

FALL 2021

NJIT

MAGAZINE

HIGHLANDER HERITAGE

LEGACY FAMILIES MAKE AN NJIT EDUCATION A TRADITION

**HISTORIC GIFT LAUNCHES TWO NEW CENTERS AT NJIT
ENGINEERING SPACES**

2021: A YEAR — AND A WEEKEND — LIKE NO OTHER



FAMILY AND FRIENDS

It is wonderful to have our students, faculty and staff back at NJIT in person, following more than a year of mostly virtual interaction. Our classrooms and offices are open to full capacity, and our campus is brimming with activity. While we have lifted some COVID-19 restrictions, in alignment with the State of New Jersey, we continue to follow other protocols to keep the NJIT community safe.

Our community is important to us and constitutes much more than just a group of people who regularly share our campus space. Indeed, we are university family and friends who work collectively toward shared goals. There is no better example of the ties we share than our legacy families, who have made coming to NJIT for their higher education a tradition. Our cover story profiles three of them: the Daudelins, the Jacksons and the McDermotts. Whatever their generational connections — be it parent and child, brother and sister, or other ties — NJIT is woven into their family histories, for which we are extremely grateful.

Also featured in this issue is a recent and history-making gift to NJIT from Paul V. Profeta, a longtime friend to the university. Administered through his foundation, the gift is enabling NJIT to establish two new education and research centers — the first-of-its-kind Paul V. Profeta Foundation, Inc. Real Estate Technology, Design and Innovation Center and the Paul V. Profeta Foundation, Inc. Center for Innovation and Entrepreneurship. Paul, who is a member of the university's Board of Overseers, wears many hats, as a real estate investor and developer with commercial properties nationwide, a philanthropist focused on revitalizing Newark and an educator. We are honored to be a recipient of his generosity and appreciate his steadfast support of innovation and entrepreneurship, both at NJIT and throughout Newark.

We take a look as well, in this issue, at Newark College of Engineering's many new facilities that are enhancing and advancing our oldest school's research capabilities. Totalling approximately 17,000 square feet, these include the Life Sciences Motion Capture Lab, the Microfabrication Innovation Center and the Dieter Weissenrieder '76 and Family Industrial and Manufacturing Engineering Laboratory, named for and supported by a generous gift from one of our distinguished NCE alumni. Additionally, Makerspace II, serving all Highlanders, offers 3D printers, laser cutters and more.

I hope you enjoy this issue of *NJIT Magazine*, and I welcome your feedback. ■

A handwritten signature in black ink, reading "Joel S. Bloom". The signature is written in a cursive, flowing style.

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On the Cover: The McDermott family — (from left) Jill McDermott, Sandra Jesch, Mike McDermott, Kevin McDermott, Donna Borland and James Borland — represents three generations of Highlanders.

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Totaling approximately 17,000 square feet, four new labs convey the trade today and its aim of a better future.

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More than 500 NJIT alumni and friends reconnected with the university during Alumni Weekend 2021.

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NEWARK TURNS TO HILLIER COLLEGE STUDENTS FOR DESIGN IDEAS

A team of students from Hillier College of Architecture and Design (HCAD) is working with Newark City Historian Junius Williams to transform the city's 1st Precinct police building into a community museum and home for the Office of Violence Prevention and Trauma Recovery.

At the same time, HCAD students are contributing design ideas for a new arts education center that the New Jersey Performing Arts Center is developing in Newark. Both projects illustrate NJIT's ties to its surrounding community and its mission to place students in real-world experiences.

HCAD's participation in reimagining

the police building began with Christopher Watson, Newark planning officer and a Hillier doctoral candidate, asking Roger Smith, an adjunct professor and design director at Gensler, if he would lead a design studio to propose plans for the building.

"Students have been both inspired and energized by having the opportunity to engage with the community and the City of Newark on such a visionary project," Smith said. "It will transform the 1st Precinct police building — a symbol of racial injustice during the 1967 Newark [riots] — into an important new Newark institution that preserves the collective memory of the

HCAD students helped design this entrance for the museum and Conflict Resolution Center in Newark's transformed 1st Precinct police building.

community while also serving as a place for understanding and healing."

Teaching socially and historically relevant adaptive reuse projects through community engagement is a model for design education today. Design studio student Tess Dalton, for one, appreciates the opportunity to "interact with the community [that] this project is going to be for and to know that some of the ideas we have contributed will have a positive impact on the residents of Newark." ■



NJIT students attend class either in person or, via the back-wall screen, from a virtual location.

NJIT Awarded for Its Digital Transformation

Higher education technology solutions provider Ellucian honored NJIT's digital transformation initiatives during the pandemic with a 2021 Ellucian Impact Award.

The award — which recognized six

EPA Selects NJIT to Help Communities Reclaim Brownfields

NJIT has been chosen by the U.S. Environmental Protection Agency (EPA) to provide training and technical assistance to communities in EPA Region 2, which comprises New Jersey, New York, Puerto Rico and the U.S. Virgin Islands, under the Technical Assistance to Brownfields (TAB) Program.

Much of the assistance is for communities in neighborhoods that are underserved and economically disadvantaged — places where environmental cleanup and new jobs are most needed. This service is available to all stakeholders and comes at no cost to the communities.

The NJIT TAB Program will serve as an independent resource for municipalities attempting to clean up and reclaim brownfields. The program helps them manage challenges such as engaging the public, interpreting technical data and

reports, understanding the health impacts and risks, identifying funding and financing options, understanding environmental regulations, building partnerships and leveraging resources.

The EPA noted that this program is an important part of the Biden-Harris administration's commitment to advancing economic opportunities and addressing environmental justice issues in disadvantaged areas.

"NJIT is proud to be selected by the EPA to share its expertise in brownfields redevelopment and to foster economic growth in underserved and economically disadvantaged communities throughout our region," said NJIT President Joel S. Bloom.

Stephen Marks, town administrator for Kearny, N.J., and Colette Santasieri, executive director of the NJ Brownfields Assistance Center @ NJIT, take stock of an abandoned gas station that abuts a public walkway on a bank of the Passaic River.

"Our experience in this area is extensive, and we are enthusiastic about the opportunity to serve these communities."

Colette Santasieri will serve as executive director of the NJIT TAB, overseeing assistance to hundreds of brownfield-challenged communities as they seek to "become more sustainable, resilient, environmentally just and economically sound." ■



institutions this year — celebrates visionaries who inspire others to push the boundaries of higher ed tech and innovation.

"This year's Impact Award winners truly exemplify what it means to be a transformational, digitally focused and student-centered institution," said Laura Ipsen, president and CEO of Ellucian.

Before the pandemic, NJIT created a new delivery model for certain classrooms to blur the lines between online and in-person learning experiences. When the pandemic hit, this Converged Learning Model (CLM) was

immediately expanded to facilitate socially distanced attendance for the fall 2020 semester.

The onset of the pandemic also presented opportunities to improve online service delivery and create a global campus supported by a synchronous experience like that of the CLM. As a result of these innovations, 44% of all classes were offered in the CLM and more than 70% of all undergraduate students had an in-person experience that still provided social distancing for students and faculty.

At the same time, NJIT managed to minimize the spread of COVID-19 on campus

and maintain its enrollment, with student academic performance remaining comparable to prior semesters. All student support — including advising, psychological counseling and student events — is available via online and digital services. NJIT will continue the digital options for students as part of the global campus, whether they are on campus or attending remotely.

A plan to develop the next generation of digital learning is now underway at NJIT, made possible by a \$385,000 grant from the Martinson Family Foundation. ■

STUDENTS, FACULTY AND STAFF CREATE VIRTUAL EXHIBIT OF ROBOT DESIGN

A new virtual exhibit of robot design curates the work of faculty, staff and students from Hillier College of Architecture and Design, Newark College of Engineering and Ying Wu College of Computing.

The exhibit engages visitors in a virtual 3D tour that features animation, text and videos. The tour spans the origins of the terms “robot” and “robotics” a century ago to purely mechanical designs and modern digital systems, including some physically located at NJIT, such as the work of Hillier Associate Professor Martina Decker.

Originally conceived as a physical

exhibit, the project was the brainchild of Maya Gervits, director of Hillier College’s Barbara and Leonard Littman Architecture and Design Library, who sought a topic that epitomized arts and sciences.

“The idea of robotics was floating for centuries. Just the interpretation was different, in how the idea has transferred from automatons to our times,” said Gervits, who plans on having this exhibit be physical as well.

Gervits leveraged the project organization skills of alumna Sara Tappan ’20, who has a bachelor’s in interior design and is now

The exhibit includes this panel about early 20th-century robotics.

pursuing a Master of Architecture. Among other tasks, Tappan helped identify a software platform.

Gervits also enlisted the help of librarian Monica Kenzie, a half-dozen professors and 15 other students, including architecture major Elizabeth Kowalchuk ’23, who helped build the exhibit’s 3D model. “My interest is in curation. I plan on hopefully going for a Ph.D. in art history and architectural history, doing museum work,” Kowalchuk said. ■



NJIT Ranks Highly in Pursuit of U.N. Sustainable Development Goals

NJIT has earned global recognition from the *Times Higher Education* Impact Ranking for the university’s pursuit

of and progress toward targets set forth by the United Nations’ Sustainable Development Goals.

Times Higher Education ranked NJIT No. 2 nationally in the goal of Decent Work and Economic Growth, which promotes inclusive and sustainable economic growth, full and productive

employment and decent work for all. NJIT has long been recognized as a leader in economic development, especially for underserved communities, as noted by its *Forbes* No. 1 ranking for student upward economic mobility.

NJIT ranked No. 90 globally for Affordable and Clean Energy, the goal of which aims to ensure access to affordable, reliable, sustainable and modern energy for all. This type of work is exemplified by NJIT’s Center for Resilient Design and its microgrid resiliency initiative, which helps

communities understand the value and feasibility of microgrid development.

“We are gratified that our commitment to sustainability, as demonstrated through performance in the research we conduct, the curriculum we deliver and the manner in which we engage our community, has earned NJIT a top spot in this prestigious ranking,” said Fadi P. Deek, provost and senior executive vice president. “We have made a strong commitment to sustainability, setting it as one of four guiding themes for NJIT’s strategic plan, *Building on a Strong Foundation—NJIT 2025*, in alignment with the United Nations’ Sustainable Development Goals of addressing challenges facing our planet and creating a safer and sustainable world for all.”

The Impact Ranking is the only global assessment of how universities live up to the U.N.’s 17 Sustainable Development Goals. ■

Orchestra Enlists College of Computing to Enhance Online Concerts



The COVID-19 pandemic inspired Newark's New Jersey Symphony Orchestra to challenge students and faculty at Ying Wu College of Computing to identify better ways to present virtual concerts using mixed-reality technology.

The orchestra's objective is to improve virtual live concerts, where each musician simultaneously performs from a safe location via online meeting platforms that are prone to network latency and lack of acceptable fidelity.

Ideally, NJIT researchers will leverage augmented- and virtual-reality technology, largely under the direction of Associate Professor Jacob Chakareski, who specializes in applying augmented reality/virtual reality to real-world problems.

Chakareski said new musical applications could include audio streaming algorithms that better facilitate live, multilocation performances without latency and quality issues. Another area to explore could be interactive environments that change or move with the music and movements of the musicians.

"This is not only a timely challenge we are looking to solve, but also one that New Jersey Symphony Orchestra hopes will reinvigorate its followers while bringing its music to a younger audience by making it more appealing and easier to engage with," Chakareski said. "To be

able to connect musicians from around the world and give them a means to collaborate and perform together without the limitations of being in different locations is very exciting."

Orchestra President and CEO Gabriel van Aalst characterized the project as a "chance for innovation," adding, "We look forward to seeing what's possible."

Phil Neches, an orchestra trustee who is also chair of Ying Wu's Advisory Board, helped bring the two organizations together and is helping to fund the research. ■

CONSTRUCTION BEGINS ON NEW RESIDENCE HALL

NJIT has broken ground and started construction on a new 548-bed residence hall on Warren Street that is scheduled to open in the fall of 2022.

Amenities will include private kitchens, a parking garage, indoor and outdoor cafes, a game room, bicycle storage and a grass courtyard. The building will be constructed with a focus on environmentally friendly methods and materials.

"This housing will dramatically enhance the living experience for our students, and it will meet a need that they've expressed to us for affordable apartment-style living on campus," said Marybeth Boger, vice president for student affairs and dean of students.



President Joel S. Bloom added that the new hall will "enable NJIT to continue to grow and meet the workforce demand for STEM graduates."

At the groundbreaking, Bloom and Central Ward Councilwoman LaMonica McIver acknowledged the historic nature of the building that the residence hall is replacing: a former public school. A fire in the school building, however, made restoration infeasible.

The new residence hall will house more than 500 students each semester.

To honor the site's history, architects plan to include an exhibit in the hall's lobby and incorporate the school's original exterior archway indoors. The project's advisers include Branko Kolarevic, dean of NJIT's Hillier College of Architecture and Design. ■



Tara Alvarez

NJIT-Led Research Team Receives \$3.7M NIH Grant

With a \$3.7 million grant from the National Institutes of Health, a multi-institutional team led by NJIT is exploring new methods to diagnose and treat a debilitating eye disorder known as convergence insufficiency (CI) that affects up to half the adolescents and young adults who suffer persistent

symptoms of concussion. CI, in which the muscles that control eye movements do not coordinate to focus on near objects, leads to double and blurred vision, headaches and difficulty concentrating. Its impact on cognition and learning can be severe, while it disrupts daily activities such as sports, work and driving. There is no validated treatment for it.

Tara Alvarez, professor of biomedical engineering and principal investigator for the grant, leads a team of engineers, optometrists, vision researchers, sports medicine physicians, balance experts and biostatisticians. They are investigating the neural mechanisms of concussion-caused CI, whether it is a more severe form of typically occurring CI or a different dysfunction, and whether treatments they developed for the former would be effective in concussion patients. ■

- At the 2021 College of Science and Liberal Arts (CSLA) Awards Ceremony, Dean Kevin Belfield noted the number of CSLA applicants has risen 20% in the last year, while faculty have published more than 240 refereed journal articles and received over \$10 million in new research funding.

- Namas Chandra, a biomedical engineer who develops new ways to understand and prevent traumatic brain injuries, and Lou Kondic, an expert in fluid dynamics and pioneer in the growing thin film sector, received the NJIT Board of Overseers Excellence in Research Prize and Medal for 2020.

- Martin Tuchman School of Management eclipsed 1,000 applications for its first-year class for the first time in its history, marking a 21% rise from last year and 61% jump from 2019. Growing interest in the school's flexible bachelor's in business program and a new major in financial technology fueled the increase.

- This semester NJIT launched a Bachelor of Science in Data Science, co-managed by Ying Wu College of Computing's (YWCC) Department of Computer Science and CSLA's Department of Mathematical Sciences. The program's two tracks — computing and statistics — will prepare students for careers in the burgeoning field of data science. YWCC is also now offering master's degrees in information systems and business information systems at its NJIT@JerseyCity location.

- Noted American educator Theodore "Ted" Carlisle Landsmark, Northeastern University's Distinguished Professor of Public Policy and Urban Affairs and director of its Kitty and Michael Dukakis Center for Urban and Regional Policy, addressed the 2021 graduating class of Hillier College of Architecture and Design. Dean Branko Kolarevic introduced him as "a fearless, committed fighter, whether he is fighting for racial and social justice, new urban policies or changes in architectural education."

NEXT-GEN BODY CAMS PART OF \$85K PUBLIC SAFETY GRANT

Public safety officers at NJIT will soon receive the next generation of body cams, all paid for by an \$85,000 grant from the state, dispersed over five years. The university purchased its first batch in 2016,

then again in 2019. Now, the state is picking up the tab.

The Department of Public Safety will also migrate data storage to an off-site server for faster and more convenient access to body cam footage. The department was an early adopter of body cam technology, and it was that forward-thinking culture that helped NJIT rank 6th nationwide in safety initiatives by Safe Campus last year. Chief Joseph Marswill, who is in his 25th year with the department, helped spearhead the grant application with the leadership team. ■

A public safety officer holds up an old body cam (left) and a new one (right).





Photos: NJIT Athletics

MEN'S AND WOMEN'S FENCING PLACES 4TH AT NCAA CHAMPIONSHIPS

The NJIT men's and women's fencing teams finished fourth at the 2021 NCAA Fencing Championships, hosted by Penn State at the Bryce Jordan Center. With 128

points, the program earned its best-ever showing, eclipsing its 10th place finish in 2015-16. Between the two squads, the Highlanders racked up nine All-American accolades.

Five Highlander men were named All-Americans: Robert Hondor, Rourke Hillyer, Cristian Candescu, Thomas Manley and Justin Petway. Hondor, who advanced to the final four in the men's epee, won 18 out of 23 bouts for a .783 winning percentage, while Hillyer finished in eighth place, picking up 12 victories out of 23 bouts for a .522 winning percentage.

In the men's foil, Candescu led the way for NJIT, finishing in ninth place and recording 13 wins out of 22 bouts for a .591 winning percentage, and Manley placed 11th, posting 13 wins out of 22 bouts for a .591 winning percentage. Petway posted a 12th-place finish in the men's sabre, registering 12 wins in 23

bouts for a .522 winning percentage.

The four Highlander women earning All-American status were Dominika Pawlowska, Marina Arrese, Dorottya Berczy and Paloma Almodovar. Pawlowska led the Highlanders on the final day in the women's epee, picking up a seventh-place finish; she combined for 13 wins out of 21 bouts for a .619 winning percentage.

Arrese, who was named 2021 Division I Men's and Women's Fencing Elite 90 Award winner, holding the top GPA at the championships, finished in ninth place in the women's epee with 13 victories out of 21 bouts for a .619 winning percentage.

In the women's sabre, Berczy placed ninth, combining for 11 victories in 21 bouts for a .571 winning percentage, while Almodovar recorded a 12th-place finish in the women's foil, notching 10 wins out of 20 bouts for a .500 winning percentage. ■

HIGHLANDER BASEBALL MAKES HISTORY WITH FIRST-EVER NCAA TOURNAMENT WIN



NJIT's baseball team earned the athletics program its first-ever NCAA Tournament win since moving to Division I in 2007, with a 3-2 victory over Northeastern in the Fayetteville Regional, hosted by Arkansas at Baum-Walker Stadium.

Right-handed pitcher Ryan Fischer recorded his fifth win of the season, pitching seven strong innings and allowing just one run on four hits while fanning four batters. Left-handed pitcher and closer Jake Rappaport posted his

program-best 11th save of the season, pitching the final two innings, allowing one run and one hit and striking out one batter; the veteran reliever sent down the Huskies in order in the ninth inning.

Nick Hussey led the way offensively for the Highlanders, going 2-for-3 with one run and one RBI, while Jared Donnelly went 2-for-3 with one run. And Highlanders Albert Choi, Julio Marciano, David Marciano, Paul Franzoni and Luke Longo each recorded one hit.

NJIT got on the board in the bottom of the third, as Hussey, who singled to get on base, came around to score on a wild pitch, putting the Highlanders ahead 1-0. Hussey drove in his first RBI of the game with a bases-loaded sacrifice fly to right field to take a 2-0 lead in the fourth. With an RBI single to right center by David Marciano in the fifth, NJIT increased its lead to 3-0.

Northeastern plated single runs in the seventh and eighth to pull within one run, 3-2, but the Highlanders secured the victory in the ninth. ■



RICHARD "DICK" SWEENEY '82, '18 HON BREWS UP A LEGACY AT NJIT

IF YOU ARE A COFFEE DRINKER, chances are you know and appreciate NJIT alumnus Richard "Dick" Sweeney '82, '18 HON. Dick is co-founder and former vice president of Keurig Green Mountain, Inc., the company behind the revolutionary Keurig single serve coffee system. An accomplished entrepreneur and proud Vietnam War veteran, Dick has transformed the way the world consumes its coffee, one cup at a time.

In addition to his many professional accolades, Dick has been a dedicated supporter and volunteer on behalf of NJIT's Albert Dorman Honors College (ADHC). Currently acknowledged as the Emeritus Board of Visitors Chair for ADHC, Dick was presented with the University Award for Entrepreneurship Leadership at Celebration in 2006, and received an honorary doctorate from NJIT in 2018. Additionally, NJIT is honored to recognize Dick as a member of the Colton Society, the premier giving society for lifetime donations to the university.

Now retired, Dick is building upon his investment in the talented and hardworking students in Albert Dorman Honors College. To this end, Dick has established the *Sweeney-Lacy Scholarship* at NJIT with a commitment through his estate plans. This scholarship will provide support for ADHC scholars who are first-generation college students — a group for which Dick has a special affinity, as he himself was the first in his family to attend college.

Furthermore, Dick's estate plans include funding for the *Dr. Joel Bloom Presidential Scholars Program* and the *Joan and Albert Dorman Community Education Fund*, two crucial ADHC initiatives that pay tribute respectively to President Joel S. Bloom and Albert A. Dorman '45, '99 HON, the visionary namesake behind NJIT's widely acclaimed Honors College.

To learn more about Dick Sweeney and the legacy he has created at NJIT, 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:

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Your legacy begins today.



NATIONALLY COMPETITIVE SCHOLARSHIPS AND FELLOWSHIPS

2021 NJIT HONOREES

Barry M. Goldwater Scholarship

Sreya Sanyal '22* (biology and history)
Abdul Azizogli '23* (biology)

Benjamin A. Gilman International Scholarship

Micaela Quisbert Mendoza '21* (industrial engineering, South Korea)

Boren Scholarships

Hannah Benjamin '23 (human-computer interaction, Taiwan): alternate
Samuel Carlos '22* (computer science/applied mathematics/history, China): alternate

Fulbright Grants

Kaylin Wittmeyer '21* (digital design, Canada)
Matthew Cherrey '20* (computer science, 2020 Fulbright Scholar, Germany): semi-finalist
Daniel Meza '20* (industrial design, 2020 Fulbright Scholar, Australia): semi-finalist
Matthew DaSilva '21* (biomedical engineering): semi-finalist
Sydney Sweet '21* (chemical engineering, 2020 Goldwater Scholar): semi-finalist
Anna Wadhwa '21* (biochemistry): semi-finalist

Canada-Fulbright MITACS Summer Research Award

Joseph Torsiello '22* (math/physics, 2020 Goldwater Scholar)

NSF Graduate Research Fellowship

Daniela Bushiri '21* (chemical engineering)
Philip Zaleski '21 (mathematics, 2020 Goldwater Scholar): honorable mention

Venture for America Fellowship

Parth Agrawal '21* (biomedical engineering)

*Dorman Scholar





The Daudelins, 2021

*Back, from left: Daniel, Elizabeth,
Timothy, Isaac, David
Front, top: John
Front, bottom: Jonathan*

HIGHLANDER HERITAGE

LEGACY FAMILIES MAKE AN NJIT EDUCATION A TRADITION

Highlander pride is felt by NJIT students and alumni alike, perhaps especially so among families with generational connections to the university. Whether they are parents and children, brothers and sisters, or other ties, they have established a distinctive bond with NJIT by making the institution a part of their family histories. In following in one another's footsteps, they have not only made coming to NJIT for their higher education a family tradition, they have also helped to enrich the university community over years and sometimes decades. Here, we celebrate a few of the many legacy families that have embraced NJIT.

BY JULIE JACOBS

David Daudelin

B.S. '12 Computer Science
with Business Minor, M.S. '13
Computer Science
Today: Senior Front End Engineer,
Pinwheel

Jonathan Daudelin, Ph.D.

B.S. '13 Mechanical Engineering
Today: Senior Software Engineer,
Waymo

Isaac Daudelin, M.D., Ph.D.

B.S. '14 Biology
Today: Internal Medicine Resident,
Rutgers New Jersey Medical School
(NJMS)

Timothy Daudelin, D.D.S.

B.S. '16 Biology with Math and
Chemistry Minors
Today: U.S. Navy Lieutenant,
PGY-1 Prosthodontic Resident,
Naval Postgraduate Dental School

Elizabeth Daudelin

B.S. '18 Applied Mathematics with
Computer Science Minor, M.S. '18
Data Science
Today: Full-Stack Developer,
Catastrophe Modeling, Everest Re

Daniel Daudelin

B.S. '19 Biology with Math Minor
Today: Third-Year Neuroscience
Graduate Student, Johns Hopkins
School of Medicine

John Daudelin

B.S. '20, M.S. '21 Computer Science
Today: Software Developer,
Capital One

THE DAUDELINS

It was through a MathCounts competition for middle schoolers, hosted by NJIT, that the Daudelin family first learned about the university's merit-based scholarships and robust curriculum. David and Jonathan, the eldest of the seven alumni siblings, participated in the event and, after researching NJIT a bit more, David decided he wanted to attend the university. Knowing he had an enjoyable and fruitful experience, his brothers and sister followed suit. All were Dorman Scholars at the Honors College.

"The great merit-based scholarships were the primary deciding factor for me, but I had also heard so many good things about NJIT from my older siblings, especially about the Honors faculty, and I knew the campus from visiting my brothers," recounted Elizabeth. "It was just so familiar that I didn't want to go anywhere else even if other schools had comparable scholarships."

Being so close in age, the Daudelin brothers not only were NJIT students simultaneously, they were also roommates. All the siblings drew comfort and strengthened their connection in having one another so close by.

"It was always nice knowing that someone I could totally rely on was right on campus, and in fact always my roommate," Daniel remembered. "I roomed with

Timothy my first year and John for the remaining three years."

While at NJIT, the Daudelins complemented their studies with many extracurricular activities. Jonathan and Timothy competed in track and field and were both team captains. John served as event coordinator for Cru (an on-campus Christian student organization), and Elizabeth helped grow the Knit N' Crochet student club. Honors in filmmaking, biology and innovative research were awarded to David, Daniel and Isaac, respectively.

They all have been back on campus since graduating to attend alumni and athletics events and/or visit friends. David also taught an e-commerce course as an adjunct professor, and Isaac returned to take part as a panelist in a health care-related Honors colloquium.

"The new athletics center is unreal!" Timothy remarked, referring to the Wellness and Events Center. "Very glad to have seen that all the construction during my time there paid off in a big way."

The Daudelins all agree that NJIT prepared them well for their chosen careers — and for entry into prestigious grad schools with full scholarships, too, for Jonathan (Cornell University), Isaac (NJMS), Timothy (Columbia University) and Daniel (Johns

REFLECTIONS

Where were your favorite places on or off campus to study or spend time with friends?

Isaac: "One of my favorite places to study was on top of the Campus Center next to the rooftop garden on a sunny spring day when the weather was just getting warm again."

Do you have a funny or interesting anecdote that involved some or all of you?

John: "Throughout my four years at NJIT, I constantly had people asking me if I was a Daudelin. On my first day at NJIT, a complete stranger held the door open for me and said he could tell I was a Daudelin!"

What does your family's legacy at NJIT mean to you?

David: "I'm so glad that I ended up being the first in the family to discover what a great place NJIT is. It gives me a sense of satisfaction that as a result of observing my success and happiness there, and that of my subsequent siblings, each successive sibling made their own choice to attend as well."



The Daudelins, 2012

At David's NJIT graduation:
(from left) Elizabeth, Timothy, Jonathan,
David, Isaac, John and Daniel

Hopkins University). "I think my whole family's story really demonstrates one of NJIT's greatest strengths," Jonathan noted.

"If you work hard and do well, an NJIT education can serve as the foundation and gateway to an exceptional academic and

industry career, without the highly exclusive acceptance rate of prestigious undergraduate schools or the staggering amounts of student debt that often come with attending one."

The family's legacy continues this fall: Younger sisters Anna and Cassia are first-year students studying interior design and biology and math, respectively. ■

THE JACKSONS

Marcelle Jackson, Ed.D.
M.S. '99 Management, Concentration
in Management Information Systems
Today: NJIT Career Development
Services (CDS) MIS Manager

Marie Jackson, D.M.D., FAGD
B.S. '05 Engineering Science
Today: General Dentist; Owner of
Stellar Smile Center

**Martina Jackson, V.M.D.,
DACLAM**
B.A. '14 Biology with Philosophy and
Applied Ethics Minor (Dual Degree
with Rutgers University)
Today: Clinical Research Veterinarian,
Massachusetts Institute of Technology

Vincia Jackson
B.S. '15 Chemical Engineering
Today: Operations Manager, Amazon

Vincent Jackson
B.S. '21 Business with a Concentration
in Marketing
Today: Business Development
Representative, Adobe Sales Academy

"My most noteworthy accomplishment was dragging my [then] three children with me to the library on Saturdays," quipped Marcelle Jackson of her time as a student at NJIT, adding sincerely, "They learned how to be studious."

Marcelle's three daughters and son followed her to NJIT, and she herself enrolled after her brother, countless cousins and close family friends graduated from the university and subsequently pursued successful careers. She took evening, weekend, on-campus and online classes, while working full time at AT&T Capital.

When Marie, Martina, Vincia and Vincent attended NJIT, they all participated in the Educational Opportunity Program. Martina and Marie were also Albert Dorman Honors College Scholars. "I attended NJIT, as they offered an accelerated dual-degree program, which allowed me provisional acceptance to dental school as a senior in high school,"

remarked Marie. "I didn't even think of it as following [in my mother's] footsteps. I was just happy NJIT had a program so specific to my needs with an unbeatable deal."

Having family nearby at NJIT, especially their mother working in CDS, provided the Jackson siblings with great comfort. "It was awesome having a parent on campus for support. My sister, Vincia, and I roomed together for part of a semester as well," noted Martina, while Vincent appreciated that he "could call my sisters for help."

Apart from their favorite on- and off-campus spots to meet up with friends — such as the dorm lounges, Murray Center for Women in Technology, Highlander Pub and Intrinsic Café — they remember the sense of community and camaraderie at NJIT. Vincia, who held various executive board member positions for school chapters of national organizations, recalled the inclusive environment, cultural diversity and, in particular, "second family" at EOP: "I have established relationships both during my time at NJIT and post graduation with members of the EOP cohort from years before me and after. These relationships have been critical in helping me navigate complex career decisions."

The Jacksons, 2006

From left: Marie,
Vincia and Martina
behind Vincent
outside their
church on the
day of Vincent's
First Communion





The Jacksons, 2021

From left: Martina, Vincia, Marcelle, Marie and Vincent

There were many fun and funny moments, too, like when Vincia and Martina triumphed in a karaoke contest. “Vincia and I won first-place duet ... at the Pub singing Disney’s *Aladdin*’s ‘A Whole New World.’ The prize money was great!” said Martina.

Looking forward, Marcelle hopes the Jacksons’ legacy at the university will continue. “My plans are for my future grandchildren to also study at NJIT and so on.” ■

REFLECTIONS

What impact has your NJIT degree and education had on your career?

Vincia: “Earning an engineering degree at NJIT gave me the confidence to ask the questions no one thinks of or is afraid to ask. ...This has allowed me to identify and solve problems in the workplace quickly and effectively.”

Have you been back to campus? If so, how has it changed since you were a student?

Marie: “I’ve returned for a number of the alumni weekends. The student center is completely new — when I attended it was the Hazel Center. It’s wild to see how much the school has grown. There are so many new buildings and dorms. I’m impressed.”

What does your family’s legacy at NJIT mean to you?

Vincent: “It means everything to me. Being the youngest used to feel like a lot of pressure, but as I matured I realized that it just means I’m destined to follow in the footsteps of greatness to create my own path.”

The McDermotts, 2021

From left: James, Kevin, Mike, Jill, Donna and Sandra

Kevin McDermott, PE, Ph.D.

B.S. '65 Electrical Engineering
Today: Retired, NASA; NJIT Professor Emeritus, Industrial Engineering

Mike McDermott

B.S. '88, M.S. '89 Industrial Engineering
Today: President, Pfizer Global Supply; NJIT Adjunct Professor, Mechanical and Industrial Engineering

Donna McDermott Borland

B.S. '88 Industrial Engineering
Today: Technical Processing, Dumont Public Library

Sandra Jesch

B.S. '06 Science, Technology and Society
Today: Analyst/Marketing, Sales and Design Department, Institute of Electrical and Electronics Engineers (IEEE)

James Borland

B.S. '18 Biomedical Engineering (Biomedical Instrumentation), M.S. '19 Engineering Management
Today: Inspection Engineer, Merck

Jill McDermott

B.S. '24 General Engineering Major



THE MCDERMOTTS

While there have been many changes to the NJIT campus since Kevin McDermott was a student, one constant has been subsequent generations of his family choosing to attend the university as well. Two of his children — Mike and Donna — and three of his grandchildren — Sandra, James and now Jill are forever Highlanders (as are two of his nephews).

Their NJIT educations have led to rewarding careers with, among other accomplishments, Kevin serving as a project engineering manager of the Apollo Lunar Heat Flow Experiment, Mike rising through the ranks in the pharmaceutical industry, Donna spending two decades as an engineer at AT&T, and Sandra flourishing in technical and scientific publishing. As James, Donna's son, remarked, "[It] made me ready for any challenge."

For Mike and Donna, encouragement from their father and an interest in engineering prompted their enrollment. For Sandra, James and Jill, NJIT's reputation and the career success of those who attended before them played a role. Although Jill, Mike's daughter, never felt pressured to become a Highlander, "it did help knowing that I would have a good support system of family who went through almost exactly what I would be going through. My family was also helpful in introducing me to STEM at a young age," she said.

Robotics figured prominently for Kevin, who developed four robotics laboratories and designed several courses in automation and robotics during his 35 years teaching at NJIT. As a student, James assisted in the labs, in addition to working in the Biomedical 3D Printing Lab. And Mike took one of his

father's robotics courses. "He received an A," Kevin recalled.

Now also an adjunct professor in industrial and mechanical engineering at NJIT, and named a Distinguished Alumnus in 2007, Mike practiced 3D Computer-Aided Design modeling while a student as well. "At the time, only NASA, GM and NJIT had that modeling capability and I was thrilled to be [involved with] this cutting-edge technology."

Sandra remembered visiting her grandfather in his office and joining him in the faculty dining hall for weekly lunches. "He would give me IEEE magazines to read, which I look back on and smile, since now I work for them."

"It's empowering to pass on this opportunity of a great education," summed up Donna, who along with Mike is thrilled that their children have carried on the family's legacy. Among her many fond memories of being a student at NJIT, there is one in particular that always makes her chuckle: "One fall, the first day of Calculus 3, the professor started the class with a test. My brother, cousin and I looked at each other and walked out of class. We found another section with a different teacher." ■



The McDermotts, Early 1990s

From left: Mike, Donna and Kevin, appearing in an NJIT alumni publication

REFLECTIONS

What have you missed most about NJIT?

Donna: "I loved being around really smart people. It ups your game."

How did you feel knowing a family member was close by?

Mike: "It was amazing to have the experience to attend with my sister Donna. We helped each other, supported each other and complemented each other. I could not have made it through engineering school without her."

What does your family's legacy at NJIT mean to you?

Sandra: "I'm extremely lucky to be part of this legacy and it feels good to know that I'm carrying on a tradition. I have two sons and I would be extremely proud to see them attend and graduate from NJIT as well. They've both already worn the NJIT swag as babies!"

Historic Gift Launches Two New Centers at NJIT



The NJIT campus was enriched this past summer with the establishment of two new education and research centers — the Paul V. Profeta Foundation, Inc. Real Estate Technology, Design, and Innovation Center and the Paul V. Profeta Foundation, Inc. Center for Innovation and Entrepreneurship — both made possible by a historic gift from The Paul V. Profeta Foundation, Inc. Paul V. Profeta, president of the foundation and a member of the university's Board of Overseers (above, right), signed an agreement alongside NJIT President Joel S. Bloom (above, left) this past May for the single largest donation in NJIT's history.



Profeta is a real estate investor and developer with commercial properties all over the country, a philanthropist focused on revitalizing Newark and an educator. In 2008, he started the Profeta Urban Investment Foundation, a 501(c)3 not-for-profit that loans seed capital for startup minority-owned commercial ventures in Newark at no interest. He also funded the creation of the Center for Urban Entrepreneurship and Economic Development at Rutgers Business School to work in conjunction with his foundation, as well as Rutgers Law Associates, a program run by the dean of Rutgers Law School that engages recent graduates of the school in helping ex-convicts and gang members to integrate back into society. Additionally, Profeta founded and publishes *Real Estate New Jersey*, the only magazine devoted solely to commercial real estate in the Garden State.

"NJIT is honored to accept this gift and

thanks Paul Profeta for all he has done and will continue to do for our university," said Bloom. "His steadfast support of innovation and entrepreneurship, at NJIT and throughout Newark, is a radiant example of generosity and giving with purpose."

The first-of-its-kind Profeta Real Estate Center will serve as the hub of teaching, training and research related to the disruptive technologies, innovation and novel design and construction techniques that are actively transforming the real estate field. Housed in NJIT's Martin Tuchman School of Management (MTSM) and drawing on multidisciplinary expertise from faculty across the entire university, the center will institute new undergraduate, graduate and MBA programs; provide certificate and noncredit training; organize and host conferences, symposia and workshops; and conduct cutting-edge transdisciplinary research in how real estate is now built, traded, used and managed. Studies will

have a special focus on the application of information technology and platform economics to real estate markets, also known as property technology or "PropTech," and the center will be headed by the Profeta Chair of Real Estate Technology, Design and Innovation.

"Global real estate is a more valuable asset class than all stocks, shares and bonds combined," said Oya Tukul, MTSM dean. "We are excited to be on the cutting edge of this market, producing the world's future real estate entrepreneurs and innovators."

The Profeta Center for Innovation and Entrepreneurship will also serve as a hub, for Newark-focused entrepreneurship initiatives that include the recently established Newark Startup Studio at VentureLink. The studio will cultivate and nurture historically underserved entrepreneurs from the greater Newark community, especially women and those from racial and ethnic minority groups,

NJIT Top 50 nationally for entrepreneurship studies

-The Princeton Review

Facts & Figures

582 million entrepreneurs worldwide

Source: The Hill

The U.S. is the best country for entrepreneurs

Source: Global Entrepreneurship and Development Institute

Most popular industries for entrepreneurship: Business and Food

Source: Guidant Financial

An estimated 11.9 million small businesses in the U.S. are owned by women

Source: American Express, 2017 data

Development of commercial real estate supported 9.2 millions jobs in the U.S., and contributed \$1.14 trillion to the country's GDP in 2019

Source: Career Building Communities

Between 2016 and 2026, construction will grow by 11% and create nearly 750,000 new jobs

Source: Bureau of Labor Statistics

Real estate development salaries increase to 6 figures for mid-level and senior positions

Source: Career Building Communities

Commercial real estate finance is one of the fastest-growing sectors

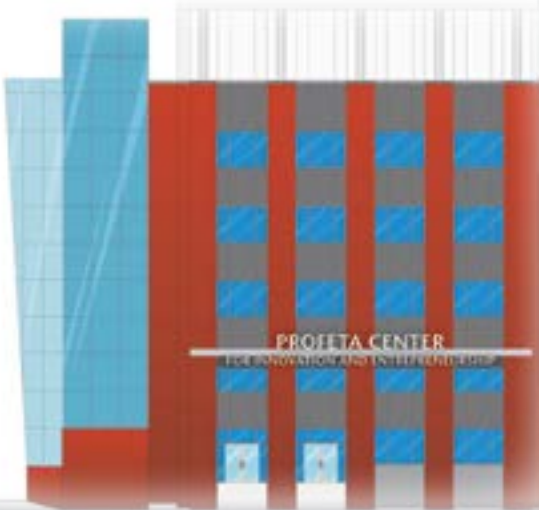
Source: Career Building Communities

From left: Kenneth Alexo Jr., vice president for Development and Alumni Relations at NJIT, Paul V. Profeta and NJIT President Joel S. Bloom prepare to sign the history-making agreement.

and help them develop and launch sustainable companies driven by NJIT-generated intellectual property. Housed on NJIT's campus at 211 Warren Street, the center will host training workshops, networking and mentoring programs, and conferences for students, faculty and other prospective entrepreneurs.

Through the center, the Profeta Foundation will also establish and endow the *Paul V. Profeta Foundation, Inc. Innovation and Entrepreneurship Fellowship*. The fellowship will provide scholarships for undergraduate business students pursuing a concentration or minor in innovation and entrepreneurship, summer internships at an NJIT entrepreneurship-focused center, and subsidies for students selected to participate as Profeta Fellows in national and regional entrepreneurship-related training programs, workshops and conferences.

Remarked Profeta about the centers, "I am proud to partner with NJIT to create an educational hub in Newark dedicated to the future of real estate. Helping students who might otherwise not have the opportunity to be innovators in the field that has given me so much, in the city that is so close to my heart, is very gratifying. I look forward to seeing the new centers thrive as a place for entrepreneurs to drive innovation and renewal." ■



Renderings of the new Profeta Center for Innovation and Entrepreneurship

ENGINE SPACE

BY ANDREW McMAINS

SEEKING

S

New labs convey the trade today and its aim of a better future

In the past year, NCE has opened or developed four labs totaling nearly 17,000 square feet. Funded by NJIT, grants and an accomplished alumnus, the work spaces represent innovation in engineering practice and research. The Life Sciences Motion Capture Lab, for example, uses infrared cameras, force plates and wearable sensors to measure the gaits of children with cerebral palsy before and after clinical interventions. And once fully equipped, the Microfabrication Lab will enable users to make flexible batteries for sensors that adhere to a patient's skin.

Advances in robotics fuel the Dieter Weissenrieder '76 and Family Industrial and Manufacturing Engineering Laboratory, where a robotic arm picks up a part, places it inside a sealed space for cutting and shaping, and then measures it on an inspection table that is connected to computer-aided design.

While those labs cater to particular disciplines, Makerspace II serves all Highlanders, with 3D printers, laser cutters and spaces for collaboration. Here's a close-up of each space.



DIETER WEISSENRIEDER '76 AND FAMILY INDUSTRIAL AND MANUFACTURING ENGINEERING LABORATORY

The makeover of this 1,400-square-foot space on the second floor of the Guttenberg Information Technologies Center was ignited by the generous financial support of Dieter Weissenrieder '76, who earned a bachelor's in industrial engineering at NJIT and went on to co-found Weiss-Aug, a leader in custom insert molding, precision metal stamping and assembly solutions.

The lab's centerpiece is a machine with a multi-axis robotic arm that picks up a part, places it inside an enclosed cavity for shaping, and then measures the outcome against computer-aided design. In seconds, it accomplishes what previously took many minutes with manually controlled equipment and measuring tools.

"Machines of this caliber provide our students with access to contemporary technology," said Dean Moshe Kam. "We believe this access will also increase the competitiveness of our students in the workforce."

Other features include an electronic whiteboard and rows of work stations equipped with retractable computer screens. Thus, the lab doubles as a classroom and provides the computing power needed to incorporate design and analysis into the industrial work across the room.

While the space primarily caters to students in mechanical, industrial and electrical engineering, it also accommodates other types of engineering and the creation of models for science and even architecture — all thanks to Weissenrieder, an Outstanding Alumnus Award winner who worked closely with Kam and Director of Experiential Learning Dan Brateris to realize this forward-looking vision.

LIFE SCIENCES MOTION CAPTURE LAB

Biomedical engineering is the focus of this 1,900-square-foot space on the third floor of the Life Sciences and Engineering Center.

Students and professors use monitoring and recording equipment to measure the gaits of children with cerebral palsy, test robotic exoskeletons used by military veterans with spinal cord injuries, and quantify the limits of human performance. The research is facilitated by a 16-camera motion capture system, an instrumented treadmill, instrumented overground walkway and host of wearable sensors.

Assistant Professor Saikat Pal, a principal contributor to the development of the space, is particularly proud of the customized grid system on the ceiling, which provides maximum flexibility in camera placement and capture volume. Cameras on the grid can be moved at the snap of a clamp and reconnected to one of 48 ports. The flexible design accommodates a broad range of motion capture studies, from people walking across the room to their fine finger and facial movements.

Big picture, Pal seeks to "train the next

NCE Dean Moshe Kam expects the Dieter Weissenrieder Lab to make Highlanders more competitive in the workforce.

generation of students in the study of human movement, musculoskeletal disorders, sports performance and robotic technology to improve mobility in persons with disabilities."

The lab is funded by NJIT, the U.S. Department of Veterans Affairs and the New Jersey Health Foundation, and has partners on its cerebral palsy research: Rutgers New Jersey Medical School in Newark, the Children's Specialized Hospital in New Brunswick and the New Jersey Pediatric Neuroscience Institute in Morristown, N.J. The exoskeleton work is supported by a \$1.2 million federal grant that NJIT is sharing with the James J. Peters VA Medical Center in the Bronx, N.Y.

MAKERSPACE II

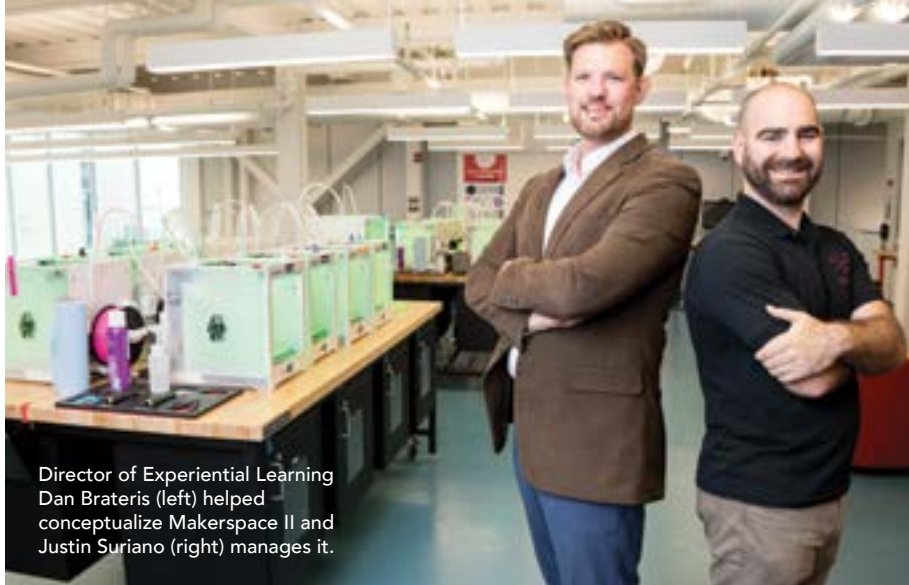
This three-floor, 10,000-square-foot extension of the flagship Makerspace answers the question, "Where can I meet with other students to work on prototypes and projects?"

Makerspace II, a hub for additive manufacturing in the Guttenberg Information Technologies Center, welcomes students from all disciplines to develop and test new design ideas, either individually or in groups. With plenty of 3D printers, laser cutters, soldering stations, tools and benches for electronics work, students can also work on class projects, vehicles for national competitions and personal projects.

The bright space also offers assorted amenities, including five meeting rooms, lockers for storing projects in progress, a training center with a digital whiteboard and glass-enclosed anteroom for demonstrating equipment, lounge seating, even a



Assistant Professor Saikat Pal studies human movement, musculoskeletal disorders, sports performance and robotic technology in the Life Sciences Motion Capture Lab.



Director of Experiential Learning Dan Brateris (left) helped conceptualize Makerspace II and Justin Suriano (right) manages it.

kitchenette. It is user-friendly and conducive to hanging out.

“We want to create these kinds of spaces where people can just start fleshing out ideas,” explained Assistant Professor Samuel Lieber, who provided input on the environment. “Classrooms are great. They give you a foundation and they give you that premise. But really, engineering is a practicing field that requires spaces for design and testing such as Makerspace II. Whether you’re a computer programmer or a part producer, you’ve got to practice your craft.”

A year in the works, the construction was funded by NJIT and a State of New Jersey grant.

MICROFABRICATION LAB

Coming soon to this 3,600-square-foot space on the first floor of the Microfabrication Innovation Center is a bevy of specialized equipment in chemicals and materials engineering.

By early 2022, the equipment will enable students, faculty and external collaborators to conduct a broad range of work in photolithography, laser writing, material deposition, wet/dry etching, metrology

measurement, cell-based assays and biomarker assays. Users will be trained and fully gowned to keep themselves and the space clean, with help from the ventilation system.

Once operational, the state-funded lab will facilitate the manufacturing of flexible batteries, sensors, semiconductors, novel materials and biomedical devices. Associate Professor Sagnik Basuray expects it to become a model for innovation in the region.

“I envision it as a nerve center for any new nano or micro device developed at NJIT,” said Basuray, who is working with Research Engineer Xiaotian Wang to realize that vision. “Envision, design, create, test and exhibit your devices and sensors here.”

The lab’s end-to-end design capabilities distinguish it from similar academic facilities and enhance its appeal across the university, from undergraduate and graduate students to professors and researchers. “STEM is not just about math and chemistry and physics,” Basuray added. “Those are your foundations, but how do you bring it to life, make it tangible? This lab represents an answer to that question.” ■



Photo: Diane Cuddy

Lab Develops 3D-Printed Biomaterials to Create Rejection-Proof Organs

There is no sustainable cure for osteoarthritis, the most common chronic musculoskeletal disorder of the joints. Joint replacements are successful treatments for older patients with already reduced mobility, but hold less promise for younger patients, with failure in the long-term nearly guaranteed. Biomaterial engineers propose another solution: restore the damaged tissue itself.

“The gap between supply and demand for transplantable tissues and organs is increasing,” said Murat Guvendiren, an assistant professor of chemical and materials engineering who is developing biomaterials designed to enable the production of fully functional, human-scale tissues and organs to replace failed organs. Known as bioinks — hydrogels seeded with live human cells that are 3D-printed in the lab — these materials could potentially be used to construct highly complex and patient-specific tissues and organs, as well as tissue interfaces.

“Optimally, we would produce tissues and organs from a person’s own medical images and cells to manufacture personalized materials that would not be rejected,” added Guvendiren, director of the Instructive Biomaterials and Additive Manufacturing Laboratory. His bioinks are what he calls “cell-instructive” materials that train stem cells to differentiate into different cell types in the right sequence to create a functional tissue.

Backed by a National Science Foundation CAREER grant, he is currently focusing on the interface between cartilage and bone, a complex task as the tissues are so different. Bone is hard, has a unique architecture and is threaded with blood vessels; cartilage is soft and has none. The cells that compose each must be created in a precise sequence.

More generally, Guvendiren aims to establish a library of bioinks and to customize biomaterials for the task at hand, be it the repair or replacement of skin, cartilage, bone or cardiac tissue.

- Tracey L. Regan



Associate Professor Sagnik Basuray, inside the Microfabrication Lab, makes STEM tangible.



A Year — and a Weekend —

Despite the continuing challenges of the COVID-19 pandemic, more than 500 NJIT alumni and guests reconnected with the university during Alumni Weekend 2021.

An unbroken tradition stretching back two decades, the weekend was canceled for the first time in 2020 due to the pandemic. This year, there was no question that the event would take place in some form.

**By
Michael
Smullen**

“We [the Alumni Weekend Committee] knew that this would be an unpredictable year. But there was tremendous support for holding the event in any way possible. Our alumni, and frankly our students and staff as well, truly felt the need to re-engage with NJIT and with each other. Members of our NJIT family have always supported each other through difficult times, and that desire came through loud and clear this year.”

With that in mind, the committee planned 15 virtual events over three nights. These events included, among others, wine and beer tastings; alumni seminars on retirement planning and podcasting; a comedy show; tours of the Newark Museum and NJIT’s campus; student research roundtables; and several faculty lectures. Each was

livestreamed to hundreds of viewers.

“It was so lovely to have someone talk in-depth about all the different aspects of wine and what we can be smelling, tasting and looking for,” said one alumnus about the wine tasting.

“The comedian was tons of fun! It was really refreshing to be allowed to leave my mic on and get rowdy for a Zoom call,” said another about the comedy night.

Some of the featured luminaries included nationally recognized podcaster Hala Taha ’12, MBA ’16, host of the *Young and Profiting Podcast*, which frequently ranks as the No. 1 education podcast, according to Audible; and Steve Reina MBA ’06, financial adviser at Prudential.

In an uplifting return to form, three



Like No Other

in-person events also took place: a walking tour of Newark; an off-campus reunion for the Classes of 1970 and 1971; a celebration for the Class of 2020; and the president's "state of the university" address and luncheon.

It was a happily larger-than-usual group of alumni who gathered at Ravello Restaurant in East Hanover, N.J. Since the Class of 1970 was unable to celebrate their 50th reunion in 2020, they joined their friends in the Class of 1971 to celebrate in style. While closely observing every health and safety precaution, they still proudly stood together for their induction into the Golden Highlander Society, marking those alumni who graduated 50 or more years ago.

At the heart of the weekend's events was the Class of 2020 celebration. Although they participated in a virtual Commencement the prior year, many of these newly minted graduates longed for an in-person ceremony of some kind, both as a time to say goodbye to each other and to mark new beginnings.

More than 400 alumni and guests arrived at Lubetkin Field at Mal Simon Stadium. Parents and friends packed the stands



Top: The Class of 2020 lines up with their respective deans.
Middle: Warm weather did not stop these Highlanders from wearing their graduation regalia. They were joined by NJIT First Lady Diane Bloom and President Joel S. Bloom.
Bottom: Alumni were guided on a walking tour of Ancient Rome.



while members of the class, buzzing with anticipation, lined up on the field behind the deans of their respective colleges.

Then, NJIT President Joel S. Bloom proudly greeted the class. He recognized the resilience and complimented the courage of the alumni and their guests, offering a reminder that just as their remarkable academic achievements were founded on support of others, they must now remember to support the generations to come. The former students stood listening in respectful silence. And when the president, sporting a broad smile, concluded with the traditional Tassel Turn, a raucous cheer erupted from the alumni and rippled out to the crowd. After a year of waiting, the Class of 2020 finally enjoyed the celebration they had been waiting for.

According to one alumna, "It was an amazing event, and it gave me the sense of closure I needed to move on." She continued, "It meant so much to have an in-person event acknowledging the class of 2020. None of us even knew how much we wanted a celebration like this."

Finally, the weekend's activities concluded with that classic NJIT line: GO HIGHLANDERS!

We look forward to seeing you next year! ■

Top to Bottom:

Albert Dorman Honors College Dean Louis Hamilton presents alumni awards to Rich Acosta '11H and Erica Feldman '10H.

Alumni President Ralph Jimenez '02 and wife Cheri enjoy the proceedings.

A moment of celebration!

Family and friends arrive at Lubetkin Field, Mal Simon Stadium.

Support our community!
Make an impact today!



Your gift will provide a
world-class education
for our hardworking students.



njit.edu/givenow

PROFILE

JOANN LUI '11

Helps Women Architects to
'Be Heard, Be Seen, Be Known'

Photo: Courtesy of Joann Lui

Joann Lui '11, an architect in Lawrenceville, N.J., is only 32 but may have already helped more people thrive in her field than most professionals could mentor in a whole career.

In 2018, Lui founded a Facebook group called Women Architects Collective, which now has more than 3,000 members from around the world, all seeking a safe space to discuss industry issues such as harassment, inclusion, job searching, technical matters and more.

"Women Architects Collective is an online platform for women architects looking to redefine their own work journey. We're leading the conversation on what it takes to be a modern woman architect. ... I'm here to help you be heard, be seen, and be known in your work journey," her group description states.

"I always wanted to start a community, a Facebook group online, but I didn't really have the time to do it. I was always busy getting my license and studying for the exam," explained Lui, a graduate of NJIT's Hillier College of Architecture and Design.

But when she reached that milestone, she found time on her hands and had experienced enough ups-and-downs to begin considering ways to help others. "I've gone through the struggles, the problems that we have, and I was at the same time frustrated with talking to my friends, my coworkers, and feeling like they don't know what to do with the problems they face. ... I always felt like there must be a way. I don't know if I have the power to change it, but at

least have a place to have a conversation."

She asks all new members about their biggest struggles. The most common responses are not being heard at work, not being taken seriously and how to stay effective as a working mother. She sees her work as complementing that of established offline organizations, such as the Association for Women in Architecture + Design.

As for her own career, Lui spent a decade in the trenches as a working architect at mega-firm Gensler and local specialist Lindemon Winckelmann Deupree Martin Russell. Earlier this year, she traded that life for a content marketing position at San Francisco-based startup Monograph, which develops software to help architects track projects.

Lui said her dream job would be turning the Facebook group into something larger, such as a nonprofit organization, if she could make a living by doing so. She believes it is possible and knows she cannot rush the process.

Meanwhile, she has shared a wealth of advice for younger people, observing that current students should work on time management and be open-minded to related careers where architecture experience would help. She said young professionals in the field should learn that it is okay to say no to extra work, and that listening is vital, especially when working with co-workers from other backgrounds. ■

- Evan Koblentz

WOMEN ARCHITECTS COLLECTIVE IS AN ONLINE PLATFORM FOR WOMEN ARCHITECTS LOOKING TO REDEFINE THEIR OWN WORK JOURNEY. WE'RE LEADING THE CONVERSATION ON WHAT IT TAKES TO BE A MODERN WOMAN ARCHITECT.

- Facebook Group Description

1950s

WILLIAM "BILL" LEVIDOW

M.S. '54's recent 100th birthday was recognized by the Springfield Township (NJ) Committee. During World War II, he served in the Navy Construction Battalion. Afterward, he joined the faculty of Newark College of Engineering, then went on to work at Bell Labs where he "was one of a few engineers relocated to Washington, D.C. to provide technical support to NASA and the office of manned spaceflight."

1960s

PETER WRAMPE '66, M.S. '66

was elected chairman of the Wilton Republican Town Committee. He is a professor of data analytics at New York University and is a former international business executive with Union Carbide and Praxair.

1970s

GLENN O. STEIGER '70, M.S. '87's letter to the editor was featured on nj.com. His letter, "NJIT Hits It Out of the Park," congratulated NJIT making the NCAA college baseball tournament.

1980s

THOMAS L. MANISCALCO

M.S. '80, B.S. '93 volunteers as a mentor/tutor at The Learning Centers at NJIT, Rutgers University and NYU. As a member of the American Society of Mechanical Engineers (ASME), he teaches a course given by ASME for interested students who are preparing to take the Fundamentals of Engineering exam for PE licensure.

JOHN RIBARDO '80, M.S. '83, director of strategic projects at PSE&G, co-authored "PSE&G Traverses New Jersey Wetland," a paper describing PSE&G's innovative construction methods to reduce the impact on protected habitats.

ANTONIO C. "TONY" CRINCOLI '86

joined Charles River Laboratories as vice president of engineering in May 2021. Most recently, he served as the head IOAO (UpJohn) of global engineering at Viatrix.

CLIFFORD M. "CLIFF" SAMUEL '88

was appointed to the Board of Directors at Antiva Biosciences, a clinical stage biopharmaceutical company developing novel, topical therapeutics for the treatment of precancerous lesions caused by human papilloma virus (HPV) infection.

1990s

DAVID A. CLARK '90 was promoted to assistant vice president at CP Engineers in Sparta, N.J. He joined the civil engineering firm in 2014 as a senior project manager.

DR. AVERY F. BROWNE '91 was featured in the *Pro News Report*. He is the medical director of AFC Urgent Care Centers in South Plainfield, West Orange, Cedar Grove and Aberdeen, N.J.

ELISA F. CHARTERS '92, M.S. '93

has been appointed to the NJIT Board of Trustees. She is a principal in the consultancy EAC Business International and president of Latina Surge, a national nonprofit advocacy organization that she co-founded in 2015.

ROBERT S. OKOJIE '92, M.S. '93, PH.D. '96

was among the four that were inducted into the NASA Inventors Hall of Fame in 2020, joining the ranks of 33 other innovators since its inception in 1973. Inductees are innovators who have made significant contributions to our nation through the technologies they have developed during their mission work. Their technologies spur economic growth, protect the planet and even save lives.

SUMIT SHARMA '96 was appointed chief executive officer and director of

MicroVision, Inc. (NASDAQ: MVIS) in February 2020. Before this appointment, he served as chief operating officer from June 2018 to February 2020.

SANJAY C. YODH '96 joined Monroe Capital LLC as managing director and head of insurance solutions and distributions. Before this role, he was head of insurance solutions in North America at Aberdeen Standard Investments.

KALPESH G. KAPADIA M.S. '97's company, Deserve, topped \$500 million valuation with investments from MasterCard and Ally Ventures Invest.

GUNJAN SAMTANI M.S. '97, M.S. '97, head of Goldman Sachs Services in India, was appointed partner in January 2021.

DHIRAJ SHAH '99H, a transformational business leader, high growth investor and passionate entrepreneur who founded and serves as executive chairman of global IT services company Avaap, joined NJIT's Board of Trustees.

KIM V. VIERHEILIG '99H, M.S. '00, vice president and business line leader for buildings and places, Metro New York for AECOM, was honored with a distinguished citizen award from the Patriots' Path Council, Boy Scouts of America.

2000s

NELLY E. NAUMAN '00 joined Parexel as chief information security officer in May 2021 at its Durham, N.C. location. Prior to Parexel, she served as managing director, information risk and security at Moody's Corporation.

RAJNEESH "RAJ" MANOCHA

M.S. '00 joined the American Urological Association as vice president and chief technology officer. He recently served as director of applications for the Maryland

PROFILE

At NJ TRANSIT, IoT Networks Smooth the Commute:

BILAL KHAN '10

Chief Technology Officer
NJ TRANSIT



Photo: Oscar Masciandro

Q: What does your job at NJ TRANSIT entail?

A: I am the chief technology and security officer for the Office of Information and Digital Technology. I oversee the IT infrastructure operation and security, which houses the 150-plus software applications that run NJ TRANSIT, its two data centers, the network that connects our buses, trains and facilities back to the office and our cybersecurity infrastructure. My team builds our digital workspace with new features that allow employees to do their jobs more efficiently and with next-generation IT to support cloud computing and to create new applications for our customers.

Q: What technology have you adopted recently?

A: In 2019, we provided our employees with cloud-based platforms, including Microsoft Teams, so they were no longer tethered to the office. With the COVID-19 lockdown last March, they were able to work from home on day one.

Q: How is new technology improving transportation for passengers?

A: In addition to new ticket vending machines and up-to-date speakers for

our PA systems, we've created several new mobile app capabilities. One new feature, launched in September 2020 with COVID-19 protocols and passenger comfort in mind, allows riders to see how full a bus or train is before they get on. Green, yellow and red color-coded icons indicate light, medium or heavy ridership conditions. On buses, this data is collected by automated onboard passenger-counting technology. On trains, the data is collected automatically from new, handheld devices used by train crews to scan and validate tickets and passes. A new push notification service alerts passengers that their stop is coming up next.

Q: How are data analytics and machine learning transforming operations?

A: We use Internet-of-Things sensors — thousands of cameras throughout our network and our new handheld devices, for example — that feed data into our models to guide decisions in real time: how to manage traffic, optimize routes, monitor and respond to safety and environmental conditions, and make business decisions based on the revenues generated by different routes. Aggregating data from our employees' devices allows us to uncover recurring

problems in the system — say a VPN that is difficult to access — that it will then fix automatically.

Q: What's on the horizon in terms of new technology for NJ TRANSIT and the transportation sector in general?

A: NJ TRANSIT is running a pilot program of self-driving shuttles that will start on a closed section of Fort Monmouth. They will seat up to 15 passengers, travel at speeds up to 15 miles an hour and are 100% electric. In a second phase of this test, we will need to get permits to drive them on public roads and to carry passengers within the Fort Monmouth property. As initially conceived, these vehicles would make short trips within an area and feed NJ TRANSIT and other fixed-route services. In another technology area, we have a team in IT that is FAA-certified to use drones to survey and help maintain our routes. These devices are very useful after a storm, for example. We're now exploring other ways to utilize them. ■

- Tracey L. Regan

Department of Human Services. Raj holds a Bachelor of Engineering from the National Institute of Technology.

RAJVIR S. "RAJ" MADAN '01H was appointed chief digital and information officer of Arcutis Biotherapeutics, Inc. He is responsible for providing the vision, strategic direction and overall leadership in digital, data/analytics and information technology initiatives. Prior to Arcutis, he served as vice president of digital, data/analytics and innovation for consumer health care technology at GlaxoSmithKline.

KARA L. COPPA '02, M.S. '04 and **ROBERT STATICA '96, M.S. '00's** company, Wickr, was acquired by Amazon. A secure messaging company co-founded at NJIT in 2011 by Kara, Robert (her husband and NJIT senior university lecturer) and Chris Howell (NJIT adjunct instructor), Wickr is known for its focus on corporate and military customers. Amazon will integrate Wickr's technology into its Amazon Web Services portfolio.

TIFFANY MORRIS '02H, M.S. '04 co-authored "Initiatives to Find the 'Lost Einsteins' through the Integration of Independent Scientific Research Projects in Early College," an exploratory study on findings from the integration of an independent research project into the college biology curriculum at Bard High School Early College in Newark, N.J. This study was inspired by the claim that students in low socioeconomic environments are less likely to consider becoming innovators.

ASHISH PARMAR M.S. '02 was featured in the June 2021 Forbes CIO Summit. As chief information officer for the house of modern luxury lifestyle brands, Tapestry, Ashish is responsible for leading technology strategy, information security and technology operations powering the digital-first and data-driven ways of working for its 17,000+

associates across 1,500 stores globally. He was also recently appointed to the Board of Directors of LL Flooring, a leading specialty retailer of hard-surface flooring in North America.

JONATHAN F. ECHEVERRIA '03 was promoted to chief operating officer for the technology infrastructure department at Bank of America.

PAULO SANTOS '03 was among the first wave of coronavirus patients in New Jersey. After he recuperated, he decided he wanted to do something to show that everything his health care providers did was not just for his survival, but has also given him a chance to do something more. He has since raised \$13,913 on the GoFundMe page he created to benefit CentraState Healthcare Foundation. He is a vice president at Jones Lang Lasalle Inc.

AJAY B. SHETTY M.S. '04's gin and tonic brand, Salud, won the financial support of Indian actor and serial entrepreneur Rana Daggubati. Salud is based in Bengaluru, India.

PAUL S. YOON '05 was appointed program coordinator of Spiritual Care at Memorial Sloan Kettering in March 2021. In this role, he leads a team of ten multifaith chaplains. He is a cancer and COVID-19 survivor.

PRASANT BALAKRISHNAN M.S. '06 became the chief operating officer at Maker Village Kochi in Kerala, India, in 2021. His most recent role was as an assistant director at Ernst and Young in Kerala, India.

MARC BREGMAN M.S. '07 was appointed as chief financial officer to Elite Pharmaceuticals, Inc., on May 17, 2021. His most recent role was as controller at Langan Engineering & Environmental Services.

PRIYANKA S. SAVE M.S. '08 was featured among the Top 10 women

winemakers in India by Indian Wine Academy. She and her father operate the Hill Zill Resort and her husband, **NAGESH R. PAI M.S. '09**, is affiliated with Hill Zill Winery.

HIRSH V. SINGH '10 serves as the senior director, operations, at EIT, Inc., a family business (formerly Hi-Tec Systems). He was a recent New Jersey Republican gubernatorial candidate.

HAICHEN LIU M.S. '12 was featured on Poets & Quants, a website that shares candid critiques of MBA rankings, in-depth coverage of MBA outcomes and innovative changes in MBA programs. She is enrolled in the International Institute for Management Development Business School. She is currently the global customer experience manager at Beckman Coulter Life Sciences in Germany.

KWAME L. BOLER '15 and his partner, Claudius Mbemba, were finalists for Young Entrepreneur of the Year at the GeekWire Awards. Boler and Mbemba co-founded Neu, a Seattle, Wash.-based startup platform that provides cleaning services to Airbnb, Inc. (NASDAQ: ABNB). Neu has nine employees and closed a \$700,000 seed round by New Stack Ventures in October 2020.

STEPHEN J. MARTINEZ M.Arch. '15 joined Hackensack University Medical Center Foundation as a trustee. He is an architect at RSC Architects.

TIAJA Y. HARLEY '18 was featured in "Unexpected Tools That Help Disadvantaged Kids Excel in College" by *Crains Cleveland*. Her most recent position was as field engineer at Taylor Bros., Inc.

NKUAH ASARE '18 is the newly elected Alumni Association president at Essex County College. He received his A.S. degree in civil engineering from Essex County College in 2015. Nkuah is

PROFILE

RYAN BROWN '15

Kicked Off Super Bowl LV
With the CBS Sports Team

Photo: Courtesy of Ryan Brown

If you were one of the 96.4 million viewers of Super Bowl LV, chances are you were watching the work of Ryan Brown '15 flash across your TV screen all night without realizing it.

Since leaving NJIT with a B.A. in communication and media, Brown has become graphics operator with CBS Sports, heading up the production crew responsible for the flurry of slick fonts, statistics and other graphical information that fans see accompanying nationally televised sporting events, including the NFL, NCAA and two Super Bowls since he started in his current role in 2017.

"A great thing about my time at NJIT and being close to the city was that I was able to take an opportunity with CBS full time before I even graduated," said Brown. "Since then, in my career there's definitely been stressful moments where we were under the gun to deliver content quickly at these big events. But for a diehard sports fan like myself, it doesn't get much better than what I'm doing now."

On Super Bowl LV Sunday, Brown animated over 100 graphics aired throughout CBS's pregame, halftime and postgame coverage. He had a hand in all of it from inside CBS's production truck just outside the stadium — from the pregame "Countdown to Kickoff" clock, the halftime statistical breakdowns detailing such things as the Chiefs' penalty miscues, and the inevitable Tom Brady playoff resumé graphics after the game.

"A normal game is about one hour of airtime for us, but the Super Bowl is a four-hour pregame show alone," said Brown, who started production in Tampa eight days before game day, prepping from his truck in the CBS Sports compound. "The production is on the biggest stage you can think of from a broadcasting point of view. There's way more prep work to really dig into storylines and stats for these two teams to make the content and visuals interesting throughout the night."

"I was in the production truck for 10 hours a day just preparing hundreds of graphics, most we didn't even use," said Brown. "When we are on air, I'll constantly be going through our catalogue of lower-third graphics and fonts and need to call things up rapidly to match video and field shots that are being rolled in from our tape machines. ... We have to be ready for anything."

Brown didn't get much rest after Super Bowl LV, quickly switching over to cover the NCAA basketball calendar. However, when the next Super Bowl arrives, Brown hopes the graphics he produces will be centered around a different star quarterback.

"As a Jets fan, I can't get away from Brady," Brown joked. "The last Super Bowl CBS produced was Super Bowl LIV in Atlanta, and I was making similar content for him back then, too." ■

- Jesse Jenkins

**"A GREAT
THING ABOUT
MY TIME AT NJIT
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TO THE CITY WAS
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- Ryan Brown

a geotechnical engineer at Frank H. Lehr Associates in East Orange, N.J.

NIRAV H. SHETH M.S. '19

co-founded Trell Experiences Pvt Ltd. in 2016 with IIT Bombay alumni Agrawal, Prashant Sachan, Arun Lodhi and National Institute of Industrial Engineering alumnus Bimal Kartheek Rebba. Trell is an India-based lifestyle community commerce platform that has raised \$45 million in its Series B funding. Nirav is also a contract software

engineer at Tata Consultancy Services in Pittsburgh, Penn.

JENNA D. BOUSELLAM '20

was appointed software engineer at Roblox Corporation.

TOMAS PASIECZNIK '21

was featured in "The Internet's Exotic Pets, and the People Who Love Them" by *The New York Times*.

SAMIR PESHORI '21, co-founder and chief operating officer at GlydeApp Inc, received financial backing from Village Global, a venture firm that is backed by some successful entrepreneurs such as Jeff Bezos, Mark Zuckerberg, Bill Gates and others. Founded in June 2019, GlydeApp provides contactless dining by automating the ordering and payment process for restaurants and their diners.

2020-2021 Alumni Achievement Award Winners

Honors were bestowed at Alumni Weekend 2021.



Judy A. Donnelly
M.A. '97



Tomas Gregorio
MBA '08



Donald J. Reifer '69



Albert A. Dorman
'45, '99 HON



Kalpesh G. Kapadia
M.S. '97



Paula A. Gutierrez
'09 MHA, CPTC
GeNext Young Alumni Achievement Award

IN MEMORIAM

Benjamin P. D'Armiento '48
George A. Ruhe '49
Milton E. Jones '51, M.S. '56
Richard A. Crocco '54
Fred O. Stickle '54
Reynold R. Zanetti '55
Raymond L. Bilott '56
Louis F. Torricollo '56, M.S. '61
Hyman Izraeli M.S. '57
Robert A. O'Hare '57
Edmond V. Ray '57
George A. Marsh '58
Ernani C. Vergano '58, M.S. '61
Donald Burke '59
John W. Howard '59

James R. Woods '59
Matthew M. Nigro '60
Donald R. Andres '61
Russell M. Hope '61
Richard F. Bloom M.S. '62
Frank Estavanik '62
Richard C. Oehling '62
Ruth R. Pearl M.S. '62
Joseph M. Provissiero '62
Raymond J. Wojcik '62, M.S. '65
John J. Forst '63
Laurence E. French '65, M.S. '67
Robert C. Miller '65
Thomas F. Stapleton '65
Frank E. Pearn '66
Joel A. Shelko '66
Matthew J. Wallasky '66
George J. Findura '67

William J. Lahm M.S. '67
Robert J. Quinlan '67
Joseph A. Bronsard '68
Gene P. Ort '68
William M. Lund '70
Richard R. Bozzo '71
Joseph R. Inserra '71
Eugene E. Breslin '73
William E. Hess '73
Frederick D. Chichester Ph.D. '76
Antonio P. Branco '77
Thomas J. Flatley '77
Joseph J. Zafian '81
Jean C. Joseph '82
Saint Jean Fombrun '87, CERT '87
Pankaj Gohel '97
Vincent Picarello '97
Kevin Klein '19

PROFILE

The Emerging Art of Disease Forecasting:

SARA DEL VALLE '00, M.S. '01

Deputy Group Leader
Information Systems and Modeling Group
Los Alamos National Laboratory



Photo: Los Alamos National Laboratory

Q: What is your job within the information systems and modeling group at Los Alamos?

A: I spend half my time overseeing more than 40 scientists and 20 students and postdocs executing a diverse portfolio in support of national security, from assessing infrastructure impacts resulting from man-made and natural disasters like hurricanes, to physics-based modeling of the spread of chemical-biological-radiological-nuclear agents, to data analytics of real-time heterogeneous streams to inform national security problems. The other half is focused on developing mathematical, statistical and computational models to understand and predict the spread of infectious diseases, what we call mathematical epidemiology.

Q: How have you addressed the pandemic?

A: My team provides science-based decision support to state, local and federal organizations, such as the Centers for Disease Control and Prevention, the Department of Energy and the New Mexico Department of Health. We provide weekly COVID-19 forecasts and assess the impact of interventions such as masks, closures and re-openings, as well as testing and vaccines, on COVID-19 spread. Disease forecasting

is still in its infancy. Historically, the mathematical epidemiology field has focused on understanding disease spread and assesses the impact of “what if” scenarios.

Q: How do you use approaches from weather forecasting to model disease spread?

A: Forecasting is the ability to predict what will happen in the future based on analysis of the past and current data. The weather forecasting community leverages historical data and current observations from sensors around the globe (e.g., satellites and weather stations) and mathematical models to provide probabilistic forecasts of the weather. My team exploits different types of data, including social media and climate, satellite imagery and disease surveillance data, and combines them with mathematical models to forecast infectious diseases.

Individual decisions, such as wearing a face mask, can have an impact at the aggregate level, but it's difficult to capture human behavior in real time. Therefore, there are limitations in terms of how far into the future we can forecast due to the uncertainty in human behavior, but our models appear to be robust in generating short-term forecasts. They provide decision support that can address resource allocation questions, targeted educational

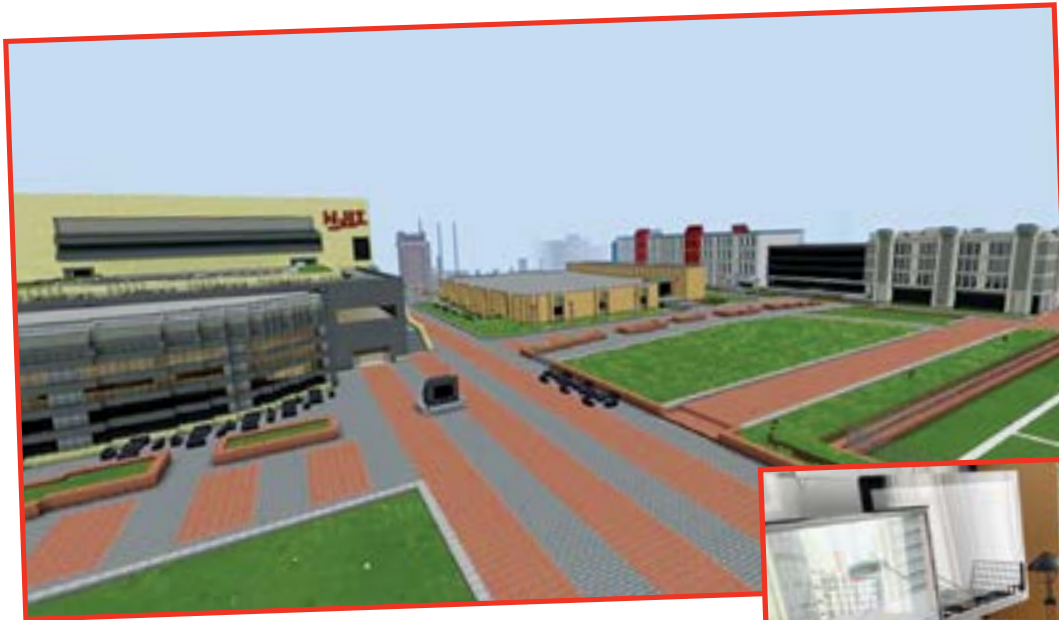
campaigns and cost-benefit analysis of optimal intervention strategies.

Q: What new modeling approaches will help in mitigating disease spread?

A: The combination of data-driven and model-driven approaches is what we need to tackle future threats and challenges. A big challenge for this field is data integrity, so approaches that can tackle this problem will be useful to increase the accuracy of modeling results. Data can be misleading, because it cannot capture the mechanistic dynamics of how diseases spread, such as the impact of super spreaders, emergent human behaviors and transmission routes (e.g., human-to-human vs. mosquito-borne).

Mathematical models provide the foundation to understand how the world works, but when combined with heterogeneous and dynamic data, the results are likely to be more accurate and robust. My team is developing hybrid models that combine machine-learning approaches that exploit data with mechanistic mathematical models to build better models that can be flexible and adapt to situations they weren't anticipating. ■

- Jesse Jenkins



Pawel Sierhej, a civil engineering major, missed being on the campus during the pandemic, so he built one in Minecraft.



Photos: Courtesy of Pawel Sierhej

ENGINEERING STUDENT GOES VIRTUAL WITH NJIT MINECRAFT CAMPUS

NJIT has a new campus, but you can only go there by computer because civil engineering major Pawel Sierhej built it entirely in [Minecraft](#).

Sierhej, who commutes from Linden, said he was inspired to build the virtual campus because he missed being at the real one during the height of the COVID-19 pandemic. It's a trend nationwide, as students at Boston University, Northwestern, Penn and UCLA modeled their campuses, too.

"If I was a resident, I don't think I would be quite as nostalgic toward rebuilding the campus. The quarantine had me really isolated. I think being a commuter was one of the reasons I did this," Sierhej explained.

Sierhej worked in Minecraft's creative mode, where players build all day, without the need to make alliances, battle enemies and ultimately slay a dragon, as in the videogame's competitive mode. He has not yet uploaded the files to public Minecraft servers, but hopes to do that soon. The virtual campus could be finished this academic year, he said —

it's mostly just exteriors for now, although he already built the inside of the Campus Center.

Sierhej said he felt renewed energy for the project after receiving positive feedback on it through the unofficial NJIT subforum on Reddit. His post there in late April quickly exceeded more than 100 upvotes and dozens of comments by early May — "This is awesome! Also a really great idea for incoming freshmen too," one user commented. "Get this man a scholarship ASAP," another said.

Sierhej enlisted help from two friends, Dominik Dragan and Erik De La Cruz, who are both studying mechanical engineering. They're helping finish his work and beta-testing it. Players will likely find several Easter eggs — a term used by programmers for jokes hidden in code, visible to determined users — such as an invisible block placed under the campus clock tower, so students don't accidentally walk underneath it and doom themselves to not graduate on time, per the Highlander legend.

The virtual campus is not perfectly to

scale. "I was going for accuracy from the very get-go, 1-to-1 scale on everything, but I made an error in that I started from one point and didn't consistently measure every time I made progress," resulting in the omission of the digital Naimoli Family Athletic and Recreational Facility, he said. "Hopefully, nobody gets too bugged out about that," he added, with apologies to the university men's and women's tennis teams.

Sierhej said he applied lessons learned from Stephanie Santos, a senior university lecturer in the civil and environmental engineering department, from whom he took courses such as CE 260, Civil Engineering Methods. The course taught him how to use Autodesk's AutoCAD and Civil 3D drafting software. Minecraft is not so precise, with each block equal to a cubic meter.

"It was extremely fun," he concluded. "It's one of those things I can always go back to. It got a good response." ■

- Evan Koblentz



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