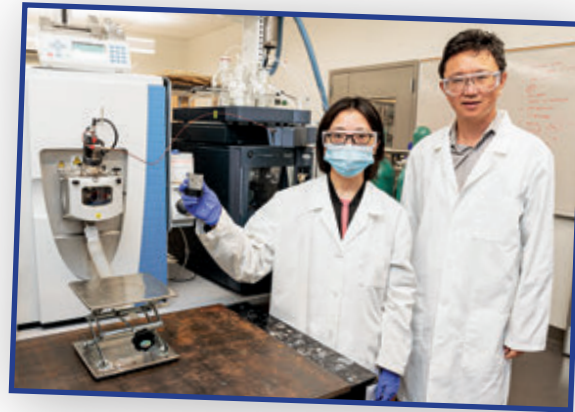
The electrochemistry technique was described in the journal *Analytical Chemistry*. The paper's first author was NJIT Ph.D. chemistry student Yongling Ai. The technique could enable safety and quality testing of up-and-coming biotherapeutics to be done more rapidly than by current methods, which typically require the lengthy and costly production of certain biomaterials used for sample testing. Protein-based drugs, such as therapeutic monoclonal antibodies, are developed to treat a variety of diseases — from cancers to infectious diseases.

"This method we've developed at NJIT

has the potential to have a major impact in quantitative proteomics, and it represents a paradigm shift in the pharmaceutical industry in terms of monitoring biopharmaceutical product and process impurities for quality control," said Hao Chen, professor of chemistry and environmental science and the paper's co-author, with Professor Young-ick Kim.

Traditionally such testing, or protein quantitation, involves the time-consuming preparation of synthetic isotope-labeled peptides which are used as internal standards to measure total protein concentrations in a sample — helping researchers actively monitor the efficacy and safety of therapeutic protein components throughout the drug development process.

"We've now demonstrated an approach



NJIT chemists Yongling Ai and Hao Chen.

that can quantify drug product and process impurities much more quickly and accurately than had been possible," Chen added. "We expect it to become very useful to facilitate therapeutic protein and vaccine development for treatment and prevention of different diseases in the future."

The study was conducted in collaboration with researchers from Merck, Johnson & Johnson and Ohio University, and was supported by a \$379,397 grant from the National Institutes of Health. ■



AR COULD HELP TRAIN CARETAKERS FOR THE ELDERLY

With the world's population of geriatric patients growing faster than the number of people trained to care for

them, NJIT Assistant Professor of Informatics Salam Daher thinks that augmented reality technology may help close the gap.

Daher and her students are prototyping a digital model of an older person that is aware of its feelings and environment. Existing models only cover

physical aspects, so they're breaking new ground with a patient simulator that teaches caretakers about the emotional and psychological aspects of their daily work.

"We want to do training that improves communications, empathy and perceptions," Daher said. "We want to create a proof of concept for this type of training and use it to investigate if it makes a difference."

The project will also be significant for

pushing the limits of augmented reality. Daher said the software that the team is developing will enable the virtual patient to remember conversations or take actions such as turning off a television when a nursing student enters the room.

"It's a new class of virtual agents," she added. "They may make comments that give the illusion that they're aware of you or the environment around them."

Daher is a specialist in healthcare simulation who previously developed mock patients using digital assistants, interactive video and physical models. Her latest work is funded by a \$110,000 grant from the National Science Foundation. Her co-principal investigator is Distinguished Professor Julie Ancis and collaborators include the University of Delaware and University of Central Florida. ■

CAREER FAIR DRAWS A RECORD CROWD

NJIT's fall Career Fair — its first in-person fair since the onset of the pandemic — set dual records for attendance, with more than 2,500 students and 233 companies participating.

The companies spanned a broad array of sectors and included Verizon, Pfizer, Turner Construction, Accenture, Merck, Marsh McLennan, L'Oréal and Johnson & Johnson. Collectively, they offered some 445 jobs, internships and cooperative educational experiences, according to NJIT's Career Development Services, which organized the event.

The appeal for students was clear, with hundreds of opportunities to apply their talents in the real world. "There was so much

information, so much networking. It was very helpful," said Lillian Anderson '24, a biomedical engineering major. "It was very beneficial to talk to [so] many companies."

Equally clear is that NJIT students are coveted by employers. Here's what a few company representatives — including some NJIT alumni — said about Highlanders whom they interviewed.

"We found so many good, quality students," said Bobby Kalpouzos '14 of engineering firm ANS Geo. "They were very well-prepared: they knew their pitches, what they were looking for, what they could contribute and what they wanted from our company."

"We always get great talent from NJIT," said Dhruv Parekh '18 of Merck. "As a graduate myself, I'm so impressed by how



much this event has grown, and how much the student interest has increased."

Yancy Adham of Getinge, a supplier of medical products and services, said that she "loved having the reverse recruiting event the same day," where students set up tables to pitch themselves to employers. "It was a wonderful way for us to connect with them, especially with our initiatives rolling out next year." ■



NJIT Gathers for Dedication of the Lenda and Vince Naimoli Turf Room

As part of the 2022 Homecoming festivities, the university held a ribbon-cutting ceremony for the Lenda and Vince Naimoli '62, '09 HON Turf Room.

Lenda Naimoli and her sister Glenda Young, President Teik C. Lim and First Lady Gina Lim, President Emeritus Joel S. Bloom and First Lady Emerita Diane Bloom, Athletic Director Leonard Kaplan, Vice President for Development and Alumni Relations

Ken Alexo, athletics staff and student-athletes were among the attendees.

Vince Naimoli, who passed away in 2019, attended Notre Dame as an undergraduate on a Navy ROTC scholarship before earning double master's degrees at NJIT and Fairleigh Dickinson University.

During the dedication, Lim highlighted the sustained generosity of the Naimoli family,

whether it was through scholarships or the Naimoli Family Athletic and Recreational Facility, home of NJIT's men's and women's varsity tennis programs, since 2011.

"Vince was always ready to help the university whenever he was asked," said Lenda. "He served on the NJIT Board of Overseers for over a decade and attended and hosted countless alumni events in our home in Tampa, Fla."

"I know Vince would be profoundly humbled by having this place named for him. Vince and I shared a large portion of our lives with each other. One of the best things he shared with me was his great fondness for NJIT and New Jersey."

Located on the third floor of the Wellness

and Events Center, the Naimoli Turf Room is an indoor training facility for NJIT student-athletes, especially the men's baseball team, men's and women's soccer teams and men's lacrosse team.

"Vince just loved his baseball, to be honest with you," said Kaplan. "He founded the Tampa Bay Devil Rays, which are now Tampa Bay Rays. We built this facility so we can run an infield, have batting practice, have pitching practice and everything."

Kaplan knew Naimoli for 15 years and highlighted his support for the university to move to Division I. Naimoli believed NJIT students could succeed academically and be good at athletics. The combined average GPA of a Highlander student-athlete has been higher than a 3.0 now for 27 straight semesters.

"There's a term about giving time, talent, treasure," said Kaplan. "It's a fundraising term, treasure being money, time [being] donating your time, and talent, you know, mentoring kids, and that's what he did."

"So anytime he was on campus visiting, he would always sit with the student-athletes, anybody, and tell them the story a little bit. He was a hard-working guy from Paterson, so [he would say] put in the time, get your degree and work hard." ■

CONFERENCE RECOGNIZES SOCCER STANDOUTS

The America East Conference selected midfielder Maximus Barboto as Rookie of the Year and named six Highlanders to all-conference teams.

Barboto, from Wayne, N.J., played in every match, tallying four assists. His play also earned him two Rookie of the Week awards and a place on the All-Rookie Team, along with fellow first-year players Andrea Campoli and Hugo Tavares.

Tavares, a midfielder from Porto, Portugal, started all 16 matches, totaling three goals and six points. Campoli, a defender from Rome, appeared in nine matches, including eight starts.

The other conference honorees were goalkeeper Samuel Reisgys, who made the All-Academic Team, women's soccer team defender Siani Magruder, who made the All-Conference Second Team, and women's soccer team defender Riley Jones, who made the All-Rookie Team.

Reisgys, a senior from Rimbach, Germany, posted a 1.59 goals-against average, a saves percentage of .701 and 235 career saves — the most of any NJIT keeper since soccer joined Division I. At the same time, he maintained a 4.0 GPA as a business major and made the Dean's List six times.

Magruder, a graduate student from Egg Harbor Township, N.J., helped hold opponents to a scoring average of 1.11 (third in the America East) and just 20 total goals (also third best) while shutting out opponents six times.

Jones, a first-year student from Clinton, N.Y., played in eight matches, starting the last five and increasing her minutes in each contest until she played a full 90 minutes in each of the last four, tallying two goals and an assist. The strong finish earned her Rookie of the Week twice. ■



Maximus Barboto



Siani Magruder



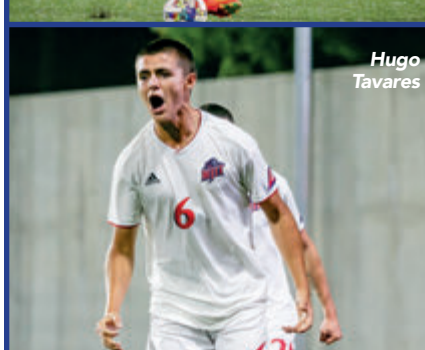
Andrea Campoli



Riley Jones



Samuel Reisgys



Hugo Tavares



Photo: NJIT Athletics

PLAYS BIG ON YouTube, TOO

Women's Basketball sophomore forward Trinity Williams parlayed a fun interview during her first season into a video series on YouTube.

"T'ed Up with Trinity Williams," which debuted in November, showcases her quick wit and infectious smile as she goes behind the scenes of the Highlander program. The first episode, for example, revealed the go-to snacks and pre-game rituals of teammates like Kennedy Cash and Kendle Dalrymple.

Williams, who's from Upper Black Eddy, PA, is majoring in cyberpsychology. ■

Photos: NJIT Athletics



EMIL MAZZARELLA '52, '58 AN ELECTRICAL ENGINEER LEAVES A LEGACY



WHEN EMIL MAZZARELLA WAS A YOUNG MAN, HE DREAMED OF being a cowboy, a television entertainer, or an electrical engineer. His technological curiosity, love of tinkering, and practical nature eventually won out, and Emil enrolled in the electrical engineering program at Newark College of Engineering (NCE).

Like so many from his generation, Emil was called into military service upon his graduation from NCE in 1952. Emil proudly served for a total of 10 years in the United States Army, ultimately returning to New Jersey to pursue a career with Western Electric. He spent his entire career in the telecommunications industry, retiring from Lucent in 1996. Emil was an outstanding friend and a mentor to his colleagues, and he attributed his professional success to the education he received while at NJIT, then Newark College of Engineering.

Out of gratitude for his time at NJIT, Emil made a generous gift to the university through his estate plans. Emil's estate commitment will establish two separate graduate fellowships, plus an endowment for campus beautification projects.

The *Emiliano A. Mazzarella '52 Ph.D. Fellowship in Biomedical Engineering* will provide support for a graduate student pursuing a doctoral degree in biomedical engineering. The *Emiliano A. Mazzarella '52 Ph.D. Fellowship in Traumatic Brain Injury* will support a doctoral student who is conducting research under the university's Center for Injury Biomechanics, Materials, and Medicine at NJIT. Finally, the *Emiliano A. Mazzarella '52 Beautification Fund* supports the landscaping needs of the greenspace outside the Central King Building.

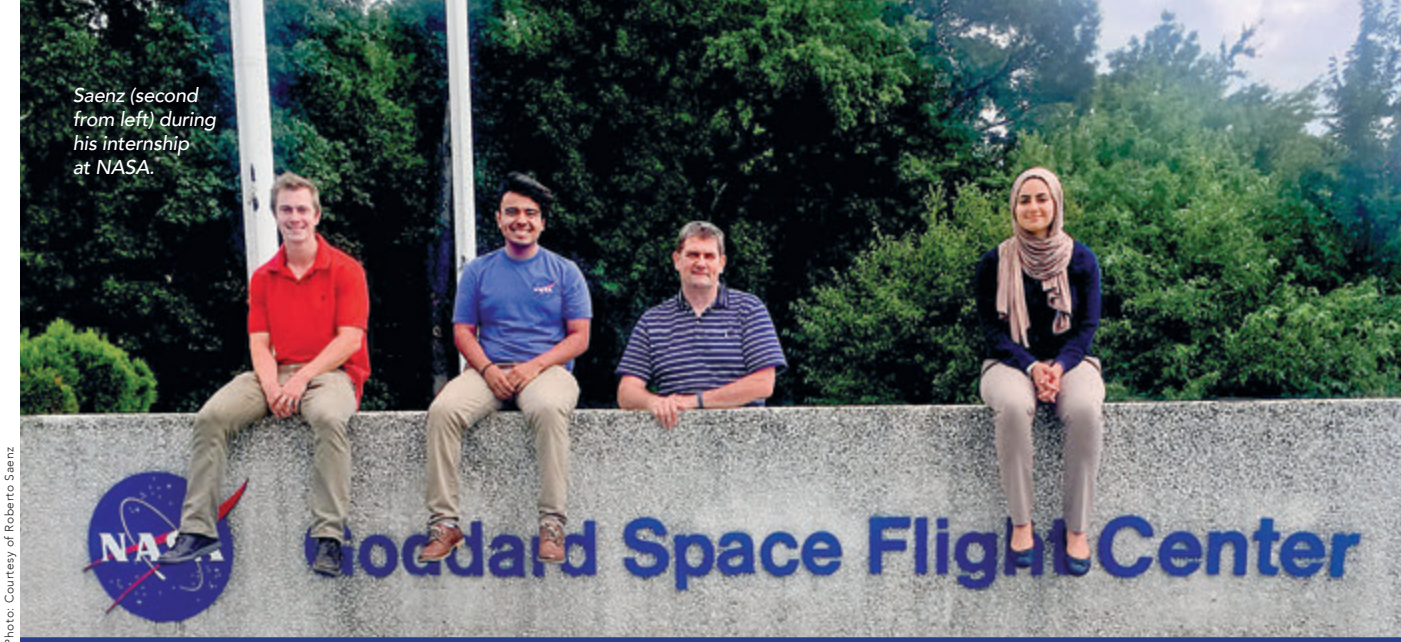
To learn more about the legacies created at NJIT by Emil and other members of the 1881 Society, please visit "Donor Stories" at njit.giftplans.org.

For further information on the 1881 Society or about how to include NJIT in your estate plans, please contact:

Beth S. Kornstein
Associate Vice President, Leadership and Planned Gifts
973-596-8548
bkornste@njit.edu • njit.giftplans.org



Your legacy begins today.



Saenz (second from left) during his internship at NASA.

Photo: Courtesy of Roberto Saenz

‘Así se Hace’

Hispanic and Latinx Leadership Council Awards First Scholarships

By Nayib Morán

Roberto Saenz’s dream to work at NASA and build his own spacecraft started when he watched the “Discovery Channel” as a child. Now, the first-generation Mexican American from Union City, N.J. is turning those dreams into a reality.

This past fall, the mechanical engineering major was supported through a first-ever scholarship awarded by NJIT’s Hispanic and Latinx Leadership Council (HLLC). The award helps outstanding Hispanic students pay tuition, fees, room and board.

“Being awarded the scholarship means a lot to me because ever since I started school here at NJIT, I made sure to put more of myself into my studies and into the Society of Hispanic Professional Engineers,” said Saenz. “Since my parents weren’t able to complete their education, I want to make sure I can complete my education and continue pursuing my own goals and community outreach efforts on the side.”

The HLLC is an 11-person council composed of leaders in business and community advocacy, including seven alumni, that advises, counsels and supports

NJIT’s drive to increase its percentage of Hispanic and Latinx undergraduates. The group also seeks to deepen relationships with Hispanic and Latinx alumni, businesses and organizations.

The HLLC held its first *Café y Conexiones* event to kick off this year’s Hispanic Heritage Month at NJIT. Launched in January 2022, *Café y Conexiones* brings together NJIT’s Hispanic and Latinx students with HLLC members, alumni, and business and civic leaders during the academic year.

The first event of 2022 included New Jersey Senator Teresa Ruiz and a conversation between President Teik C. Lim and alumnus Ruben Esquivel ’71. During the event, the HLLC scholarships were awarded to Saenz and Giovanni Martinez-Gonzalez, a second-year student studying communication and media.

“This award is incredibly important to me as I have learned and felt the struggle that my parents, and their parents before them, felt in order to give us a brighter future,” noted Martinez-Gonzalez. “Apart from this scholarship, there have been

others that I’ve been awarded.”

Angelica Ogando ’02, MBA ’11, HLLC co-chair, said the HLLC board wants to help make NJIT a Hispanic-serving institution. She’s happy that enrollment numbers for incoming Hispanic students have grown to 30% in NJIT’s largest-ever first-year cohort. For Ogando, the scholarship event was a “full circle moment.” As a student she was thrilled to receive a scholarship, but at the time there was no group like the HLLC to help her make connections.

“I was able to give back to the students through the HLLC. For me, right there, the work has been done making sure that Latino students are receiving the funding and resources they need to be successful at NJIT,” Ogando said.

Saenz is currently in his second year at NJIT after transferring from Passaic County Community College. Although he had the opportunity to study out of state, he elected to remain in New Jersey to be close to friends and family and because NJIT offers a rigorous engineering program ranked in the top 100 nationally.

As the eldest of his siblings, he’s one of his family’s anchors. “I didn’t want to go out of state for university because I wanted to be there for my family. I am one of the financial pillars at home, so I want to make sure that they have the support they deserve,” said Saenz.

Once he graduates, Saenz wants to enter the space industry after obtaining a Ph.D. in aerospace engineering with a focus in space exploration and earth monitoring.

He still remembers those early days when his uncle first showed him the “Discovery Channel,” Saenz recalled, “He would come to our apartment, and he introduced us to the channel. And from there, I saw a bunch of documentaries with him and my family, which are some of the best moments growing up because it was like, ‘Hey, we can do this!’”

One of the documentaries that impacted him most showed how NASA builds space shuttles, and in 2019 he interned at NASA with eight other students from Passaic County Community College.

To experience that internship further motivated Saenz to become an example for other young Hispanics who can look up to him and feel confident that landing a job at NASA is possible.

“I want to be able to shift that perspective and encourage and motivate other Hispanics and show them, *asi se hace* (this is how you do it) and *si le echas ganas* (if you put in the work) anything is possible,” he said.

Saenz is especially interested in community outreach and pre-college efforts, and it’s one of the reasons why he’s the director of Community Outreach for NJIT’s Society of Hispanic Professional Engineers.

Saenz said he always saw his mother giving back. “It’s something I developed growing up because I saw my mom constantly trying to help out others, especially from an early age.”

“I’ll make sure to instill those characteristics that she has in helping others out,” he added. “Doing things with love, not just helping out because there’s something in it for you, but because you actually want to help out to make a change.”

As he keeps climbing, he always takes the time to remember how important his mom and family’s sacrifices have been for him to achieve his goals.

“They’re the reason,” he said. “I just want to make my mom proud. All the stuff she sacrificed, it was a lot, but I’ll make sure it’s worth it. This is for them.” ■



A LEADING VOICE FOR DIVERSITY

By Andrew McMains

New Jersey Institute of Technology has tapped David E. Jones, a leader in diversity, equity, inclusion and belonging (DEIB) in higher education, to become its first chief diversity officer.

Jones, who started Dec. 1, comes from William Paterson University, where he had been chief diversity officer since 2020. On his watch, the university established scholarship opportunities for diverse students; developed a predoctoral fellowship program to improve faculty of color representation; launched a monthly Community Dialogue Series for faculty and staff; conducted workshops on unconscious bias; race and gender identity; issued a land acknowledgement statement and created a Council for Equity and Justice, which Jones chaired.

Before William Paterson, Jones was director of the Paul Robeson Cultural Center at Rutgers University in New Brunswick, where he oversaw a mentoring program for Black undergraduates and earned the Dr. Martin Luther King, Jr. Staff Service Award. Jones also teaches DEI modules to senior leaders via The Equity Institute — a remote program at the University of Southern California Race and Equity Center — and has written about DEI issues in publications such as the *Journal of Higher Education Management* and the *Journal of College Student Development*.

At NJIT, Jones assumes a high-level, multi-faceted role as the university strives to deepen diversity across all its ranks, foster belonging for students, faculty and staff on campus, and earn the federal designation of being a Hispanic-serving institution. Such initiatives flow from NJIT’s strategic plan, which seeks to redouble efforts to enroll women and underrepresented minority students, attract and retain diverse faculty, and hire and promote diverse administrators.

“David is ideally suited for this role, given his 15 years of experience as an administrator, educator and consultant in diversity, equity and inclusion,” said President Teik C. Lim. “I’m particularly struck by his energy and enthusiasm for creating an inclusive campus climate here in Newark, in which every individual can thrive.”

The university’s DEIB initiatives encompass surveying, research, training and recruitment, with everything from college prep for Newark high school students to diversity leadership training for undergraduates. There is also a management training partnership with McKinsey & Co. and research into the online harassment of female and LGBTQ live streamers. Ultimately, the goal is to serve students.

Jones, who holds an Ed.D. in organizational leadership and communication from Northeastern University and a master’s in education in college student affairs from the University of South Florida, worked closely with students at the Robeson Cultural Center and earlier, as director of residence life and student conduct at the City University of New York. Indeed, his career is rooted in student experience.

“My lived experiences have informed my career and life’s work,” Jones said, adding, “I’m eager to blend those experiences as the chief diversity officer at NJIT.”

AN ENGAGED FORCE



From left to right: Lieutenant Joshua Sanders, Deputy Chief Mike Villani, Chief Kevin Kesselman, Lieutenant James Casey and Sergeant Raheem Denson.

Department of Public Safety Launches New Era of Programming & Outreach

By Theta Pavis

Chief Kevin Kesselman has a lot of plans for changing the way NJIT Public Safety officers engage with the community. In fact, the whiteboard in his office — nicknamed the “think tank” — barely has any space left for his team’s latest ideas.

Kesselman, a friendly, energetic man who’s been with the department for 21 years, takes a positive approach to policework. He doesn’t want his team to think about what they do as “community policing,” but instead shift their focus to community engagement. Since being named chief last year, he’s instituted a wide range of initiatives all aimed toward that new perspective. In his short time at the helm, Kesselman has created a first-ever Diversity and Inclusion Division inside the department, plus numerous other committees to get more buy-in from the entire community. While he definitely stays up to date on best practices in policing, his secret weapon may be that he’s a good listener.

At the weekly command meetings with his deputy chief and lieutenants, Kesselman said the team asks each other what they can do better. “It needs to be a holistic approach. I can’t come up with all the answers.”

That sentiment goes beyond headquarters. For example, Kesselman recently had his Community Engagement Commander, Lt. Josh Sanders, reach out to the deans of each college. “I want to know what they need from us. I don’t want to make decisions for them,” he said. “That’s real engagement.”

Kesselman aims to produce more programs with faculty and staff but wants to build them slowly so people can get used to the idea of collaborating. What he’s heard in initial meetings, he said, is that staff and faculty are interested in safety programs, which can include training people to be more aware of their surroundings and reducing theft. “I see the deans and faculty as becoming partners,” said Kesselman, “to help us reach their students and staff members and for us to be doing events together.”

In February, the chief is planning a roundtable on domestic violence and sexual assault hosted by his department, with six survivors coming to share their stories. In the past, he said, such programming would have been geared just to students, but it will now be open for everyone, including alumni. Additionally, NJIT will hold a Take Back the Night program in the summer.

Kesselman’s outreach efforts seem to be paying off. Last fall, the department’s Meet and Greets reached 2,000 people and offered opportunities to connect the NJIT community with officers through conversation, meals, the chance to check out a police cruiser and games such as cornhole and “police officer bingo.”

“We’re working toward changing the work culture in policing by transforming from a more traditional autocratic leadership style to more appropriate servant leadership within the department,” he said. “When autocratic leadership is embodied within a police department, we

have created generations of stern, less accommodating police officers. By living the principles of servant leadership within the department of public safety, our officers will be more engaging and portray a more service-oriented demeanor to our community.”

Kesselman has many other initiatives underway, these include:

- Focus groups with students, faculty and staff. A recent event centered on traffic issues. “We were able to hear great feedback and give good responses,” Kesselman said. “Based on that kind of interaction, eventually we want to hold a town hall meeting.”
- Building other committees, including Community, 30 x 30 (a national effort to have 30% women officers in all ranks by 2030), Mental Health/Physical Wellness and a Retention committee.
- Tabling to educate the campus about theft prevention has been moved outside of the Campus Center and onto the streets, so officers can reach more people.
- The One Up Program aims to increase retention among the 89-member staff. This program lets an officer spend a week as a sergeant, or a sergeant as a lieutenant, so they can understand “what the next level up brings you in the field.”
- A Lateral Transfer Program will allow officers from other departments to come to NJIT.
- Accreditation through the International Association of Campus Law Enforcement Administrators is underway. This goes beyond the department’s current accreditation with the New Jersey Association of Chiefs of Police.
- The Junior Police Academy: A week-long summer program that introduces Newark middle schoolers to public safety and features drills, swimming and field trips, such as to the American Dream Mall. Additionally, Kesselman wants to create an ambitious six-week summer program



Public Safety officers take some time to connect with NJIT community members during a Meet and Greet event this past fall.

for high school students. “Engagement to me isn’t just engaging with NJIT but with the surrounding community — we have to build partnerships.”

- Rape Aggression Defense Systems (RAD) self-defense classes, offered twice a year for students, will potentially be expanded to faculty and staff.
- Upgrading 911 services; in the next year and a half Kesselman plans for NJIT to be one of the first in the state to offer expanded 911 services, such as text messaging.
- Going green — with 30% of its patrol cars electric by 2025. E-bikes will also be added to the mix.
- Working closely with NJIT’s Center for Counseling and Psychological Services, to ensure that the mental health and well-being of the entire community is a top priority. “Through all of our engagement, we reduce crime without having to use the old ways of policing where you are out there stopping people who you think are committing crime. Policing doesn’t need reform, it needs transformation,” he said. ■



A Community of SCHOLARS



An Engineer and a Mathematician Win Honors at NJIT's 2022 Excellence in Research Ceremony

By Tracey L. Regan



Engineer Michel Boufadel, one of the world's chief experts on oil spills and a frequent consultant on cleanups, won the Board of Overseers Excellence in Research Award for 2022. Denis Blackmore, a mathematician who specialized in measuring and modeling changes in a range of dynamic systems, was honored posthumously with the Board of Overseers Excellence in Research Lifetime Achievement Award.

Atam Dhawan, NJIT's interim provost, called the two esteemed and influential awardees "path-breaking researchers," enthusiastic collaborators who figured out early on that the best way to solve complex problems was to join with peers in other disciplines.

Blackmore, he noted, collaborated with engineers to take on challenges in industry, such as particle compaction, to give one example. Boufadel works regularly with computer scientists, statisticians, emergency response specialists, biologists and other engineers on research projects and on prominent scientific committees focused on spills and remediation methods.

A distinguished professor of civil and environmental engineering at NJIT who focuses on environmental fluid mechanics and hydrology, Boufadel tackles unanswered questions about the mechanics of spills and

the effectiveness of remedial methods. He has played a central role in determining new ways to track and measure major oil spills, including releases from the Exxon Valdez, a tanker that ran aground in Prince William Sound, the Deepwater Horizon, a burst well in the Gulf of Mexico, and the Enbridge pipeline in Michigan in 2010, which spewed more than a million gallons in the Kalamazoo River.

In a 600-foot-long saltwater wave tank on the coast of New Jersey, he and a team of NJIT researchers conducted the largest-ever simulation of the Deepwater Horizon spill. His team determined that the use of dispersants had a substantial impact on air quality in the region of the spill by reducing the amount of toxic compounds such as benzene that reached the surface of the ocean, thus protecting emergency workers on the scene from the full brunt of the pollution.

Boufadel's interest in fluid mechanics is not restricted to spills. In the early days of the COVID-19 pandemic, he and a team of environmental engineers and modelers studied the virus's pathways inside supermarkets. He and colleagues at NJIT, Princeton and Duke later developed a model that predicts where the disease will spread from an outbreak, in what patterns and how quickly. That paper was published in *Proceedings in the National Academy of Sciences*.

Boufadel has served on six National Academy of Sciences committees on oil spills, as well as a committee of the Royal Society of Canada, and has so far obtained \$13 million in funding from national and international agencies to pursue his research.

In remembering Blackmore, it was noted that he was a founding member of the university's Center for Applied Mathematics and Statistics. Blackmore, who was widely admired as a "renaissance mathematician," taught for a remarkable 50 years at NJIT

and played a significant role in helping the Department of Mathematical Sciences become one of the best-recognized applied mathematics departments in the U.S. He passed away in April of 2022.

While his focus was on dynamical systems, he also made significant contributions to a number of other fields, including differential equations, differential geometry and topology, as well as more applied areas, such as fluid dynamics and granular media.

In a paper published in *Chemical Engineering Science* in 2002, Blackmore and his collaborators provided one of the first clearly formulated, quantitative explanations of the role that vibrations have on size segregation and compaction of granular matter, which is useful in many industries.

Blackmore authored or co-authored 134 peer-reviewed journal articles and more than 68 refereed conference papers and wrote six books and 10 book chapters. Recently, he served as the president of the Faculty Senate during the COVID-19 pandemic.

Blackmore supervised 16 Ph.D. students and more than 20 master's students for their dissertations and served on over 50 Ph.D. committees. He developed or co-developed over a dozen new courses and played a pivotal role in the development of bachelors, master's and Ph.D. degree programs in his department.

Linda Cummings, a professor of mathematical sciences and a longtime colleague who accepted Blackmore's award for him, recalled one of his Ph.D. students saying, "Denis knew how to balance guidance and independence for each student. If a student was stuck on a problem, Denis would work round the clock to help them solve it. On the other hand, if the same student wanted to come up with their own projects or solutions he would give them time and space to figure it out." ■

An NJIT Water Treatment Specialist Wins an Edison Patent Award

By Tracey L. Regan

In daily battles with pathogens, legacy chemicals from long disappeared factories and a growing array of micropollutants, water treatment systems are often handicapped by clogged membrane filters. Replacing them regularly is both laborious and expensive.

"Membrane filters are easily clogged when bacteria, natural organic matter and insoluble solids block their pores, aging and damaging them. They must be cleaned by intensive backwashing, sometimes involving strong chemicals," said Wen Zhang, an associate professor of civil and environmental engineering at NJIT who designs novel reactive membrane systems that degrade contaminants not captured or removed by standard filtration.

Zhang recently won a Thomas A. Edison Patent Award from the R&D Council of New Jersey for a novel technology that combats what's known in the industry as membrane fouling. His revolutionary technology uses microwave irradiation to catalyze reactions on the membrane surfaces, producing high-temperature hot spots and reactive radicals that rapidly degrade pollutants, kill microbes and mitigate membrane clogging.

His technology is the first to use microwaves to enhance catalytic reactions during membrane filtration. It has proved capable of destroying refractory micropollutants and viruses in both water and in airborne droplets.

His device is a microwave chamber with filtration membranes placed inside, which have embedded metal oxides as catalysts that facilitate chemical reactions with the water being treated when they are irradiated. The whole device can be as small as a kitchen



microwave oven or as large as a trailer, depending on the treatment capacity and other factors.

Zhang's Sustainable Environmental Nanotechnology and Nanointerfaces Laboratory creates devices that employ filters with functionalized membranes, where membrane surfaces are coated with contaminant-degrading nanoparticles or nanomaterials as catalysts that are activated by microwaves or electrochemistry. Once activated, the membranes serve as a highly reactive barrier to destruct water pollutants on contact, providing a self-cleaning filtration system that also mitigates membrane fouling issues.

In addition to microwave-activated membranes, he has also developed reactive electro-chemical membrane systems that are activated by DC power sent to the membrane surface and photocatalytic reactive membranes activated by external UV or visible light irradiation.

The micropollutants he treats, including chemicals in organophosphate flame retardants, pesticides, herbicides,

Wen Zhang is recognized for a novel technology that combats membrane fouling.



Left to right: Students Michael Biondi, Isabela Minutolo and Luna Alhallak while volunteering at the Quitman Street School in Newark.

Opposite page: Top photo: Student volunteers at the William A. Horton School, Newark. Left bottom: Volunteering in Asbury Park during Alternative Spring Break to clean-up storm damage. Center bottom: Breast Cancer Awareness Walk. Right bottom: Students volunteer at the Greater Newark Conservancy.

STUDENT VOLUNTEERS BREAK RECORDS IN SERVICE

By Tracey L. Regan

One of NJIT's most venerated traditions, the First-Year Day of Service, came roaring back to life in 2022 after a hiatus due to COVID. Nearly 1,330 of NJIT's newest Highlanders, the largest cohort ever in the history of the event, fanned out to volunteer at schools, parks and nonprofits.

New partners this year, including the Michelle Obama Elementary School, the Newark School of Fashion and Design, and Arts High School, matched students with particular needs. For the first time, for example, students majoring in interior design styled mannequins and decorated bulletin boards at the School of Fashion and Design. For many students, these experiences strike a chord that will resonate throughout their time at NJIT: the call to community service.

The vast majority this year helped Newark public schools ready their classrooms for students returning after the summer break. Teachers noted the difficulty of organizing their rooms, while fitting in meetings and professional development training, forcing many to stay late or come in over the Labor Day weekend.

"The partnership definitely helped. A LOT!" said one elementary teacher in feedback provided to NJIT's Career Development Services, adding, "We also shared information with the scholars about our school, our students and the students' needs. We talked to them about mentoring and tutoring during the school year if that is something they would be interested in and could balance with the rigorous program of NJIT. The students were fantastic!"

For one new foreign student, this year's outing provided the chance to "listen and see what art in the U.S. looks like and the way that the students present their art in the street. It was a really nice opportunity to get

involved in the culture and the friendliness of people in the U.S. in general and in New Jersey particularly."

Indeed, despite the logistical constraints caused by the pandemic, NJIT students managed to pack in thousands of hours of service over the course of the 2021-2022 academic year, some of it online, including work on websites. Together, 1,214 student athletes, Albert Dorman Honors College scholars, fraternity and sorority members, as well as others volunteered for about 37,000 hours at 186 community-based organizations.

"It's so important that students know that we have an office of community service," said Vivian Lanzot, director of civic engagement for NJIT's Career Development Services. "The First-Year Day of Service introduces students to the community they'll be part of for the next four years, connects them to nonprofits where they may want to work and shows them the university's commitment to Newark. While they're here, we're able to match them with needs in the community. This became

critical over the pandemic, which created a shortfall for so many nonprofits."

For many NJIT students, and future veterinarians in particular, opportunities to volunteer at New Jersey's Turtle Back Zoo are a building block of their career. Staff at the zoo say they appreciate the way college level volunteer events expand both the host and the students.

In March, NJIT will also celebrate the 10th anniversary of the Alternative Spring Break (ASB) launched in 2013 to help devastated New Jersey communities clean up, rebuild and preserve their heritage following Hurricane Sandy. Leading the charge in the metropolitan region, NJIT assembled a crew that spring of nearly 570 student volunteers who assessed damages, swept beaches and parks, and demolished and reconstructed wrecked homes and buildings, such as the 60-year-old SurfLight Theater in Beach Haven. About 1,700 students have participated in ASB since then.

The celebration will also generate important feedback on the professional and personal value of significant community service, Lanzot said. NJIT plans to invite students who were influential in establishing the program back to campus to hear from them how the experience influenced their lives after NJIT.

"The Alternative Spring Break continues to be a staple event and allows students that may not be traveling to spring break destinations, or even home for that matter, to stay engaged. Helping others is what we do as Highlanders and the ASB is an event that provides an avenue to do that." ■

Photos: Courtesy of NJIT's Civic Engagement Career Development Services



Students volunteer at the Turtle Back Zoo.





RISE OF THE RESEARCH UNIVERSITY

NJIT'S REMARKABLE PROGRESS

BY THETA PAVIS

NJIT has long been recognized as a polytechnic powerhouse, but in the past year its reputation has soared. How does an institution that's more than 140 years old keep innovating? It's a rare combination of groundbreaking research, engaged professors and a diverse and dedicated student body. Now ranked No. 14 in the nation on *Money's Best Colleges* list, NJIT has experienced remarkable success.

A FORCE FOR CHANGE

The fall 2022 first-year cohort saw nearly 1,600 enrollees, a 30% increase from last year's class. First-year enrollment totals for both men (close to 1,100) and women (almost 500) are the highest in NJIT's history.

RANKINGS & RECOGNITION

2023
U.S. News & World Report
Best Online Programs

TOP 50

- Best Online Master's in Information Technology
- Best Online Master's in Engineering

- #1 Public University in New Jersey - *Forbes*

- #11 Best Career Placement among Public Colleges and Universities - *The Princeton Review*

- In its annual ranking, *U.S. News & World Report* placed NJIT #8 in the nation for ethnic diversity among public universities.

- Georgetown Center on Education and the Workforce ranks NJIT the #1 public institution in New Jersey for Return on Investment.

- #14 Best Colleges for 2022 - *Money*

- R1 Research University Carnegie Classification®

- *Fortune* found NJIT's Martin Tuchman School of Management to have one of the best MBA programs in the nation.

- NJIT's impact on the State of New Jersey exceeds \$2.8 billion in total economic output each year.

- NJIT was the highest ranked public school among Top Schools for Entrepreneurship Studies in the Northeast by *The Princeton Review* and *Entrepreneur Magazine*.

- Top 100 National University - *U.S. News & World Report*



Biomedical engineer Tara Alvarez tests VR equipment used in the diagnosis and treatment of convergence insufficiency, an eye coordination disorder experienced by millions of concussion patients with lingering symptoms.

There are also new research centers on campus, such as the Paul Profeta Real Estate Technology, Design and

NJIT is also redoubling its efforts to enroll women and underrepresented minority students and attract and retain diverse faculty. A catalyst for applied research and innovation, the faculty at NJIT are known for their creativity and excellence. That's highlighted by the number of significant grants, awards and citations that professors bring home each year.

Highlanders also give back. A record number of alumni donors have made gifts. In fact, the percentage of NJIT alumni who made gifts last year is more than double the national median for public universities.

EXPLORATIONS & RESEARCH

Highlanders have access to programs ranging from STEM disciplines to architecture and design, as well as management and humanities. The bedrock of it all is the faculty who continue to do cutting-edge research and the staff who support them.

NJIT began 2022 with a reaffirmation of its status among the nation's most elite and productive research institutions — the highest designation, R1, under the Carnegie Classification® — following a triennial review. Individual faculty members followed suit by winning numerous accolades for their ingenious applied research.

Over the course of 2022, NJIT substantially strengthened its capacity to conceive,

develop and translate homegrown inventions into groundbreaking technologies and devices with unprecedented levels of investment in campus innovators and entrepreneurs.

Student researchers participating in the university's Undergraduate Research and Innovation (URI) program, for example, received more than \$780,000 to advance their work, including \$153,000 in Provost Summer Fellowships and more than \$60,000 from the Albert Dorman Honors College Summer Research Institute alone. With the guidance of academic mentors, they secured sizable awards from scientific funding agencies and other external partners.

A device that scans staged crime scenes into VR applications for forensic science students and a system to reduce wear-and-tear on gears and springs by using magnetic augmentation to create a near-contactless method of operation were two of the James Stevenson Innovation Award winners



Rajesh Davé leads a center that will improve pharmaceutical drug formulations, while developing ways to design and manufacture new drugs more simply and faster.

at the 2022 NJIT Undergraduate Summer Research and Innovation Symposium.

At the end of the year, NJIT's Office of Research launched the Technology Innovation Translation and Acceleration (TITA) program, NJIT's first strategic initiative to promote translational research, market validation and entrepreneurship for technology commercialization. The program provides seed grants in three phases of \$25,000 each, with total potential funding of up to \$75,000, for campus entrepreneurs with developed ideas and external partnerships. "We want to improve lives," said NJIT interim Provost Atam Dhawan. "We'll achieve this goal by ensuring our transformational technologies make their way into homes, businesses, communities and ecosystems."

The first round of project winners included a point-of-care device for the detection of diseases that spread between animals and people, such as SARS-CoV-2; a system that can objectively capture, visualize, measure and track skin abnormalities, including wounds and pressure

injuries; a rapid-screening point-of-care micro biochip to detect complex disease biomarkers for cancer and infectious diseases; and a device to deactivate airborne viruses using a microwave-enabled air filtration system.

Four young professors, all hired within the past six years, received multi-year Faculty Early Career Development (CAREER) grants from the National Science Foundation to further their research on solar flares, novel infrastructure materials, high-performance computing and the evolution and ecology of social insects. Described by the agency as one of its most prestigious and selective awards, these grants support early-career researchers with "the potential to serve as academic role models in research and education and to lead advances in the mission of their department or organization."

Veteran researchers won some of the highest awards in academia, including induction as fellows into eminent societies, such as the Association for Computing Machinery, the Royal Society of Chemistry and American Institute of Chemical Engineers (AIChE). Rajesh Davé, a distinguished professor of chemical and materials engineering, won AIChE's PD2M Award for his outstanding contributions to pharmaceutical research.

With the election of Tara Alvarez, distinguished professor of biomedical engineering, to the National Academy of



Left: Students volunteer at NJIT's Rooftop Therapy Garden on campus. Right: Record-setting attendance at the Career Fair.



Photo: Andy Frame Photography on behalf of RISE

Above: Opened in Fall 2022, Maple Hall offers apartment-style living.



Left: Students cheer the women's basketball team at a home game. Right: NJIT students learned about Makerspace equipment and aerodynamics during the inaugural NJIT Makerspace Soda Bottle Rocket Competition.

Inventors (NAI) in December, NJIT now boasts 12 NAI Fellows, including President Teik C. Lim. Daniel Henderson, a member of NJIT's Board of Overseers, was also elected to the Academy this year. Murat Guvendiren and Wen Zhang, both associate professors of engineering, were named senior members of the organization.

To continue its momentum and deepen capabilities across STEM and other disciplines, the university hired 21 new faculty members in 2022, many already seasoned researchers at renowned institutions. They include experts in areas such as machine learning, data analytics, biomaterials and biomechanics, sustainable design, renewable energy and the learned language systems of birds and humans.

NEW SPACES, GREEN PLACES

NJIT takes sustainability seriously and it's captured the imagination of students, faculty and staff. Students at the Albert Dorman Honors College, for example, were inspired to work toward a greener, more sustainable urban environment when they researched the types of plants that could be used to create a Rooftop Therapy Garden at the Campus Center.

Working with faculty, students proposed new plantings to heighten biodiversity and make the garden more appealing to birds, bees and the campus community as a whole. Not only is this work in keeping with the core values of the university's strategic plan ("Building on a Strong Foundation – NJIT 2025") it also helped NJIT win national accolades from *The Princeton Review*. Named a "Top 50 Green College," NJIT earned a score of 90/99 for its Green Rating, which provides a comprehensive measure of the university's performance as an environmentally aware and prepared institution — a more than 45% increase over the past five years.

The garden bloomed this past year with more than a dozen flowers, fruit and herbs, including black-eyed Susan, lowbush blueberries, lavender, wild bergamot, basil and mint. Not far away, a new landscaped plaza with benches and walkways took root in the northeast portion of the University Heights neighborhood when NJIT created a new green space. A place to stroll or relax, the plaza has two entrances, at the intersection of Bleeker and Summit Streets, and at the intersection of Central Avenue and Dr. Martin Luther King Jr. Boulevard.

At NJIT, students become part of an

exciting community and there are more options than ever to live on campus. The recently opened, apartment-style dorm Maple Hall is an eight-story, 500-bed residence, which emphasizes single-occupancy bedrooms and was constructed with environmentally friendly methods. Its award-winning design, which has Manhattan-skyline views, offers bicycle storage, parking, a game room, creative spaces, lounge areas, an inviting grass terrace, indoor/outdoor cafes and a makerspace.

Also new in 2022, the Lenda and Vince Naimoli '62, '09 HON Turf Room is located on the third floor of the Wellness and Events Center (see page 3).

The university has also expanded both locally and internationally. NJIT and Israel's Ben-Gurion University of the Negev recently celebrated their joint research center: the Institute for Future Technologies in Jersey City. The Institute is a gamechanger, with a study space for exchange students, joint graduate degrees, ideation-stage startups and even combined faculty appointments in fields such as artificial intelligence, civil engineering and cybersecurity. The Institute receives funding from the National Science Foundation and from the joint U.S.-Israel Binational Science Foundation.

GIVING TOWARD THE FUTURE

Many Highlanders stay engaged with the school after graduation, including giving generously. In fact, a record number of alumni donors made a gift in fiscal year 2022. The university has also added \$29.3 million in gifts to the endowment since 2019.

With its regional and national profile increasing, NJIT is attracting donors from a wide range of people. In the fall, the pioneering venture capitalist John Martinson donated to the Albert Dorman Honors College to broaden and deepen the curriculum and real-world experiences for top scholars. "What impresses me is that NJIT is growing in size and growing in national stature," said Martinson, the chairman of Martinson Ventures. "I'm enthusiastic about the university's progress, transformation and vision."

From national recognition to its expanding research and opportunities, it's clear that NJIT is committed to making a superior education available to more students. The increasing acknowledgement of the university as a leader in the nation is proof that its vision is transformative. ■



STRIDING INTO THE FUTURE

Strapped into an exoskeleton in Saikat Pal's Life Sciences Motion Capture Laboratory, Damyane Evely strode heavily back and forth across a 15-foot platform, taking an occasional peek at a monitor on the wall to survey his progress — and to silently marvel. It had been more than 15 years since his spinal cord was compressed in a motorcycle accident, landing him in a wheelchair. He was relishing his verticality. Evely was the first person in the U.S. with a spinal cord injury to test the new, self-balancing Wandercraft Atalante, a third-generation exoskeleton with 12 degrees of freedom that is designed to more closely approximate human gaits than current models. He took 1,100 steps with engineers, physical therapists, exoskeleton trainers and robot designers looking on. They wanted to know not just whether he could walk in it, but how naturally and safely.

"We were measuring the movement of the human and the robot, both together and independently, to see how the two interact and to get a deeper sense of the physics behind how a human walks in the robot," says Pal, a biomedical engineer. "With the Wandercraft and other models, we also want to know how the device improves a host of health measures in different patient populations."

#NJITDayOfGiving



Save the Date for NJIT Day of Giving, March 7-8!

Come together with fellow NJIT alumni, parents,
students and friends in a 24-hour event
to advance the student experience.

NJIT



njit.edu/giving

1970s

CHARLES M. FORMAN '72 serves as president of the New Jersey Bankruptcy Lawyers Foundation. The foundation received the William J. Brennan, Jr. Citation for Justice from Legal Services of New Jersey (LSNJ) for providing emergency funds that support LSNJ's clients through challenging times. He is a member of the Board of Overseers.

CHARLES E. LARSEN '73, a board member of Femasys Inc. since 2015, has been appointed to the role of non-executive chair. Femasys is a biomedical company focused on women's health through next generation advancements, including minimally invasive technologies for reproductive health. Larsen serves as the managing director of Accuitive Medical Ventures LLC and vice chairman of The Innovation Factory. He is an angel investor.

STEVEN E. FORSHAY '76 is semi-retired. He was most recently the senior vice president, Advanced Technology Group at Dolby Laboratories.

JAMES M. KOCIS '77, founder of Hudson Street Ventures, has received investment from Bipsync, a leading financial technology provider of research management software. Hudson Street Ventures is a private investment firm deploying long-term, permanent capital. He is also the founder and chief executive officer of Burgiss, a financial technologies and data provider to the private capital industry.

GEN. ELLEN M. PAWLIKOWSKI (U.S. AIR FORCE, RETIRED) '78, '13 HON joined the board of directors of RPM International Inc. RPM International owns subsidiaries that are world leaders in specialty coatings, sealants, building materials and related services. Pawlikowski was also appointed to the board of directors at Velo3D Inc., a leading metal additive manufacturing technology company for mission-critical

parts. Recently, Pawlikowski received the Arthur M. Bueche Award for exceptional leadership of the development of space systems for national security, management of innovative, all-domain aerospace systems and promoting diversity in engineering.

DEBBIE (formerly FRANK) DUDIS '79 made history as the first openly transgender woman Assistant District Attorney in New York history, working in the Brooklyn District Attorney's Frauds Bureau. She recently gained a jury felony conviction in a \$900,000 real estate fraud.

1980s

JEFFREY J. MILANAİK '80 was featured on the ROI-Influencers Real Estate list (2022). He is the principal, Bridge Industrial LLC.

NORMA J. CLAYTON '81 was elected as a new member by the National Academy of Engineering (NAE). She is part of a cohort of national and international members, and co-vice chair of the NJIT Board of Trustees.

ANTHONY D'ANGELO '82, M.S. '86 joined Raritan Valley Community College in N.J. as the coordinator of the Mechanical Engineering Technology Program.

GERARD P. FITAMANT '82 was promoted to senior associate at Langan Engineering & Environmental Services.

STEPHEN C. BETTS '83, M.S. '86 was one of four William Paterson University business professors who received the prestigious Bright Idea Award, sponsored by the Stillman School of Business at Seton Hall University. The large-scale social entrepreneurship model proposed by the professors may lead to innovation in addressing global

water resource sustainability. Betts is professor of management, marketing and professional sales.

ROBERT C. COHEN '83, M.S. '84, M.S. '87 was featured on ROI-Influencers Executives: New Jersey list (2022). Cohen also recently spoke on the "Future of Medical Technology with State-of-the-Art Robotic Surgery" on the Finding Genius podcast. He is the president, Digital, Robotics and Enabling Technologies at Stryker and chair of the NJIT Board of Trustees as well as a board member of the Alumni Association of NJIT.

MICHAEL P. HRYCAK M.S. '83 announced that his older son, Brandon P. Hrycak, was awarded his M.S. in environmental policy and management from the University of California at Davis in June 2022. His uncle, Orest W. Hrycak '86, also graduated from NJIT. His grandfather is the late NJIT professor Peter Hrycak of the Mechanical Engineering Department.

DARRYL P. RILEY '83 was appointed to the newly created position of chief sustainability officer at Hostess Brands, Inc. In his new role, he will expand the company's capabilities to develop and execute strategies to drive its environmental, social and governance objectives and initiatives. He most recently served as senior vice president, Quality, Food Safety and R&D.

JOHN F. LARKIN '84, head of impact investments at Avenue Capital Group, was selected as the designated appointee to the board of directors of Silver Sustainable Solutions Corp.

PAUL SOMLO '85 is enjoying his 20th year of retirement after a career at Hewlett-Packard in Loveland, Colo.

GOWTON T. ACHAIBAR '86 was appointed president and chief executive officer for ADS-TEC Energy. ADS-TEC

PROFILE

DORA GOMEZ, '18 M.S.
Fraud Examiner,
Alumni Chapter Leader

Photo: Deric Raymond

Dora Gomez walked the cozy, private dining room of Seasons 52 in Paramus, N.J., greeting fellow NJIT alumni and swapping stories like she has done it dozens of times before. In truth, this was her first time helping to organize an NJIT alumni event as the new volunteer organizer for the northern New Jersey chapter.

With over 25 years of experience in fraud risk management in the financial world, Gomez is currently with Ernst & Young's Financial Crimes Technology Consulting team helping financial organizations strengthen their controls in preventing technology-based crimes (e.g., bank accounts opened with stolen or synthetically-created identification).

Gomez earned her M.S. in Business and Information Systems from NJIT and has a bachelor's in accounting from Pace University. She sat down with NJIT to discuss details of her work in FinCrime, her experience on professional boards, and how NJIT has influenced her career.

Q: Can you describe your work in financial fraud?

A: One of the things we have seen is a heightened risk in application fraud. Meaning people opening fake applications using synthetic identities. Synthetic identities basically take your personal information, like your social security number and create a new person. We are seeing an increase in cases in vulnerable persons like children and the elder community.

If a criminal gets their hands on a child's social security number, that child may not know until he runs his first credit report, or applies for a job, but will then realize they are in an incredible amount of debt because

someone has used their identity. That's a very dangerous part that people are unaware of.

A lot of my most passionate work is on addressing elder fraud. Incidents are growing rapidly, especially during COVID as many elderly people were prisoners in their own homes and vulnerable to being taken advantage of through social engineering — creative and unique ways to get their personal information through social contact. It's estimated that elder financial fraud results in over \$36 billion of losses per year, which is probably underestimated as most incidents are not reported. The complexity and lengths people will go to manipulate somebody is shocking, and so wrong! I would love to help more people in this area.

Q: How has your master's from NJIT expanded your skill set in your profession?

A: I always wanted to obtain a master's, but I never had the time. So, I decided to take some time off in between jobs to invest in myself and further advance my career impact and future. I decided to get involved on the technology side because, to me, IT underlies every important part of business and society. It is also a rapidly changing area with increased focus from corporate boards and regulators. Understanding technology better can help anyone's career, in my opinion. I looked at NJIT's [IT] program, and I was impressed with the professors, the student body and the vision promoted by the school's leadership and compassion for its students.

Although most of my classes were virtually delivered, I always tried to meet the professors. Every semester I

would come in a few times to meet my professors, get their personal insights and advice, and to build personal relationships. If something wasn't working well for me, I could reach out to someone I trusted and knew. I felt like I needed that connection.

Q: You are president and director of multiple organizations, you just started volunteering as an alumni leader, and you helped fundraise for one of NJIT's competitive engineering teams. What inspires you to give your time so generously?

A: My upbringing. I think coming from an immigrant family (I was the first one born here), we were driven to make ourselves "the best we could be." When I was growing up, I didn't have a mentor as my exposure to professionals was very limited, so it was hard to get good advice and to build a good network.

My advice was limited to my dad telling me to get a job where "you can be independent and build your own fortunes," but that is somewhat nebulous to a 17 year old.

I was lucky in some early decisions and majored in an area of study where I could achieve independence and success. So if I can provide career advice to somebody else, and lead them down the right path, it makes me feel I am giving back and more personally fulfilled. I am also driven and quite good at helping organizations succeed, and be the best that they can be! ■

**This interview was edited for space.*

- Deric Raymond

is a global leader in battery-buffered, ultrafast charging technology.

DILIP R. SHAH M.S. '86 was recently sworn in as a trustee at Shawnee State University in Portsmouth, OH.

MICHAEL P. McDERMOTT '88, M.S. '89 was included in the Top 10 Leaders in *Supply Chain Magazine*. He currently serves as executive vice president and global supply chain officer at Pfizer.

YING WU M.S. '88, '16 HON was appointed independent director of BEST Inc. BEST is a leading integrated smart supply chain solutions and logistics services provider in China.

ALBERT ROQUE '89 was one of four finalists for the police chief position for the city of Walla Walla, Wash. He has worked in law enforcement since 2003 and is currently the chief deputy for the Washington County Sheriff's Office in Hillsboro, Ore.

1990s
DAVID A. CLARK '90 was promoted to vice president at CP Engineers. He is a licensed professional who leads the company's Commercial and Industrial Services Group. CP Engineers is a multi-discipline engineering firm based in Sparta, N.J.

SCOTT A. SACCAL '90, M.S. '91 joined Cambrex Corporation as vice president, head of Information Technology. Based in East Rutherford, N.J., Cambrex is a leading global contract development and manufacturing organization that provides drug substance, drug product and analytical services across the entire drug lifecycle. Previously, he was executive director, Global Franchise Marketing IT at Merck.

VIVIANNE J. ARENCIBIA '91 presented at the 2022 International Society for Pharmaceutical Engineering's (ISPE) session, "Building a Quality Organization." Arencibia is vice president of Global Quality Systems and Compliance at Moderna, Inc. Prior to joining Moderna, Arencibia led her own consulting company, and has held a variety of leadership positions at Novartis AG, most recently as global head of External Engagement for Group Quality.

LEON K. BAPTISTE '91, president of LB Electric Company, LLC, was named Trade Contractor of the Year by the National Association of Minority Contractors.

ROBERT M. DILLON '91 is a serial entrepreneur who plans to open a whiskey distillery called Dismal Harmony in Morristown, N.J. He serves as senior vice president, Connected Radio, Xperi Holding Corp. He received his MBA from Columbia University and has several patents.

ANTHONY RUSSO '91 was featured on the ROI-Influencers Associations & Organizations list (2022). He is the president of the Commerce and Industry Association of N.J.

MONEESH ARORA '92 is the new chief executive officer at UniFocus, a leading workforce management platform. Recently, he served as chief executive officer at Med-Legal, LLC and was the chief service (operating) officer at Paycor.

FRANCISCO A. RUELA '92 joined InfoTran Engineers & Architects, P.C. as a senior vice president/principal architect in July 2022. He formerly served as president at SYSTRA A+E.

SEN. PAUL A. SARLO '92, M.S. '95 was featured on the ROI-Influencers Elected & Appointed Government Officials list (2022).

MARCO V. AVILA '93 was featured in *Baltimore* magazine for his work uplifting Hispanic communities. An engineer, Avila founded The Healing Hands Foundation which brings the engineering community together to support his work through Golfers for Charity. He currently serves as director, civil engineer, certified project manager and program manager at WSP. He is chair of the board and president of the Maryland Hispanic Chamber of Commerce.

JOSHUA J. BENNETT '93 was promoted to vice president, Offshore Wind at Dominion Energy.

JAY R. FENNIMORE '94 has turned his love of video games into starting J2Games.com LLC, a video game company with three New Jersey locations.

VENKATANARAYANA KRISHNAMOORTHY '94 is one of two new board members on ACORD, a global standards-setting body for the insurance industry. Krishnamoorthy is the chief technology officer at Hamilton Insurance Group.

MICHAEL F. EDWARDS M.S. '95, MMBA '01 was appointed chief executive officer of MedMinder Systems Inc. Based in Needham, Mass. MedMinder is the leading end-to-end pharmacy, medication adherence and connected care solution for elderly and polypharmacy patients. Before joining MedMinder, Edwards was chief commercial officer at Truveris and held several executive roles at Optum that included president, commercial markets at OptumRx.

SIEGFRIED G. MUELLER M.S. '95 is chief executive officer at Analytical Science and Technologies Group Inc., which purchased the former *New Jersey Herald* site in Newton, N.J. for \$1.8 million. Analytical Science and Technologies consults and builds equipment for the food and beverage

PROFILE

Computer Engineer SURAJ GHUMWALA '22 to Join U.S. Space Force



Photo: Courtesy of Suraj Ghumwala

Suraj Ghumwala will be the first cadet from NJIT's ROTC detachment commissioned into the U.S. Space Force.

Now a second lieutenant in the Air Force, the computer engineering major from Rochelle Park, N.J., said his childhood dream was to be an astronaut. As the first person in his family born in the U.S., he felt a sense of service to the community, influenced by friends who also joined the military.

Ghumwala chose NJIT because of its strong academics, affordability, commuting distance and diversity, and said he truly felt a sense of belonging in his second semester when he switched from computer science to computer engineering and joined the Reserve Officer Training Corps (ROTC).

"That was definitely a difficult conversation. I talked with my parents about what exactly I'm getting into ... I have to serve four years," he explained. "I like being a little hands-on. In computer science, everything happens on the screen. I was more interested in seeing stuff move."

Being in ROTC taught Ghumwala leadership skills that stick. As a senior he trained cadets on adaptability, critical thinking, leadership and working under pressure. Once commissioned into

the Space Force at the starting rank of second lieutenant, he'll be responsible for maintaining satellites used for communications and tracking — "Space surveillance, space lift, space warning and satellite command and control," he stated.

His first assignment will be training in California at Vandenberg Space Force Base. Timing is uncertain due to a backlog of Space Force onboarding from the pandemic, and meanwhile he'll be in the reserves. But he has that delay covered, landing work at Verizon as a network operations engineer. He gained experience in this field by working a part-time job in the networking and telecommunications department of NJIT's Information Services and Technology office, where he was frequently dispatched around campus to fix phones and Wi-Fi equipment.

Regardless of whether his long-term career path keeps him in the military or leads to civilian employment, Ghumwala would like to stay in the growing space field and still hopes to launch someday. Space Force members can have careers that lead "To infinity and beyond," he joked.

Ghumwala's proud of simply completing the ROTC program. He said it was challenging to get into shape for the military fitness assessment while studying for his

electrical and computer engineering classes. His senior project was to design a robotic car for evaluating fires, while his most influential professor was Oksana Manzhura, who taught him the principles of circuit design.

"I definitely enjoyed my time at NJIT. ROTC made a major impact for me as a student. The first thing when you go to college is you try to figure out where you fit in. ROTC was a good outlet," he said.

"He is extremely capable, extremely well spoken, organized and he will absolutely do well in the military," said Air Force Maj. Eric Laake, who teaches in the unit command team. "His ability to use technology, and his technical expertise that he's gotten here at New Jersey Institute of Technology, have all prepared him well to succeed in the Space Force," where there are defensive along with offensive weapons, he noted.

Laake also acknowledged the military's deep history of developing leaders from first-generation American families. "That is something that's always made NJIT stronger," he said, "and it continues to make our country stronger." ■

- Evan Koblentz

industry, semiconductors manufacturers, medical and pharmaceutical companies, and the military.

ADNAN M. PASHA M.S. '95 was promoted to senior associate at Langan Engineering & Environmental Services.

DANIEL G. (DAN) SWAYZE M.S. '95 was appointed executive vice president of Energy Services at Bowman Consulting Group Ltd. He will lead the continued expansion of the company's renewable energy business.

WIWAT KAMOLPORNWIJIT M.S. '96, '00 PH.D. was one of 120 top-tier artists selected to be part of the Smithsonian Craft Show, an annual event that recognizes the new pursuits of contemporary craft artists in their mastery of innovative design, fabrication and use of unusual materials. He transforms mixed materials into wearable art.

DEVENDRA K. MEHTA '96 was recently appointed chief information officer at People First Federal Credit Union. Most recently, he served as chief information officer/chief security officer at Stone Clinical Laboratories and head of information technology at New York eHealth Collaborative.

ANDREW R. ALICANDRI M.ARCH. '97, M.S. '97 was promoted to principal from project manager at LS3P Associates Ltd.

KALPESH G. KAPADIA M.S. '97 is chief executive officer and co-founder of Deserve, which is part of a group of angel investors in Zero Hash. Zero Hash is a crypto services startup that recently raised \$105 million. Deserve also recently launched the Deserve Commercial Credit Card Platform, designed to help companies create credit and charge cards for their customers.

MARTIN PIETRUCHA PH.D., PE, F.ASCE, F.ITE, '97 retired as professor emeritus of civil engineering from the Department of Civil and Environmental Engineering at the Pennsylvania State University after 31 years. While at Penn State, Pietrucha was director of the Science, Technology, and Society Program. He also directed the university's Thomas D. Larson Pennsylvania Transportation Institute.

ALBERT W. ROUGHGARDEN '97 received the Civil Engineer of the Year Award from the North Jersey Branch of the American Society of Civil Engineers. He serves as senior principal/New Jersey transportation practice leader at Stantec.

PHILLIP SCOTT '98 was interviewed about his career by *The Vector*. He was named director of urban engineering and development at Matrix New World Engineering.

NIRMALA SISTLA M.S. '98 joined JPMorgan Chase & Co. as the managing director/head of Data Foundations in September 2022.

ABHISHEK VERMA '98 joined Intercell-Virtual Mentor Network's leadership team as chief marketing officer. He has two decades of industry experience and has led marketing teams at Star TV, Sony Entertainment Television and Discovery Channel. Intercell is an ed-tech startup changing the way students experience professional mentoring services. The company is backed by marquee investors, including actor Sonu Sood.

MICHAEL E. STALHAMER M.S. '99 was appointed president of Pleco Therapeutics. Pleco Therapeutics is a specialty biopharmaceutical company developing novel treatments designed to detoxify the cancer promoting cellular micro-environment. Previously, he was

vice president, Regulatory Affairs & Product Development at STI Pharma.

VERONICA M. VANTERPOOL M.S. '99 was appointed deputy administrator of the Federal Transit Administration. She has served as senior advisor in the FTA Office of the Administrator since August 2021.

KIM V. VIERHEILIG '99H, M.S. '00 was appointed president of Buildings and Facilities at STV, a leader in engineering, architectural, planning and programming, and construction management services. She is also a member of the NJIT Board of Overseers.

2000s
ABU BAKAR M.S. '00 spoke at the National Incubation Center Lahore's 10th Cohort session, sharing his thoughts on technology being an enabler in health care worldwide and how developing countries can be creative in using technology to solve local problems. Bakar is the chief information and digital officer at Summit Health.

LEROY J. JONES M.S. '00 was featured on the ROI-Influencers Consultant list (2022). He is the principal founder of 1868 Public Affairs.

SAMUEL J. LAMONTANARO '00 was named director of engineering at Aufgang Architects LLC.

ERIC WANG M.S. '00 joined Hill International, Inc. as vice president, Underground Practice Lead in August 2022.

NASEED GIFTED '01 recently launched a Kickstarter fundraiser, "Bringing Wakanda to Newark," which will help expand the STEAM programs as part of Khem Fest. Founded by Gifted, Khem Fest is an annual gathering that

seeks to put the spotlight on Black comic book creators. Gifted is the vice principal at Science Park High School in Newark.

LISA J. MOVING '01, M.S. '04 was named a Notable Woman in Construction, Design & Architecture by *Crain's New York* in May 2022. She serves as vice president, Diversity, Equity and Inclusion at Turner Construction.

PUNEET TANDON M.S. '01 is the co-founder and chief operating officer at Artivatic.AI, a global risk and decision-making platform that automates human decisions in insurance and healthcare sectors, empowering them through artificial intelligence. The company is based in Bengaluru, India and Rehoboth Beach, Del.

SATISH CHAMYVELUMANI M.S. '02 was named as chief executive officer of the Compostable Division at Yash Pakka. He brings more than 20 years of experience in the product, packaging and food industry. Based in India, Yash Pakka aims to contribute toward a cleaner planet by providing compostable packaging solutions.

TIMOTHY W. MAY '02, M.S. '05 wrote an article for enterprisetalk.com on "Five Ways to Harness Technology for Optimal Project Efficiency." He is the chief technology officer and co-founder at Sitetracker.

JOSEPH MELE '03 has joined MidAtlantic Engineering Partners as part of the company's growth initiative for northern New Jersey and an expansion of services in New York. He will be opening and managing a new office.

BHARATH (RAM) RAMAMOORTHY M.ARCH '03, MSCE '04 was elected as the 2022 president of the American Institute of Architects - Central New Jersey Section. He is a registered architect

in New Jersey with over 20 years of experience. He is currently an associate vice president and senior program manager at AECOM.

HIRAL R. SHAH '03 was interviewed for westfaironline.com on "Blending Family and Finance." He is a private client adviser at J.P. Morgan Wealth Management in Mount Kisco, N.Y.

SWATEE SINGH PH.D., '03H was a panelist at a new conference hosted by *CDO Magazine* by EDM Council. She is CIO of Enterprise Data Platforms at Barclays.

CHRISTIAN G. HOOVER PH.D., '04H, M.S. '07, an assistant professor in the School of Sustainable Engineering and the Built Environment in the Ira A. Fulton Schools of Engineering at Arizona State University, will expand his research into glassy metallic organic frameworks in the next five years with funding from a National Science Foundation CAREER Award.

ALAN W. LOTHIAN M.S. '04 was promoted to associate at Langan Engineering & Environmental Services.

EDWARD J. MUSA '04, M.S. '06 started a new position as account manager, Strategic ISVs at Amazon Web Services. Prior to his new role, he served as Senior Customer Solutions Manager at AWS.

NEXUS U. SEA '04H joined O'Melveny & Myers LLP's product liability and mass torts practice group in New York. He was previously a partner at McDermott Will & Emery LLP.

KELLI C. GLASGOW M.ARCH '05 was appointed an associate at DIGroup Architecture. She joined the company in 2014 and has developed a diversified body of work, leading projects in the academic, civic and corporate market sectors.

DIGroupArchitecture is a minority-owned business specializing in architecture, interior design and environmental graphics.

DOLORES I. MARTINEZ-WOODEN '05, M.S. '07 was appointed acting director of engineering for the City of Newark. She previously spent 12 years at Turner Construction Company, where she was recently a project engineer. Martinez-Wooden is an NJIT Alumni Association board member.

MARJORIE A. PERRY MBA '05 was featured on the ROI-Influencers Executives: New Jersey list (2022). She is the chief executive officer at MZM Construction. Perry is chair emerita of the NJIT Board of Overseers.

JESSICA R. HARRIS '06 is founder of Harris Energy Solutions, a woman-owned company headquartered in Austin, Texas specializing in solar design. Harris Energy is partnering with Shoreline Energy Advisors. The Montclair Township Council members awarded a contract to Shoreline Energy Advisors for Phase 2 of the Town Center Distributed Energy Resources Microgrid Design Incentive Program, a clean-energy program.

ANTHONY R. COSCIA '07 HON was featured on the ROI-Influencers Economic Development list (2022). He is a partner at Windels Marx Lane & Mittendorf.

KIRAN GILL MMBA '07 was appointed executive director of the Sikh American Legal Defense and Education Fund in August 2022.

SCOTT O. GRAHAM M.ARCH '07 was appointed by the City of Reading Building and Fire Board of Appeals to serve as chairman. He is the president/principal at Muhlenberg Greene Architects.

SAKINAH HOFER '07, M.S. '11 started a new position as lecturer at Princeton University.

DIANA MARTINEZ '07H started a position at Cooper Medical School of Rowan University as an assistant professor in the department of biomedical sciences. Her research program focuses on determining the central mechanisms of cardiorespiratory dysfunction due to sleep disorders.

DAVID D. RUCHMAN '07, M.S. '09 was appointed chief executive officer at powersolution.com, a leading New Jersey-based managed IT services provider.

KEITH C. SILVERMAN '07 PH.D. joins Axalta Coating Systems Ltd. as senior vice president and chief operations and supply chain officer. Silverman was most recently an external advisor with Bain & Company lending expertise to Bain consultants and clients across operations, supply chain, manufacturing, EHS and quality. Axalta is a global leader in the coatings industry.

STEVEN S. BURGOS '08 joined HOK as regional leader of WorkPlace based in Miami. He is the immediate past president and current vice president of sponsorship for the International Interior Design Association's (IIDA) South Florida chapter.

VATSAL A. SHAH '08H, M.S. '09, '15 PH.D. is a member of the 2022 National Society of Professional Engineers (NSPE) Fellows. The NSPE Fellows is a national program that recognizes deserving professional engineers who have demonstrated long-term professional service at the chapter, state and national levels of NSPE. Shah is president of the Alumni Association of NJIT.

AKSHAR SIDANA '08 won his third term on the Woodbridge Board of Education. He owns Indianica Academy, an Indian dance school in Woodbridge, N.J.

ERIKA J. TAUGHER-RIETZE '08, M.S. '09 was listed in the Kayo "Top 22 in '22: Women in Renewable Energy Finance and Development." Taugher-Rietze is director, Renewable Energy at Pattern Energy Group.

CHRISTOPHER M. HANNA '09, M.S. '14 is a project manager for T.Y. Lin International in the Rockaway, N.J. office. Previously, he served as the construction services department manager at Pennoni.

RALPH IZZO '10 HON, executive chair, president and chief executive officer of PSEG, retired on December 31, 2022. Izzo was recently featured on the ROI-Influencers Top 50 and National/Global Executive lists (2022).

MAYUR B. MUNDADA '10 was promoted to process lead at PSEG.

JOSEPH KARDOS, IV '11H joined the Popli Design Group as design team leader, Civil Engineering.

KELLIE L. SULLIVAN '11 was appointed senior director of annual giving at Boston University.

DAVID C. DAUDELIN '12H was promoted to director of engineering at EarlyBird. He previously served as the director of Front End Engineering.

HALA A. TAHA '12, MBA '16 was the keynote speaker at Massachusetts Institute of Technology's 2022 Gathering of Titans Conference, an annual conference that brings a group of CEOs

together to share world-advancing ideas and business insights.

DANIELLE VILLEGAS M.S. '12 was invested at the end of April 2022 as director for the Society for Technical Communications board of directors. Previously, she had been president of the Philadelphia Metro Chapter, as well as chair of several committees. In 2021 she received the board's Distinguished Community Service Award. She is the senior knowledge management specialist for Cox Automotive.

WILLIAM T. BARRY '13H joined Deloitte as a senior consultant. He was formerly a lead associate at Booz Allen Hamilton.

MANPREET K. KOHLI PH.D., M.S. '13 is currently a postdoctoral fellow at the American Museum of Natural History where she is pursuing her research in insect systematics, evolution and phylogenetic methodology.

JOSEPH A. PALERMO '13 participated in the GI Go SEAL Swim 2022. A team of U.S. Navy SEALs were joined by fellow veterans and military supporters in a swim across the Hudson River to honor military veterans, their families and all those who died during 9/11 and the wars that followed. Palermo is a resident engineer with Port Authority of New York and New Jersey.

RUCHIKA TALWAR, M.D. '13H was named the 2022-2023 H. Logan Holtgrewe Legislative Fellow. This fellowship is designed to prepare and educate urology residents and fellows in the legislative aspects of health policy. Talwar is a urology surgery resident at the University of Pennsylvania-Penn Medicine Health System in Philadelphia.

ZHE HE '14 PH.D. is the recipient of the 2022 Lois Lunin Award. The award recognizes individuals who have made noteworthy contributions to the practice of Information Science and Technology through leadership, mentoring and innovation. He is an associate professor at the Florida State University School of Information.

MASROOR KHAN '14, M.S. '16 has been announced as the recipient of the Society of Women Engineers 2022 SWE Distinguished New Engineer Award. This award honors a SWE member who has demonstrated outstanding technical performance, contributions in their local community, as well as leadership in SWE.

JEFFREY M. SENATORE '14 joined SV Design as an architect. Previously, he was a project architect at STG Design.

JOSHUA A. COLLAZO '15 launched an NFT (non-fungible token) project. He is an angel investor.

BRIAN P. ERB '15 joined the College of Charleston as its data coordinator, Academic Advising and Planning Center. Previously, he was a substitute teacher in the Charleston County school system.

ASHLEY J. MONTJOHNSON M.S. '15 successfully defended her dissertation, "Development and Evaluation of a Hand Exoskeleton for Neurorehabilitation Post Stroke." She was recently appointed as the assistant director of Undergraduate Studies in the Biomedical Engineering department at NJIT.

JOHN VITO D'ANTONIO-BERTAGNOLLI '16H, M.S. '17H founder and chief executive officer of OculoMotor Technologies, appeared on Fez and Friends, a new podcast hosted by **AWAIS A. QAZI '17**. OculoMotor was recently awarded a \$1 million National Science Foundation Small Business Innovation Research Phase II grant.

OculoMotor is creating revolutionary software for optometrists and their patients. D'Antonio-Bertagnolli was named to *NJBIZ's* Next Generation of Leaders list.

HARDIK A. DARJI '16, '16 started a new position at JPMorgan Chase & Co. as a senior associate, Strategic Analytics.

LUKE E. ROBBE '16H married Anna L. Lechner Rodriguez on August 13, 2022 in Brazil. He serves as a project engineer at General Motors.

DIMITRIOS TSAKOS '16 joined InstaMed as an implementation manager in August 2022. JPMorgan Chase & Co. acquired InstaMed, a medical payments technology firm, in 2019.

DINA AYMAN '17, M.S. '18 was named to the *Forbes* 30 Under 30 list. She is a program manager at Microsoft and an adjunct professor in the Helen and John C. Hartmann Department of Electrical & Computer Engineering at NJIT. This year she also ran for Miss New Jersey.

MARY GESCHWINDT '17H graduated from the Harvard Graduate School of Design in May 2022 with an M.S. in Urban Planning, with Distinction. She is excited to build upon her architecture education from NJIT with a new emphasis on planning and designing for transportation and infrastructure systems. She is currently a community planner at the U.S. DOT Volpe National Transportation Systems Center.

CHIRANTAN GHOSH M.S. '17 is in the Ph.D. program at Lehigh University which he began in fall 2022. He will conduct research on computer vision and deep learning.

BRYAN V. HABERSTROH '17 married Alayna Nicklaus in August 2022. He is the marketing programs manager at PDQ Manufacturing in Lancaster, Pa. He played baseball at NJIT.

LIEM HO '17H is the campaign manager at The Trevor Project. He previously served as the digital program manager at Avalon Consulting Group.

RASHMI B. KETHA '17H, M.S. '18 is the first woman of color and South Asian to co-lead the Women's Association of Verizon Employees, Verizon's largest global employee resource group with more than 12,000 members from 32 countries. Ketha was interviewed for Ashwin Krishnan's #standoutin90sec on LinkedIn. Ketha is the product manager, 5G Disruption (New Business Incubation, Corporate Strategy) at Verizon.

MOHAMMED N. SALEH '17 was appointed assistant chief technology and management information systems for the Paterson, N.J. school district in August 2022.

DANA R. SCHULES '17 joined Taka Sogo as a food technologist. Taka Sogo is a Japanese food production company.

MIGUEL MOLEDO '18 and **KATHRYN NYBY '18** are engaged. Moledo is a mechanical design engineer at O&S Associates. Nyby is an intelligent process automation senior analyst at Johnson & Johnson Consumer Products.

LENERSON (LENNY) PYRRHUS '18 was featured on CNBC in a segment titled "This 26-Year-Old Fled Violence in Haiti as a Child — Now He Makes \$130,000 Working for JPMorgan." He is a senior associate at JPMorgan Chase & Co. in Philadelphia.

AKASH U. SEWANI '18H was promoted to vice president, product manager at JPMorgan Chase & Co.

TOMISLAV ANTOLJAK '19H is the founder of Hangoo, a social and networking app that recently launched and is backed by billionaire activist Bill Ackman. He played tennis at NJIT.

SARAH L. GARÇON '19 is a mechanical engineering mentor for The Gearing Towards Engineering Foundation. Garçon serves as a research and development engineer at Tioga Cardiovascular.

MARINA ARRESE '21, M.S. '22 was named as a First-Team selection on the College Sports Information Directors of America (CoSIDA) Academic All-District 2 Women's At-Large Team. She is a two-time CoSIDA Academic All-District First-Team selectee. She was the president of the NJIT Investment Fund and served on the women's fencing team.

JULIO C. MARCANO '21 was appointed mechanical engineer at the Johns Hopkins University Applied Research Laboratories in its Research and Exploratory Development Department (REDD) in June 2022. In REDD, he will be in the Mechanical Engineering Systems

Analysis & Design section supporting the Concept Design and Realization Branch.

VICTORIA Q. NGUYEN '21 was accepted to Northwestern University Pritzker School of Law. Most recently she served as a legal support assistant at Alston & Bird.

MONICA C. WEGLARZ '21 won the Best Early Stage Startup award at the UPitch Competition. Currently, she is a part-time private client paralegal at Hanse Anderson LLP and is a JD candidate for fall 2023.

JAMES V. BRONICO, JR. '22 joined Van Cleef Engineering Associates as a senior survey technician in June 2022. He was a survey intern for the firm from May 2021 to June 2022.

SREYA DAS '22 joined the cybersecurity team at JPMorgan Chase & Co.

PRADNYA N. DESAI '22 won the Audience Choice Award for Best Pitch at the 2022 University Pitch Competition

of The IndUS Entrepreneurs (TiE-NJ) for her startup idea called Ad-Connect. Ad-Connect aims to help children with ADHD develop social skills. In August of 2022, she became a software engineer at Microsoft in Seattle, Wash.

AMBER R. EISERLE '22 joined Remodeling LLC as an interior designer.

SURAJ GHUMWALA '22 will be the first cadet from NJIT's ROTC detachment commissioned into the U.S. Space Force.

SYDNE C. NANCE '22H is an architectural associate at Studio 1200, a Short Hills, N.J. interior design firm. Previously, she served as an intern at the firm. At NJIT, Nance excelled in track and field, winning a bronze medal in the America East Outdoor Championships.

AMAL S. SHABAZZ '22H participated in a 10-week summer internship at Pfizer in Andover, Mass. and then began the Ph.D. program in bioengineering at the University of Maryland in fall 2022.

Started a new job or got a promotion?

Have a special update to share?

We want to know!

Submit a Class Note
and stay in touch.



IN MEMORIAM

Bernard M. Lubetkin '49, M.S. '52
 Arnold C. Peterson '49
 Frederick H. Abernathy '51
 Hans A. Becker '51
 Robert A. (Bob) Gerlach '51
 Concetto P. Italia '51, M.S. '54
 John E. Steen '52
 William L. Taetzsch '52
 Paul G. Kisciras '53
 Daniel H. Rucki M.S. '54
 John MacInnes '54
 Michael S. Polashock '54
 Ruth S. Barnes '55
 James M. Cameron '55
 Edward M. Irving '55
 Robert A. Livermore '55
 Thomas W. Owens M.S. '55
 Carl H. Rosner '55
 Alvin H. Weiss, M.S. '55
 Donald C. Woodnorth '55
 Edward R. Nolan '56, M.S., '59
 Richard F. De Venezia '57
 Herman O. Rogg '57
 Robert L. Bowser '58
 Leon R. Solek '58, M.S. '66

William E. Behrendt M.S. '59
 Donald B. Hardy '59
 Donald V. Di Massimo '60
 Thomas G. McBride '60
 Raymond X. Okonsky '60, M.S. '67
 Robert A. Pege M.S. '60
 Warren O. Weillbaeher '60
 Denis P. Duggan M.S. '61
 Richard P. Grimm '61
 George A. Katzenberger '61
 Otto J. Schultz '61
 Gene R. O'Brien '62
 Walter D. Houle '63
 Edward M. Kelley '64, M.S. '71
 Paul D. O'Lenick '64, M.S. '69
 James J. Juliano '65
 Ronald J. McKinnon '65
 William F. Washburn '65
 Richard S. Herman M.S. '66
 Fredric J. Holub '66
 John L. Savicky '66
 Emil C. Neu, '66 PH.D.
 Frank J. Greco M.S. '67
 Windsor M. Jacques '67
 Raymond J. Misiewicz '67
 Kenneth Calcagno '68
 Gerald J. Kane '68

Henry G. Koch M.S. '68
 John D. McKenna, M.S. '68
 Anthony Sodano '68
 Michael C. Washeleski '68
 Edward G. Kinal '70
 Thomas D. Policastro '70
 Andrew J. Van Abs '70
 Edward J. Schmeltz '71
 Chester Maskiewicz '72
 James Deluna '73
 John N. Frangakis '73
 Andrew J. O'Sullivan '74, M.S. '74
 Karlis V. Kopans '75, M.S. '85
 John J. Sakowski '75
 Werner G. Mueller '79, M.S. '99
 Thomas B. Hood '80, M.ARCH '04
 Ramón Lestón '83
 Charles J. Brodowicz M.S. '07
 Malay J. Patel '18

- Barbara A. Hillier, architect, philanthropist and patron of J. Robert and Barbara A. Hillier College of Architecture & Design
- Professor Emeritus Troy West, J. Robert and Barbara A. Hillier College of Architecture & Design
- Professor James A. McHugh, Department of Computer Science, Ying Wu College of Computing



Photo: Deric Raymond

Student winners, NJIT officials and event judges enjoyed the successful event.

BUSINESS MODEL COMPETITION ADDRESSES SOCIETAL IMPACT

Student entrepreneurs at NJIT's annual New Business Model Competition had one word for the experienced judges: plastics.

It's the opposite of the revered 1967 film *The Graduate*, where a young Dustin Hoffman receives that single word of career advice from an accomplished friend of his parents. But it holds true, as plastics technology was a common theme to the student winners, all born decades after the movie debuted.

The contest began 14 years ago as a way for NJIT to encourage future business leaders whose ideas are commercially viable and socially responsible. The judges and sponsors represent NJIT entities including Martin Tuchman School of Management, New Jersey Innovation Acceleration Center and VentureLink, along with external investors including Capital One, Ellavoz Impact Capital and Wells Fargo.

In 2022, about 50 students and 25 unaffiliated community members applied, with seven students and eight community members reaching the final round. First prize in the student category went to ReFilament, a company by computer science major Anthony Caruso and computer engineering major John Holck, as they aim to produce and sell

plastic filament for 3D printers using only recycled materials. Second prize went to doctoral student Jitendra Anil Kewalramani, who studies geotechnical and geoenvironmental engineering, for his invention to remove microplastics from water by using ultrasound purification technology.

Caruso and Holck are already talking to VentureLink manager Will Lutz about ways to get their business started. Caruso attended high school in Brick Township, N.J. where he learned to use 3D printers. He then caught the business bug at NJIT in a course with Associate Professor Cesar Bandera, the Leir Chair for Entrepreneurship, who organized the business model event.

Kewalramani, meanwhile, explained that existing methods of destroying the chemicals in plastic are only partially effective, expensive to use and still leave behind dangerous material. "On the other hand, ultrasound is easy to operate, just requiring electricity and can break down PFAS completely into benign products," he stated.

The research already has interest from environmental engineers in the U.S. Department of Defense, Air Force, Navy and NASA, Kewalramani said. "Currently we are developing a field treatment trailer

for an Air Force project in collaboration with [engineering firm] Tetra Tech," which has shown interest in licensing the technology, he noted.

Winners in the community category were Cass Severe, whose concept emphasizes societal reentry services for women released from prison, and Dawn Niles, who is building a mobile application to assist New Jersey residents participating in certified apprenticeship programs. Severe's plan stood out for not trying to turn a profit.

"This is the epitome of what NJIT stands for. I think NJIT is one of the most innovative, entrepreneurial campuses in America," said President Teik C. Lim, himself an engineer and inventor holding several patents related to noise reduction in luxury cars.

"There is a bigger question, why are you interested in innovation? The reason for that is that innovation is the driver of everything," added Interim Provost Atam Dhawan, who noted that many famous companies began on college campuses. Oya Tukel, dean of Martin Tuchman School of Management, said innovation is vital to their mission. "We are a business school with very unique ambitions. We're a business school where innovation and entrepreneurship are in our DNA. It is in our vision statement."

Ellavoz Vice President Chris Ferry served as a judge in the student category. He invited several contestants to pitch at an Ellavoz event targeting angel investors in spring 2023, and said next year he intends to bring additional sponsors to NJIT's competition. ■

- Evan Koblentz

Hillier College's Design Showcase 2023



will take place on the evening of Thursday, April 20th in the newly opened Jewel Box at Gateway Center in downtown Newark. We have much to celebrate: The amazing work of our students, the first annual Alumni Achievement Awards, the 50th anniversary of the New Jersey School of Architecture, the 15th Anniversary of the School of Art + Design.



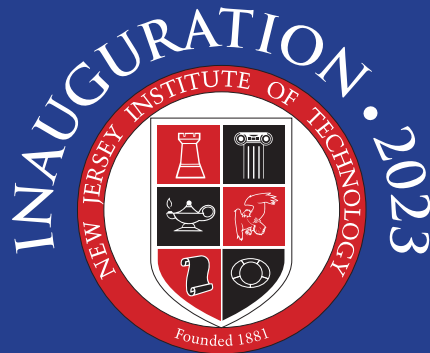
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Thursday, April 20, 2023



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INAUGURATION OF DR. TEIK C. LIM

9TH PRESIDENT OF

NEW JERSEY INSTITUTE OF TECHNOLOGY

The official investiture ceremony will take place
at 11 a.m. on Friday, April 28, 2023, on the NJIT campus.

A full program of inaugural events will be announced in the coming weeks.

For more information, contact the Inauguration Committee Co-Chairs:
Kenneth Alexo, Jr., Ph.D., VP for Development & Alumni Relations (alexo@njit.edu)
Marybeth Boger, Ph.D., VP for Student Affairs and Dean of Students (boger@njit.edu)