





# The Ledger

**Nicole Kalitsi '20** completed a nonprofit co-op at the Greater Philadelphia Cultural Alliance that was endowed by the Lenfest Foundation. To date, "The Future Is a Place We Make" campaign has raised \$121 million to provide for student scholarships and co-ops.

## CAMPAIGN

### CAMPAIGN SUCCESSES

In March, Drexel marked a milestone of more than \$615 million raised during its most ambitious fundraising campaign, thanks in large part to generous alumni. The *"The Future Is a Place We Make"* Campaign is more than three-quarters of the way to its goal of \$750 million since launching publicly in 2017. With help from the Campaign, the University is preparing students for academic and professional success, generating research and innovation that addresses urgent societal challenges, and sustaining civic engagement initiatives that benefit the Philadelphia community and beyond. Below are some Campaign achievements.

\$200 M

Amount raised from parents and friends of the University and its students.

131

Million dollars raised for academic support.

\$138 M

Amount raised for research initiatives.

11

Number of professorships endowed.

29

Million dollars raised for endowed professorships and chairs.

\$185 M

Amount raised from Drexel alumni.

23,700

Number of alumni engaged with the Campaign.





FEATURES

# 26

## 19 Stories of Dragons Coming to the Rescue During COVID-19

Viral diagnostics...emergency food... economic aid...expert information... protective supplies...basic science... When the pandemic brought the country to a stop, Dragons rushed to help.



VICTOR JUHASZ

# 34

## Who Will See Us Through This?

Former Secretary of the Department of Veterans Affairs David Shulkin (MD '86, HD '19) reflects on the affliction of American partisanship during the coronavirus.

# 38

## A Year in the Life of a Philadelphia Teacher Resident

Philadelphia is one of a handful of cities experimenting with year-long apprenticeship programs to address teacher shortages in public schools. Now Drexel has joined the effort.



One of my first messages to the Drexel community about the pandemic noted that “much about this new virus remains unknown.” Even after all that we learned since that time in late January, that statement remains true. In fact, we’ll be grappling for some time with many questions, such as the timetable for developing a vaccine, the long-term impact on colleges and universities, and the pace of return to a new normal.

That being said, it will come as no surprise that your alma mater has taken a proactive approach to this new challenge — with each initiative designed, first and foremost, to safeguard the well-being of our people and students, while also staying true to our mission of teaching, research and service.

The cornerstone of our response has been the shift to online instruction. Given mere weeks to prepare, our faculty and instructional technology team did transformative work — enabling professors each week to conduct more than 3,200 course sessions that, prior to the pandemic, would have been taught face-to-face. We saw a remarkably smooth virtual classroom experience for thousands new to this form of instruction, with positive feedback from students and faculty alike.

We also marshaled our research capacity to fight this disease, creating the Rapid Response Research and Development Fund and launching more than a dozen projects focused on health-related research and product development. The work runs the gamut, from producing medical masks and face shields, to creating a new app to track infections, to vaccine-related research, and chronicling the mental health impacts of the pandemic.

And we certainly are not letting the pandemic prevent us from celebrating achievements of our students. A University-wide virtual graduation celebration was held in June, in addition to similar celebrations for individual colleges and schools. The College of Medicine kicked off our virtual commencement season with its virtual ceremony on May 29, including remarks from Commencement speaker and honorary degree recipient Katherine A. High, MD, co-founder, president and chief scientific officer of Spark Therapeutics.

The pandemic has left no one untouched. At the same time, I am confident that the Drexel community is navigating the challenges and opportunities it presents with increasing success. In that spirit, I want to assure you that our students and faculty continue to focus on making a meaningful and positive response to this extraordinary period in history.

Sincerely,

John Fry / President

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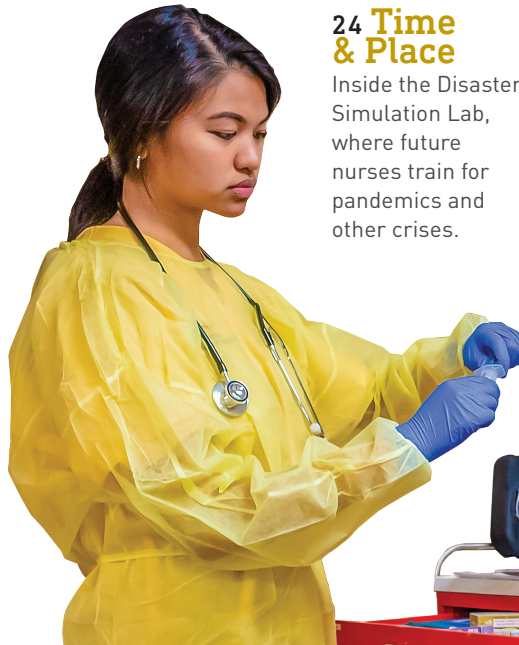
Don't we all want a hero right now? The masked student who roams campus dressed as Spider-Man reveals what motivates him.

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EDITOR'S LETTER

Oh Hello, Upheaval

I was writing for a business magazine based in New York in 2001. That year, the market crash dashed dot-com dreams and the economy tanked. It was the year Enron, WorldCom and their accounting firm, Arthur Andersen, blew up in spectacular bankruptcies amid fraud investigations. In September, I watched the twin towers fall.

So much was changed by that year. Security, politics, fortunes, lives, laws, skylines, psyches. So many of those changes still influence the present — as will the events of this year, decades from now.

At the time, though, we had a magazine to put out. The day Al Qaeda attacked, we were close to going to press, and we knew nobody wanted to read another opinion piece about whether CEOs should chair their own boards. Content was scrapped and new topics quickly assigned. My editor at the time remarked, “This isn’t editing, this is triage.”

Thankfully, I wasn’t responsible for filling those editorial holes (that time).

I write this by way of introducing our triage edition. We cut features that were ready for layout and assigned new ones. We eliminated the sports section when athletes stopped playing. We updated what news we could with fresh information, but had to leave some facts in a state of suspension (when will community events and lecture series resume in person? who knows). Read charitably, please; there will be typos.

Our first thoughts when Philadelphia locked down was how can we write about an empty campus? But soon there were questions to answer, rapid changes to chronicle and an incredible pandemic response to report. Right away, our community leapt into action, coming up with help, information, diagnostics and equipment. Their stories, starting on page 26, make it easy to believe that ingenuity will prevail.

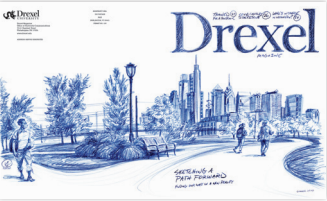
For the cover, illustrator Victor Juhasz recreated the quiet skyline visible from Drexel Park. Our magazine designer hated this concept quite a bit, but I look forward to that promise of calm, especially now. Anger at police killings boiled over in cities from coast to coast days before this edition went to press. The National Guard has been activated in Pennsylvania and in many other states, and guardsmen are currently using the state-owned Armory on Drexel’s campus as headquarters. Upheaval, again.

The sketch lines on the cover are left intentionally unfinished because that’s where we are in higher education, as a city, and as a country at this moment. We’re slowly figuring things out. But we’ll get there.

Thank you for reading.

*Sonja Sherwood*

Sonja Sherwood / Editor



ABOUT THE COVER  
Drexel Park, by Victor Juhasz.

LETTERS

We Bought a Hospital

Congratulations for editing another smash edition of *Drexel Magazine*! The description in the fall 2019 edition of how Hahnemann and St. Christopher’s Hospital for Children ended up part of Drexel is fascinating.

Your words on St. Christopher’s took me back many years, to 1963, in fact. My 6-year-old daughter, Donna, had contracted a disease unknown to either her doctor or to our local hospital. The doctor knew he didn’t know, but the hospital in suburban Philadelphia did not.

On the second hospital evening, I called a member of our family, an oral surgeon in Wilmington, Delaware. He called me back: “Withdraw Donna from the hospital tomorrow morning and take her to St. Christopher’s. They will be waiting for her.”

Within 24 hours, St. Christopher’s knew she had hemolytic uremic renal syndrome, a rare disease first diagnosed in Argentina. It shuts down both kidneys. It took six weeks at St Christopher’s, but our daughter we were told was the first girl in the United States to survive it. Amen.

Donna is now in her 40th year giving back as a child speech pathologist in the public school system. Our family is forever grateful to St. Christopher’s and the Lord.

Saving St. Christopher’s was and is a true Godsend. I am so happy that the hospital is in such good hands!!

Blessings.

**BOB MITCHELL**  
BS chemical engineering ’48  
Glenburn, Maine

Kudos re your nice summary of the long, tortuous road leading to

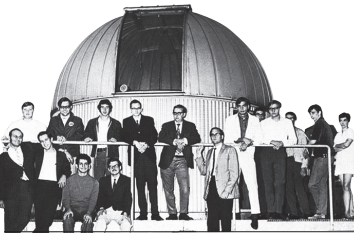


Drexel’s acquisition (in partnership with Tower Health) of St. Christopher’s Hospital for Children.

As a fan of the passive voice, however, I must say that I shuddered when I read the phrase “... Hahnemann University Hospital shuttered.”

Thanks for indulging this close reader.

**BILL MONSELL**  
BS biological science ’96  
Bellefonte, Pennsylvania

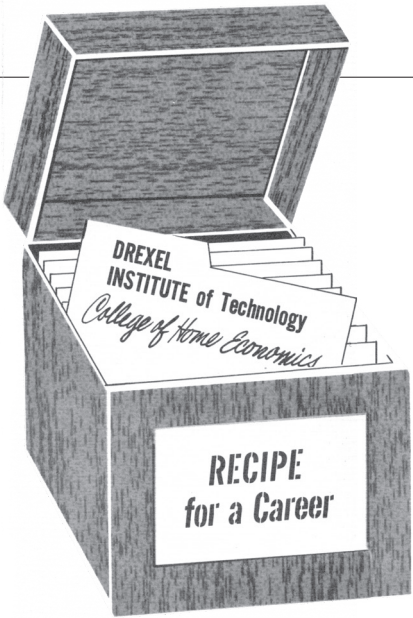


See the Stars from Curtis Hall

Loved seeing an article about Mount Apathy. I’m second from the left in the back row of the old yearbook picture. Back then we had a Celestron 10 in the dome. The club was building a 12-inch or 14-inch Newtonian including grinding the mirror. We had to avoid NCC1776 (the Food Fair sign across Market Street) when observing to the north.

Dr. Leonard Cohen and I crossed paths about a decade later when he contacted PACS (Philadelphia Area Computer Society) looking for help with his early home computer.

**WILLIAM C. KOFFKE**  
BS mechanical engineering ’71;  
MS mechanical engineering ’73  
Norristown, Pennsylvania



Fall 2019 Issue

I’ve only viewed the inside cover, your letter and a very few other pages and I love this issue. I was there as Jane Money in the associate degree for administrative help. It was 1962–64. The co-op was just a part of life for many of the students. That was after the Retail Management course but certainly during fabled Home Economics. In the old days when I attended Drexel, the courses were mainly accounting and engineering for the male students. If you were female, it was assumed you were enrolled in Home Economics.

Thank you for keeping me on the mailing list. I’m very proud to be a Dragon.

**JANE CHARLEY**  
Certificate, business administration ’64  
Downingtown, Pennsylvania

**ELIZABETH BANHAM**  
BS humanities and communications ’80  
San Diego, California

Thank you for mentioning me and my new novel, “Lydia: Destiny Or Choice” on p. 47 of the Class Notes section. I was absolutely thrilled to see my book mentioned. Also, got a chuckle that I was the only one mentioned from the ’50s. Guess time marches on, LOL...

**VICKY NORVAISA**  
BS administration secretarial ’59  
Erie, Pennsylvania

The Ledger

On page 1 of the fall 2019 issue it mentions that co-op students had served in 48 states, all except North and South Dakota. In 1961 and 1962 while working for Catalytic Construction Company, a Philadelphia firm, I was assigned to install the final stages of Minutemen missile silos. I started in Rapid City, South Dakota, and then went to Minot, North Dakota, over a nine-month period. Although I was in the business school I was doing close order surveying to lay out the missile suspension systems and sighting apparatus prior to the delivery of the missiles.

**JOHN “DEKE” SHELLER**  
BS business administration ’67  
Salisbury, Maryland

Minutemen Missile Silo



*Editor’s note: First, what a tremendous co-op experience! Second, thank you for the clarification. I believe that stat should be restated to say that there have been no co-op employers who are headquartered in North or South Dakota.*



Found Art

The Flame of Knowledge Fountain was not relocated to North Hall until the late 2000s, when the quad was redone with the dancing fountain. I believe it was late 2007/early 2008. I lived in North Hall from 2005–2006 and it was not there while I lived there. I then lived in Summer Street and recall the relocated fountain showing up before I graduated in 2008.

**JIM GARDNER**  
BS/MS civil engineering ’08  
Philadelphia, Pennsylvania

*Editor’s note: We’ll defer to the resident of the time. Thank you for rectifying that.*

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# A City Keeps Its Distance

*In 14 days in March, our region went from discovering its first cases of SARS-CoV-2 infection to a statewide lockdown — here’s how Drexel adapted.*

The New Year began with travel warnings about a new virus spreading rapidly in China, but the threat felt remote and unthinkable. Alarms bells began ringing Friday, March 6, when the first two cases of the new coronavirus disease were confirmed in the state. Even then, the infections seemed far away in Wayne and Delaware counties, and the two affected individuals could trace their infections to travel or a known exposure. It felt like we had more time. Then just four days later, Philadelphia reported its first case. The city cancelled its annual St. Patrick’s Day Parade.

The following Monday began normally, but higher education administrators across the city had learned that grade schools were considering closure. The next day, the large Lower Merion School District outside of Philadelphia announced it would suspend classes for all grades. From that day on, circumstances changed dramatically day by day.

Grade schools did not reopen and many other businesses suspended operations. By the end of the week, faculty and administrators who had for years urged their students to embrace adaptability and resourcefulness found themselves living their own lesson plans. Drexel’s final exams were moved online, all students were instructed to pack up and begin heading home, and faculty and staff began to work remotely. Study abroad, international co-ops and faculty travel were the first programs to be suspended, followed by cancellations of campus events, most research lab work, clinical rotations, all athletic programs and Alumni Weekend.

Almost overnight, alumni and friends of Drexel pitched in tens of thousands of dollars to an emergency fund to help newly uprooted

Friends play footsie 6 feet apart in the otherwise empty Drexel Park, two weeks into Philadelphia’s stay-at-home shutdown.



JEFF FUSCO



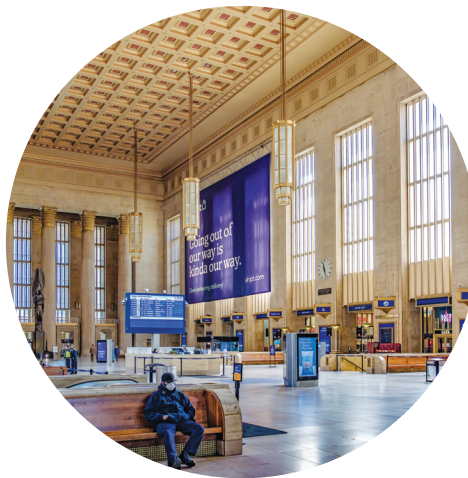


In South Philadelphia, cars lined up at a drive-thru testing site outside Citizens Bank Park.

OUTBREAK



A grocery store employee suited up in Chinatown.



The normally busy heart of 30th Street Station was quiet.



Drexel Facilities employees stepped up cleanings.

students with move-out expenses. Drexel waived \$11 million of spring quarter room and board charges for students in campus residences.

It took just two weeks for Pennsylvania to go from its first case to total lockdown, with all but life-sustaining businesses ordered to close by order of Governor Tom Wolf as of March 20. By 5 p.m. that night, Main Building was silent except for the buzz of floor scrubbers deep cleaning Great Court.

On the same day that the campus shut down, Drexel learned of its first case of a student diagnosed with COVID-19, who was recovering at home. The next day, another student was confirmed positive. Two doctors affiliated with Drexel's St. Christopher's Hospital for Children were also infected by that time. The rapid decisions of the previous two weeks had undoubtedly prevented infections. In fact, a later study by Drexel's Urban Health Collaborative estimated the shutdown saved 7,100 lives and reduced hospitalizations by 68,000 between March 20 and May 22.

The last time campus closed for public health reasons was during the Spanish flu outbreak of 1918. During a parade in late September 1918, thousands of people in Philadelphia became infected by a virus that had originated in the American Midwest. The virus spread to Europe with American troops fighting World War I and then returned stateside with a vengeance. During the flu pandemic, Philadelphia was the hardest-hit city in the United States, and the Drexel Institute of Art, Science and Industry, as it was then known, delayed its fall term until Oct. 21.

Today, Drexel is much larger and more complex, with 24,000 students and thousands of faculty and staff, but it has more options, too. Online learning and remote work platforms mean University life can adapt faster than any virus.

"This is a difficult time for all of us, full of many uncertainties," said President John Fry. "However, we are resilient and resourceful. Already, with so many working together, we have mobilized to ensure the continuity of research and educational programs and the continued well-being of our community."

Drexel swiftly parlayed its 25 years of experience in online education into converting face-to-face final exams and courses into virtual classrooms. For spring term, Drexel's Information Technology teams created more than 9,000 Zoom accounts, began supporting around 1,000 class meetings a day, tripled the number of training sessions offered to faculty, and loaned out over 100 laptops.

Protocols and funds were put in place to continue essential research work. Almost immediately, faculty pivoted toward new projects exploring ways to fight the coronavirus. Over 50 researchers are working on projects such as advancing plasma-based sanitization, anti-viral nano-coatings, washable masks and 3D printed headbands for faceshields, new drugs and virus detection methods. A \$100,000 COVID-19 Rapid Response Research & Development Fund raised with help from trustees for faculty research was oversubscribed by nearly double.

Meanwhile, the vast majority of the professional staff smoothly transitioned to remote work thanks to a limited flexible workplace policy established several years before.

Whatever comes next, the Drexel community will weather it. In the meantime, *Drexel Magazine's* message to alumni is to stay safe, scrub hands, and take care of vulnerable friends, family and neighbors. We're all in this together, and the only way we're getting out of it is together. — Sonja Sherwood and Beth Ann Downey



Keep up with current news about Drexel at [drexel.edu/now](https://drexel.edu/now).

## Quoted

Faculty experts weigh in on the pandemic in the media.

**MARIANA CHILTON**,  
Dornsife School  
of Public Health  
and director of  
the Center for  
Hunger-Free  
Communities.

**THE HEALTH OF THE WEALTHY IS DEPENDENT ON THE HEALTH OF THE POOR**

**IF WE DON'T RETAIN OUR NEWLY GAINED KNOWLEDGE, WE WILL BE NO BETTER PREPARED WHEN THE NEXT THREAT EMERGES. AMNESIA CAN KILL**

**DENISE DILLON**,  
former women's  
basketball  
coach, on the  
suspension of  
the Colonial  
Athletic Association  
tournament  
with Drexel tied  
for first.

**I WALKED IN THE LOCKER ROOM, SAID 'THE BAD NEWS, WE'RE DONE. THE GOOD NEWS, WE'RE CONFERENCE CHAMPIONS.'**

**DISASTERS REVEAL INEQUALITIES IN SOCIETY MORE EFFECTIVELY THAN ANY OTHER THING THAT WE ENCOUNTER.**

**MICHAEL SHELNET**,  
director of  
instructional  
technology, on  
Drexel's pivot  
to online final  
exams.

**WE'RE CONDUCTING BUSINESS LIKE IT'S EVERY OTHER DAY, AND SURF THEM CLEARLY IT IS NOT LIKE A WAVE**

**ROB D'OVIDIO**,  
College of Arts  
and Sciences,  
on coronavirus  
scams.

**ROBERT I. FIELD**, Kline  
School of Law  
and Dornsife  
School of Public  
Health.

**SCOTT KNOWLES**,  
College of Arts  
and Sciences.

**EVAN FORMAN**,  
College of Arts  
and Sciences,  
on avoiding food  
cravings during  
times of stress.



# Show & Tell

CO-OP

## ISABELLA SANGALINE BA HISTORY AND SOCIOLOGY '20

More than 92 percent of Drexel's undergraduates participate in the Drexel Co-op program — our signature model of education that balances classroom theory with job experience within a buzzing network of nearly 1,700 co-op employers in 52 countries. What does a Drexel co-op look like? In this regular feature, we ask a student fresh off a recent co-op to show us.

— *Alissa Falcone*

### THE CO-OP

As a research assistant at Stadtarchiv (city archive) of Dornbirn, Austria, I completed a University-funded co-op to research Francis Martin Drexel, the father of Drexel University founder Anthony Joseph Drexel. The main focus were understanding what Francis Martin's life and family were like. I worked with primary source documents like division of estate documents and tax documents for Drexel family members.

### THE OBJECT

This is a self-portrait of Francis Martin painted in 1817 when he was 25. It's one of his 38 paintings included in The Drexel Collection, the University's collection of art and special objects.

After Napoleon's campaign through Austria, Francis Martin fled to Switzerland to avoid being drafted into Napoleon's army. He spent years traveling and working around Switzerland, Italy and France painting houses and carriages. Once Dornbirn returned to Austrian rule, Francis Martin could return home, but "home" felt too small for him to make a living painting, so he came to Philadelphia in 1817.

### THE TAKEAWAY

I wrote my senior thesis on how the early life of Francis Martin affected and related to his transition into banking.

Post-graduation, I hope to go to graduate school for history, either in the United States or Europe. Long term, I would like to enter academia. This co-op confirmed that it would be a good fit for me career-wise, so I am taking my shot with it.



Francis Martin's self-portrait

JEFF FUSCO

CROSSWALK

BRIEFS



HEALTH

Dean Laura Gitlin is a co-leader in a study of non-drug interventions for people with dementia and their caregivers.



Close School Dean Donna De Carolis.

ACADEMICS

## A Speedy Starter Degree

Got a business idea and can't wait to get started?

This fall, the Charles D. Close School of Entrepreneurship is introducing an intensive three-year bachelor's degree program in entrepreneurship and innovation, one of only a few such accelerated programs in the nation.

The course is ideal for students looking to grow an existing family business and for international students.

"The program caters to the most determined entrepreneurs who may find it challenging to balance four to five years of classes while eager to start and grow their business."

**DONNA DE CAROLIS**, founding dean of the Close School and Silverman Family Professor of Entrepreneurial Leadership

HOUSING



## Revamped Bentley Hall Reopens Better Than Ever

Bentley Hall — known to some older alumni by its previous names of Calhoun Hall or the Kling dorm — reopened its doors in September 2019 after \$5 million in renovations. The nearly 40-year-old residence hall had been closed since the 2014–15 academic year.

Renovations to the eight-floor, 211-room residence hall included updated flooring, ceilings, lighting, HVAC system, furniture and elevators. The changes focused on creating more space for collaboration and quiet study, as well as laundry facilities and an office suite for the Pennoni Honors College, which will relocate to the building in the spring. Bathrooms on each floor were rebuilt to accommodate single-use, ADA-compliant and gender-neutral private rooms.

A total of 366 students moved into Bentley Hall at the start of the academic year, with 90 percent of them being first-year students.

The renovations were possible due to a gift from Greg S. Bentley, CEO of Bentley Systems, and his wife Caroline. A second phase of renovations are also under way to create a two-story, 10,800-square-foot addition which will include three seminar rooms and additional Pennoni office, study and social space.





Java is the grandson of Chai, a Cane Corso breed also employed as a Drexel therapy dog.

HEALTH

## New Pup Lends a Paw in Ruff Times

Three generations of therapy dogs are now Drexel Recreation Athletics employees, after grandson Java joined his mother Espresso and his grandmother Chai in an important role at the University: providing emotional support and plenty of Instagram-able moments to Drexel Dragons.

The first official event for the 19-month-old, 125-pound newest member of this Cane Corso therapy dog dynasty was one of the biggest and busiest held at Drexel during the year — Move-In Weekend 2019 — and Java hasn't slowed down since. "He's very excited to be here," says Janine Erato, Java's handler, who was hired by Drexel as a package deal with Chai in 2016.

The "paw-pose" of bringing a therapy dog (or three) to Drexel is to soothe and bring joy to Dragons and help students transition to college life — and all of its complexities and stressors — while getting a new "leash" on life. The outreach, program and number of dogs has grown exponentially, expanding from one dog to three (plus two humans) and from covering one campus to all three campuses.

Java, Espresso and seven-year-old Chai work at Drexel for about 12 hours a week — every week, and not just around midterms and finals. Visits with Drexel's therapy dogs are arranged for students as well as faculty and staff at no cost.

"We love Drexel and what we do here," Erato says.

HEALTH



# 11th Street Clinic Chosen for Demo Site

Drexel's Stephen and Sandra Sheller 11th Street Family Health Services was one of eight health care providers chosen to participate in "Advancing Integrated Models," or AIM, a multi-site demonstration promoting innovative, person-centered strategies to improve care for adults and children with complex health and social needs.

AIM will assist health system and provider organizations in designing and piloting new approaches to integrate care for people with complex needs, with a focus on developing an antiracist culture that combats health inequalities. "Our motivation for engaging in promoting racial justice is

central to 11th Street's strategic goals," says Executive Director Roberta Waite.

Drexel's 11th Street Family Health Services was competitively selected to participate in the initiative, along with seven additional programs. Over two years, each site will receive tailored technical assistance and access to national subject matter experts and participate in a peer-learning collaborative to accelerate solutions across sites.

Varied initiatives will target staff, patients and community members and will be applied to all services to help ensure positive steps toward realizing health equity for populations served.



For more about Drexel's research enterprise, see EXEL Magazine at [exelmagazine.org](http://exelmagazine.org).

ENGINEERING

## PURELY A MYTH

Potted plants are lovely, but claims about their ability to purify indoor air are vastly overstated, according to research from Drexel's College of Engineering. Associate Professor Michael Waring and a doctorate student found that natural indoor ventilation dilutes concentrations of volatile organic compounds much faster than plants can extract them from the air.



ENGINEERING



### Ashes to Concrete

Researchers believe they have found a use for coal ash from coal-fired power plants that ends up in landfills. The waste can be turned into a special additive that makes concrete more durable and crack-resistant. "Not only does this help protect our natural environment but it will also help to improve our built

environment," says College of Engineering Assistant Professor and Principal Investigator Yaghoob Farnam.

PUBLIC HEALTH



### The Differences Within

A study from Drexel's Dornsife School of Public Health of lifespans in six Latin American cities found higher differences in life expectancy at birth *within* cities than

among cities. For example, Panama City residents in areas with the highest life expectancy live 18 years longer, on average, than residents of areas with the lowest life expectancy. "Inequality harms everyone," says lead author and Assistant Professor Usama Bilal.

BUSINESS



### Eat Curiously

In a recent paper, Assistant Professor Chen Wang in the

LeBow College of Business explored how, why and when incidental curiosity might influence unhealthy eating. Wang postulated that curiosity is a form of cognitive deprivation that triggers a motivation to seek reward outcomes like tasty, yet unhealthy foods. He asked 147 study participants about their food preference right after seeing a curiosity-inducing ad. Those who did not receive an explanation of the ad expressed

a greater preference for unhealthy food.

NURSING



### Tools for Caregivers

The National Institute on Aging awarded nearly \$4 million to Laura Gittlin, Distinguished Professor and dean of the College of Nursing and Health Professions, and to her University of California colleague, to study the impact of an online platform called the WeCareAdvisor. The platform

provides caregivers with education about dementia, daily tips for managing stress, and a systematic, nonpharmacological method of coping with negative symptoms.

ARTS & SCIENCES



### Exercising Protection

A study of 130 dieters by the WELL Center found that when the participants did not exercise, their risk of overeating in the

following hours was 12 percent. But when they engaged in 60 minutes of exercise, overeating was just 5 percent. "These findings can help researchers to better understand when participants who are seeking weight loss are at risk of overeating," says lead author and doctoral student Rebecca Crochiere.

PUBLIC HEALTH



### Government Protection

Are legislators keeping us safe from vac-

cine-preventable outbreaks? Researchers led by Assistant Professor Neal D. Goldstein from the Dornsife School of Public Health compared the number of vaccine-preventable diseases nationwide from 2010–2016 to the number of pro- or anti-vaccine laws introduced in the year following those outbreaks. They found that more anti-vaccine bills were more likely to be introduced, especially in places that experienced an outbreak.





Andrea Kaufmann,  
mayor of Dornbirn

ARCHIVES

## DREXEL'S FRIENDLY TIES TO DORNBIRN

Over the past decade, one professor has cultivated an international friendship with the Austrian city where A.J. Drexel's father was born. — *Alissa Falcone*

You probably know your alma mater was founded by Anthony J. Drexel, a wealthy Philadelphian banker. But the Drexel family has a rich history that predates Philadelphia — in Dornbirn, Austria, where Anthony's father Francis Martin was born.

For the past decade, Director of Athletics and Carl R. Pacifico Professor of Neuropsychology Eric Zillmer has been cultivating research and cultural exchanges between the University and the city of Dornbirn to better connect with the family's roots.

"There's this beauty in the intellectual DNA of our University," says Zillmer. "I think that for students and alumni, it increases the value of their education when they can learn where Drexel came from."

Dornbirn has been the ancestral seat of the Drexel family since the 16th century. Located on the western tip of Austria near the borders of Germany, Switzerland and Liechtenstein, Dornbirn is a commercial hotspot and the country's 10th largest city.

**'There's  
this beauty  
in the  
intellectual  
DNA of our  
University.'**

Francis Martin was born in 1792 and immigrated to America in 1817. During an itinerant lifestyle painting portraits of well-to-do political figures in Latin America, he began converting international currencies for his portraiture clients. That side business flourished into an incredibly successful banking firm fortune and, eventually, into the underwriting of J.P. Morgan's banking career.

To this day, Francis Martin is considered one of Dornbirn's most famous citizens.

"That's unbelievable, especially for a city like Dornbirn, and the whole identity of the city and its self-confidence has grown ever since," says Dornbirn's Mayor Andrea Kaufmann, who has been mayor since 2013 and has twice visited Philadelphia. "This is no trivial matter. Quite the reverse — the founder of one of the best private universities in America for sure has affected our town."

Since 2009, Zillmer has visited Dornbirn with more than 100 University faculty, staff, students, alumni and friends (plus Drexel family members).

Drexel University now has relationships with the city's government and its Vorarlberg University of Applied Sciences, which has enabled Drexel faculty to teach at the institution. In addition, Drexel student Isabella Sangaline '20 completed a co-op researching the Drexel family in the Dornbirn City Archives (see page 10). Several Dornbirners have also come to the University for research and study-abroad experiences.

In the past decade, Dornbirn has publicized its connection with



This 19th century oil painting — "Portrait of Francis Martin Drexel (1792-1863)" by Jean Joseph Benjamin Constant — is believed to have been painted after Francis Martin's death. It currently hangs in Drexel's Paul Peck Alumni Center, along with a painting of his son Anthony Joseph Drexel, also by the same artist. Photo courtesy of The Drexel Collection.

the University and the Drexel family by publishing articles and dedicating a chapter in a book about Dornbirn immigrants to Francis Martin. In 2013, Francis Martin's birthplace (a hotel for the past 40 years) received an historical marker designation. In 2009, a street was named in honor of Francis Martin's granddaughter, Saint Katharine Drexel, who relin-

quished her life of affluence and leisure to become a nun; it was one of the first streets in the city to be named after a woman. The next year, Dornbirn officially opened a chapel in her honor.

"We are trying to do something here to translate Francis Martin Drexel's legacy," says Werner Matt, director of Stadarchiv, the Dornbirn City Archives.

# Faces



Send letters to the editor to [magazine@drexel.edu](mailto:magazine@drexel.edu).



Paula Marantz Cohen,  
dean of the Pennoni  
Honors College.

CHOP and Drexel scientists will  
share some research privileges.



ENGAGEMENT

## Civil Discourse in Center City

The Pennoni Honors College and Thomas R. Kline School of Law partnered in the fall to promote civil discussions of hot-button issues through a new "Wednesdays at the Kline" series.

The public discussions were first hosted at the Kline Institute of Trial Advocacy in Center City every Wednesday from 5:30 p.m. to 6:30 p.m. and were then changed to virtual monthly meetings.

"These are conversations that people want to have, but are unable to find the space for," says Melinda Lewis, the associate director of marketing and media for the Pennoni Honors College who moderates the discussions.

For law students who choose to attend, Kline School of Law Dean Daniel Filler said there is the added bonus of seeing how these types of conversations can be a part of creating law, part of the "construction of democracy" witnessed in real time.

Eileen Harrison, BS '60 and a resident of South Philadelphia, started coming to "Wednesdays at the Kline" discussions regularly because she liked the idea of having a forum to discuss the issues of the day.

"I'm very much committed to the idea of people coming together and working out problems as a group. I think there's great merit in that," says Harrison.

We are in a time now when we live in a bubble and it's hard to understand why people feel the way they do."

RESEARCH

## Law Enforcement, Autism and Understanding

The International Society for Autism Research has awarded a competitive grant to the A.J. Drexel Autism Institute and other local organizations working to improve interactions between autistic individuals and the justice system.

The award is earmarked to fund a conference of international experts and the development of a policy brief to share findings and promote change within Pennsylvania and nationally.

Research has shown that autistic individuals are at an increased likelihood of coming into contact with law enforcement or other justice professionals, compared with neurotypical peers. Understanding these interactions is important to developing resources, services and programs to improve outcomes.

Autistic individuals may also encounter similar challenges in the court system, where a lack of understanding of their diagnosis, needs and strengths can lead to misinterpretation by judges and legal professionals and can put them at risk of biased or uninformed sentencing.

Lindsay Shea, director of the Policy and Analytics Center at the A.J. Drexel Autism Institute and an assistant clinical professor, will co-lead the project with Cpl. John Burke, an instructor at the Philadelphia Police Department Training and Education Services Bureau.

"Philadelphia and Pennsylvania have been leaders in collecting data about autism and criminal justice system interactions and generating community-based responses through training, resources and convening community partners," says Shea.

### INVOLVEMENT IN THE CRIMINAL JUSTICE SYSTEM AMONG YOUTH ON THE AUTISM SPECTRUM, AGES 15-19

Percentages of young adults with autism.  
\*Individuals may appear more than once.

Source: National Longitudinal Transition Study-2,  
Wave 2, 2003

1%

Youth has ever  
been on probation  
or parole

1%

Youth has  
ever stayed  
overnight in jail

4%

Youth has  
ever been  
arrested

13%

Youth has ever  
been stopped and  
questioned by  
police

RESEARCH

## Drexel, CHOP Ally for Research

Drexel has entered into a new alliance to expand its academic and research partnership with the Children's Hospital of Philadelphia (CHOP).

The alliance, which extends through June 30, 2023, creates clearer pathways for joint research activities among researchers at both institutions, while enhancing educational programs at Drexel, including adding training opportunities for Drexel doctoral and master's students at CHOP.

Eligible non-clinical research scientists at CHOP will be offered non-tenured research track appointments as CHOP-based Drexel research faculty at select colleges.

As CHOP employees, the research faculty will be located primarily at CHOP, but will engage with Drexel students, staff and faculty for research and become part of Drexel's academic ecosystem.

Drexel faculty conducting research with CHOP colleagues may be eligible for non-traditional personnel status at CHOP while continuing to be Drexel employees based at Drexel.

"This initiative is the latest example of innovative collaboration among institutions within Philadelphia's 'meds and eds' corridor," says President John Fry. "By cultivating new opportunities for collaboration among our talented researchers, we are laying the groundwork for tomorrow's discoveries, the impact of which will be felt locally and internationally."



Drexel has made its sports bubbles available to the city, if needed, to assist with the pandemic response.

## ATHLETICS

## Athletics Bubbles Stand Ready

If you visited Drexel's University City Campus this past winter, then you probably saw — and remember — the “bubbles.”

Two very hard-to-miss massive gray domes were inflated over the three tennis courts at Vidas Athletic Complex and the turf field at Buckley Recreational Field during the winter months in the 2019–2020 academic year.

Equipped with climate control, LED sports lighting and transparent roofs that let in daylight, the bubbles have expanded Drexel Athletics' programming sports season. Throughout last winter, that meant more playing time at the Vidas bubble for the men's and women's tennis teams, and everything from softball to Quidditch to soccer to flag football under the larger Buckley Bubble.

When inflated, the 20,000- and 30,000-square-foot, respectively, bubbles are among the biggest venues on campus. The University has offered them to Philadelphia as emergency space in the pandemic fight, if needed.

They were made possible thanks to Jackie and Stan Silverman as well as Marlene and Bob Buckley, who provided leadership gifts through the Campaign for Drexel.



## ACADEMICS

## Medicine and Nursing to Move to University City

With Hahnemann University Hospital closed, Drexel plans to relocate the College of Medicine and the College of Nursing and Health Professions to University City, where they will be side by side in a new “uCity Square” development being built at 36th and Filbert streets.

Wexford Science & Technology, at its own cost, began construction on the uCity Square site in the spring. When pandemic closure orders are lifted, Wexford aims to resume construction and hopes to open for initial occupancy in the academic year 2022–23.

Nursing and Health Professions will move to the new space first, followed by College of Medicine administrative functions in 2023, along with the Graduate School of Biomedical Sciences and Professional Studies and Drexel's first- and second-year medical program. Eventually, the College of Medicine will vacate all leased space in Center City as well as the Queen Lane campus. College of Medicine researchers will remain at Queen Lane and in the New College Building until Center City leases expire.

In addition, a new College of Medicine facility near Tower Health's headquarters in West Reading, Pennsylvania, is slated to begin educating 40 additional first-year medical students in 2021.

## HEALTH

## Historic Group Has Drexel Ties

The world's first graduate program in arts therapy to matriculate students was founded at the then-Hahnemann Medical College and Hospital in 1969, which became Hahnemann University in 1981 and was absorbed by Drexel in 2002.

So it's fitting that in 2019, as the American Art Therapy Association (AATA) celebrates its 50-year anniversary, a Drexel professor — who graduated from the institution that initiated the program and teaches at the institution that absorbed it — was recently voted to lead the organization.

Girija Kaimal, an associate professor in the College of Nursing and Health Professions' Creative Arts Therapies Department, was sworn in as AATA's president-elect, a position she will retain for two years before becoming president for two more years. She follows in the footsteps of Myra Levick, who co-founded the American Art Therapy Association in 1969 and served as its first president.

Levick also co-founded the world's first graduate program in arts therapy to matriculate students at the then-Hahnemann Medical College and Hospital. At that time, art therapy wasn't generally well-known or accepted within the medical community. Both the program and the professional organization launched in part to grow the field as a mental health discipline separate from psychiatrics, with its own practices, training and education.

What made the creation of Hahnemann's arts therapy program so radical was that it was housed in a medical college, where its students could work alongside psychiatrists and nurses.

“AATA's mission, simply put, is to advance the field,” says Kaimal.



Myra Levick and Paul Fink, MD, director of Hahnemann's program, in an undated photo.

Two game design majors won \$20,000 for a healthy eating app.



## TECHNOLOGY

## Westphal Students Win with Eating 'Game'

Game design students Tara Boonngamanong and Note Nuchprayoon won first place and \$20,000 in the second round of the U.S. Department of Health and Human Services' (HHS) game challenge for their obesity prevention game, “Well Spent.”

“Well Spent” is a grocery shopping game in which the player must balance money, time and healthy eating. It heeds the game challenge objective of creating a game focused on obesity prevention or weight control for women and girls, but the team also wanted to make sure their proposed game took both a unique and an inclusive approach.

“Our game doesn't really teach the player how to eat healthy; that's not the goal,” Boonngamanong says. “Our main goal is to decrease stigma around obesity, and be like ‘Hey, there are a lot of factors that go into someone being obese.’ There's a link between low-income communities and obesity.”

The students, both second-years when they won in the fall term, were given the rest of the academic year to complete the game. If their final version also wows the judges, they could be eligible for additional funding.





Drexel Dragons participated in the Philadelphia Veterans Parade in 2018.

Former Eagles player Jon Dorenbos keeps life magical.



## VETERANS

# A Decade of Serving Veterans



Recently the University commemorated a decade of participation in the Post-9/11 GI Bill™'s Yellow Ribbon Program, a federal program established in 2008 to cover tuition and fees for post-9/11 veterans.

Drexel was one of the first universities in the area to offer the program, and has committed \$2 million in tuition coverage per year to more than 2,000 veterans and their dependents since it began in 2009.

“It was a big, bold move for our institution to do this,” says Assistant Vice President of Student Life Rebecca Weidensaul, whose father served in the Army during World War II. “Not only was Drexel thinking about how to financially manage this, but

it was also simultaneously thinking about how to set up systems that support students as well.”

Drexel is one of the few universities in the country to have an uncapped number of spots available to student veterans and their dependents to study at any of its schools through any of its programs, both on campus and online, with complete tuition coverage.

“I think we as a campus are doing everything we can to make this the best experience for our veterans and the students who are using those benefits,” says Bryant Morris, assistant director of Drexel Central, who has been involved with the Yellow Ribbon Program since he started at Drexel in 2010.

## AWARD

## Former Eagle Receives Resilience Award

Drexel's Charles D. Close School of Entrepreneurship and the Arthur J. and Sandra K. Mattia Foundation honored former Philadelphia Eagles player and magician Jon Dorenbos last year with the inaugural “Charles D. Close School Resilience Award” in recognition of his innovative thinking and perseverance.

The award was presented to Dorenbos at the first annual “Innovation Can't Wait” celebration in November 2019, held at The Union League of Philadelphia. All proceeds from the event supported programming at the Close School.

At the event, Dorenbos spoke about his book, “Life is Magic: My Inspiring Journey from Tragedy to Self-Discovery,” and performed a magic show. The book details his journey including how football and magic helped him through tragedies in his life.

“At the Close School, we recognize the value of innovation here in Philadelphia and for society as a whole. We work with students every day to help them put their ideas into action addressing some of the world's biggest problems — from mental health, to food insecurity, to clean water,” says Close School Dean Donna De Carolis. “Jon Dorenbos encompasses the spirit of innovation and resilience that we teach our students.”

## ARCHIVES

## A 1951 CO-OP, INTERRUPTED

During the height of the 1950s “red scare,” Harold Naidoff '53 encountered a challenge no Drexel co-op student should have to face: being accused of being “disloyal” to the United States. — *Alissa Falcone*

Harold Naidoff was a World War II veteran co-oping as a coppersmith at the Philadelphia Naval Shipyard when he fell victim to one of the more divisive eras in American politics. He was suspended and ultimately fired from his co-op because of his supposed ties to an organization deemed “subversive.”

After Harold Naidoff '53 died in 2005, his children saw for themselves what had transpired half a century earlier. Bruce Naidoff, Bobbie Lewis and Susan Holliday found, in a box of their father's belongings, the legal transcript of a 72-minute hearing at the Pentagon in which the then 29-year-old mechanical engineering major appealed the Navy's suspension.

Naidoff, then a married father of two, had attended four meetings organized by the Jewish People's Fraternal Order, a section of the International Workers Order (IWO) that he said he joined for the insurance coverage it provided its 180,000 members. But the Navy claimed, without evidence, that in 1940, Communist Party nomination petitions had been signed by Naidoff's wife (before he met her) and his father (when he was a minor).

Several times during his appeal hearing Naidoff was asked to defend his Jewish identity as well as his participation with the Jewish People's Fraternal Order. He told investigators: “...Since the war, especially the war with Germany, I realized any organization that could help better the culture and the ideas of the Jewish people would be an organization with which I would be glad to be considered a member, especially if that organization was in a way democratic and upheld the ideas of this country.”

His attestations of loyalty didn't save his job, however. The U.S. Navy fired Naidoff, and he worried that Drexel would expel him.

Naidoff's children told *Drexel Magazine*, “Though we all knew this story from our father's past, the details were new and the harsh tone of the charges in the transcript were startling. Our parents weren't bitter about the episode and it didn't seem to harm our dad's career. But the transcript laid out the difficulties he had to go through as a young man and how he honorably fought the false charges. And Drexel stood behind him when he most needed the support, for which we're grateful.”

Back on Drexel's campus, Naidoff was assured by his co-op coordinator, department head, College of Engineering dean and even by the president of the Drexel Institute of Technology, James Creese at the time, that he wouldn't suffer any professional or educational setbacks at Drexel.

“The president of Drexel Institute informed me even though I have been suspended from the naval shipyard I am a student of Drexel in good standing and, as such, the school would do everything they could to help me,” Naidoff testified. “And he suggested if I felt that the decision was adverse to me I should fight it to the utmost, and I decided to do so.”

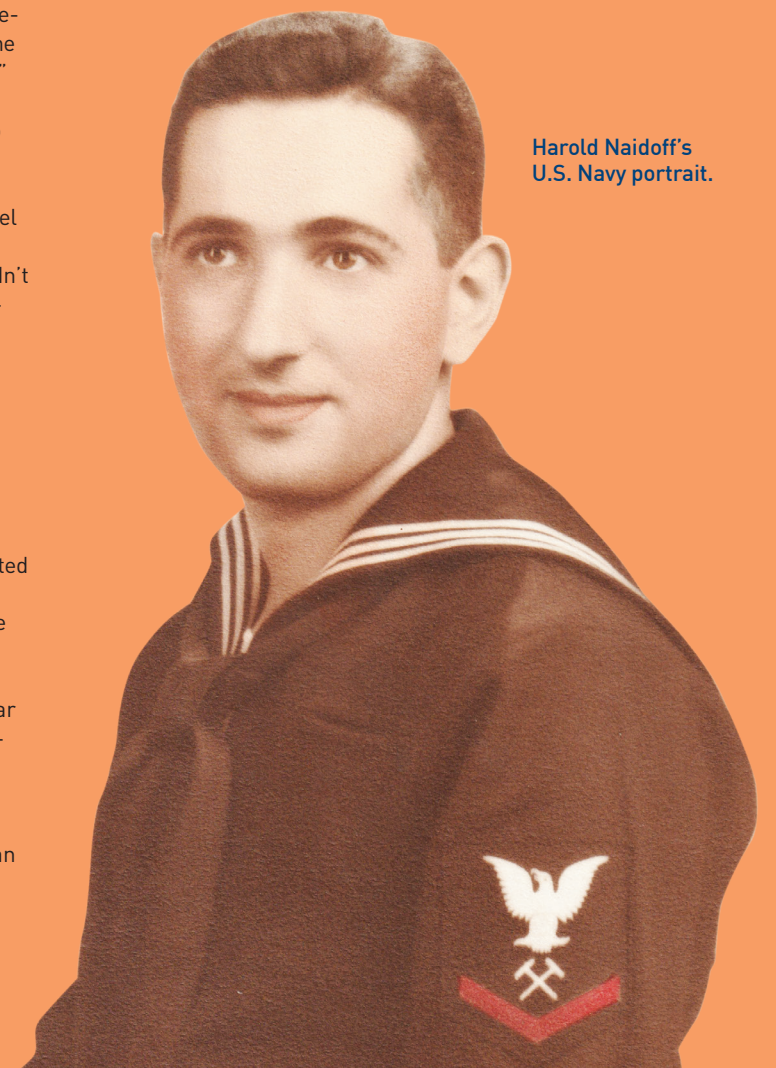
Naidoff didn't want his Navy job back, but he did want to clear the charges against him. Unfortunately, that never happened. Naidoff became one of a few hundred federal workers who lost their jobs during the Truman purges of supposed communist infiltrators, in which reportedly between 3 and 4 million federal

workers were investigated by the Federal Bureau of Investigations.

Luckily, Naidoff was able to find a new, higher-paying co-op in the private sector within a day of his suspension. After graduating from Drexel, he continued working as an engineer, later migrating into the sales and marketing side. A tennis player for the '48, '50 and '53 Drexel tennis teams, Naidoff remained friends with Drexel's tennis coach, Dave Perchonock, for years and continued playing tennis until his '70s.

Naidoff never forgot how Drexel had supported him in his time of need. For the rest of his life, he was a regular donor to the University, the Athletics Department and the College of Engineering.

“We were small children, or not even born yet, when this happened, so for young people today this may be ancient history,” says Naidoff's children. “It's important for everyone to realize what can happen here if we aren't vigilant about safeguarding our rights.”



Harold Naidoff's U.S. Navy portrait.



## DON'T WE ALL NEED A SUPERHERO?

With a great costume comes great campus responsibility.

— *Beth Ann Downey*

The true identity of Drexel Spidey — a masked superhero known around campus for his spur-of-the-moment dance offs and shared selfies — isn't widely known, and won't be revealed here.

All we will say is that he's a third-year student from the Westphal College of Media Arts & Design, and he's been spinning his magic around Drexel since 2018, when he first donned the red and blue Spider-Man costume in his freshman year. That year, a video on Instagram of him dancing with a fellow student in the Korman Quad went viral.

Since then, he's been making regular appearances on campus with one goal in mind.

"I want to make people's day," he says. "I love spreading good energy and making people laugh — it's what I do."

Drexel Spidey says he also enjoys personifying the Marvel character as a way to represent and bring recognition to Drexel. His mom is an alumna of the University, and he himself is attending on a full scholarship after excelling in high school despite coming from a "struggling background," he says.

"I'm able to take those experiences from growing up to appreciate what I have now and cherish the good things I have in my life and where I come from, to know that I never want to be in that position again," Spidey says. "It motivates me to work harder and do my best to keep a positive mentality and spread positive vibes as much as I can to the community, which is what inspires Drexel Spidey."

Although some of his peers know his true identity, he doesn't plan to come out publicly any time soon. He wants to keep the mystery alive, at least until he graduates.

"I just thought this would be a cool thing that comes out of my college experience," he says. "But one day I do plan on just like going, 'Hey, I'm the guy who's been dancing around as Spider-Man.'"



LILLY DUPUIS



Photos courtesy of Evan Ehlers

## When the COVID-19 crisis hit Philadelphia, Evan Ehlers '19 was ready to help — thanks to his Drexel co-op.

Evan's co-op in the Close School of Entrepreneurship gave him the opportunity to launch his nonprofit, Sharing Excess, which redistributed thousands of pounds of unused food from restaurants shuttered by the pandemic to those who needed it most.

The real-world experience provided by the Drexel Co-op program prepares Dragons to make a real-world impact, as students and alumni.



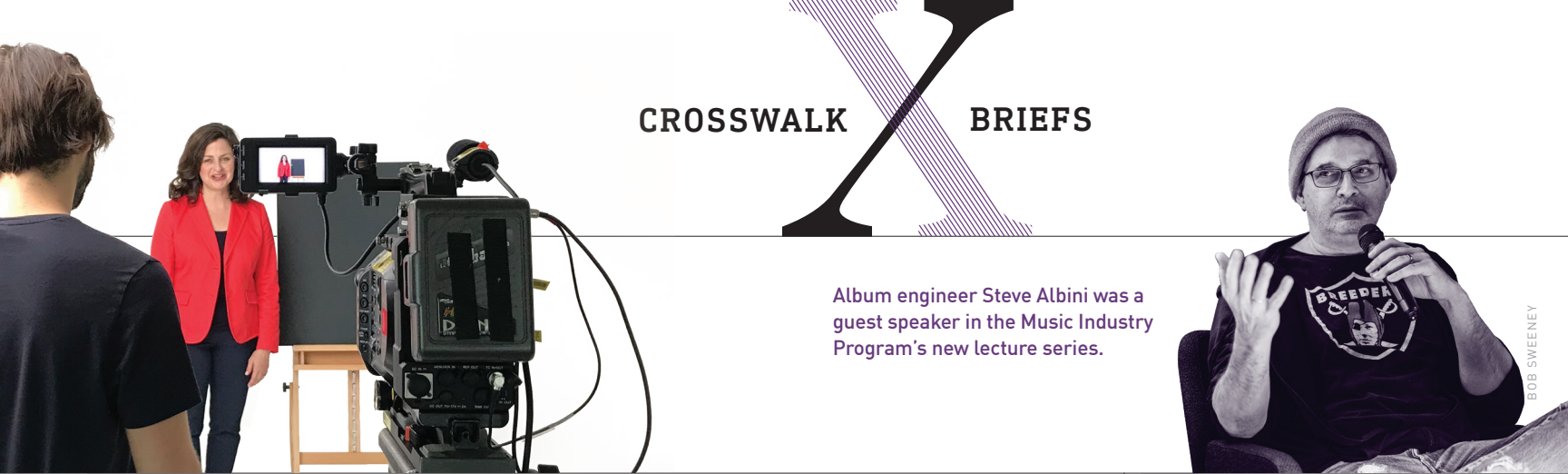
## Now, more than ever, students on co-op need your support.

Due to the need for social distancing and the resulting economic fallout, the COVID-19 pandemic has jeopardized essential co-op experiences for many Drexel students. You can help!

Donor investment enables students to pursue co-ops where industry funding doesn't exist or is very limited. Your gift can help create research, entrepreneurial and non-profit positions that allow students to make a vital difference today while launching their future careers.

LEARN HOW YOU CAN CREATE OPPORTUNITY NOW AT  
[giving.drexel.edu/co-op](https://giving.drexel.edu/co-op)





## CROSSWALK BRIEFS

Album engineer Steve Albini was a guest speaker in the Music Industry Program's new lecture series.

BOB SWEENEY

## CULINARY ARTS



# Virtual Help for Home Cooks

Are canned tomatoes better than fresh tomatoes for making pizza sauce? And what creates a denser, chewier chocolate chip cookie: room temperature butter or melted butter?

Rarely have such questions been so relevant as now, when millions of Americans have had to step up their home cooking while under stay-at-home orders.

Fortunately, the answers are readily available online in various Condé Nast videos recorded by Rosemary Trout, assistant clinical professor and program director of culinary arts and food science in Drexel's Food and Hospitality Management Department in the College of Nursing & Health Professions.

Trout has appeared as a food scientist and expert in

a number of videos for *Bon Appétit* and *Epicurious* — most notably the *Epicurious* series called “4 Levels,” in which she evaluates how chefs of three different experience levels prepare common dishes. Her videos have garnered millions upon millions of views.

“I feel so lucky to be able to do this,” says Trout. “It gave me a real appreciation of what goes on behind the scenes of making a 10- or 15-minute YouTube video.”

Dragons outside of her department have made note of Trout's appearances as well.

“I occasionally get recognized by Drexel people, and they know me from the videos,” she says. “Just yesterday a finance student passed me on campus and called out, ‘Hey! I like your videos!’ It made my day.”

## MUSIC

# New Lecture Series for Music Buffs

Legendary Chicago-based musician and audio engineer Steve Albini kicked off Drexel's Music Industry Program's new Visiting Lecture Series in November.

Westphal College of Media Arts & Design Assistant Teaching Professor Joe Steinhardt started the series to give music industry students and the public access to influential individuals in the industry.

“Being able to give these types of unique opportunities to our students is truly one of the most fun parts of my job here, and represents one of the things that makes our music industry program so special,” Steinhardt says. “Equally important to me is making sure the events at night are free and accessible to the general public. I do not think culture and knowledge is something that should only belong to a privileged few.”

Albini brings a similar inclusive ethos to his own work. Despite having formed such influential bands as Big Black and Shellac, and then working as a producer and engineer for Nirvana, the Pixies, Joanna Newsom, Superchunk, Cheap Trick and the Stooges, Albini told the audience that he tries to say “yes” to nearly any artist who expresses interest in working with him, even though his reputation could afford him more selectivity.

“I still think that any resource of mine is a resource of the community's,” Albini says. “That was a guiding principle behind building the studio.”

## ATHLETICS



Madeline Barlow and Andrea Irvine

# KEEPING SPIRITS FIT DURING COVID

When college sporting events were suspended and the campus closed, it became more important than ever for Drexel Athletics' nutrition and mental health experts to help student-athletes care for their minds and bodies. — *By Mike Unger*

Even in the best of times, the work undertaken by the Drexel Athletics sport performance team is vital. But in this unprecedented stretch of sheltering at home, the contributions of staff from sports medicine, athletic training, academics, strength and conditioning, sports psychology and sports nutrition is even more critical.

“These kids are processing a lot right now, so we want to take care of them holistically,” says Andrea Irvine, a sports dietician and assistant director of the Center for Nutrition and Performance. “One of the biggest things for us to do is let them know that no one's left them.”

Since its creation in 2016, the sport performance team has worked with Drexel's student-athletes to improve all aspects of their lives. Usually that's done through face-to-face meetings and activities, but now those things are happening through digital platforms like Zoom.

Still, the core of what the sport performance team does has not changed, says Madeline Barlow, a mental performance coach. She works with teams and individual athletes to help them increase their self-awareness and confidence, enhance their focus and concentration and feel more positive about themselves.

“Getting into our new normal is the goal right now,” says Barlow, speaking in March a couple of weeks after Drexel closed the campus and sports facilities. “I'm going to be giving them mental skills for dealing with what's happening in the world right now, dealing with the adjustment to being at home, potentially not having much access to exercise equipment, and finding ways to stay motivated.”

Irvine's job is to counsel coaches and teams on healthy nutritional practices. She also runs the John and Jinnie Chapel ACHIEVE Center and Dragon Lounge, a fueling station in the Daskalakis Athletic Center built for student-athletes to relax and grab a snack before or after a workout when they're on campus. As Drexel transitioned to remote learning at the end of the spring term, Irvine sent the student-athletes tips about what to buy at the grocery store and how to prepare healthy and balanced meals.

“Good nutrition is all encompassing,” she says. “It's making sure that over a long period of time you're eating the correct macronutrients and micro-

nutrients. Food is not clean or dirty; it's not good or bad. Food is food. It's fuel. If you really like nachos, there's a time and a place for that. You don't have to have negative feelings around that. There are a lot of variables. How many times are you eating that food? The quantity of what you're eating, the time in your training. We're teaching them how to eat, how much to eat and what they need. I want them to have good relationships with food as athletes and beyond.”

The outbreak caused an abrupt end to several teams' seasons and student-athletes' careers. That can be extremely difficult to accept for those who are single-minded in their approach to their sport and life, Barlow says. She should know — she wrote her dissertation on the transition out of sport.

“When it comes down to it we're never truly ready to move on, fully, especially when our identity is rooted in sport,” she says. “Acknowledging that this was ripped out from underneath them is important. Feeling that sense of loss, grief, anger, disappointment, whatever emotions they're having.”

With Drexel's student-athletes scattered around the world, she is connecting with them through phone calls or video chats.

“Even if you think you don't need to check in with a person, check in with them,” she says.

Each individual will have a different experience during this crisis, especially considering the differences in physical environments. A person living by themselves in a one-bedroom apartment in New York may have different dietary or emotional needs than someone living with their family in a big house in the suburbs. There's the potential to feel isolated, which can lead to exacerbated feelings of depression, Barlow says. That's why in her online meetings and messages with coaches and student-athletes, she stresses the importance of hope.

“Having a sense of hopefulness that we will be able to play again, we will be able to go back to work again, we will be able to interact again, is essential,” she says.

# Faces





## NURSING

# 11.19.19

## DISASTER SIMULATION LAB

Before the world was faced with an all-too-real contagion, Drexel nursing students were already training to cope with the chaos and danger of a pandemic, through simulation.

These seniors are partaking in the College of Nursing and Health Professions' recurring Disaster Simulation, a rite of passage for all of Drexel's nursing students and a key component of the required class titled, "Population Health Concepts."

It simulates the worst-case, yet realistic scenarios that nurses might come across in their career, from pandemics to natural disasters to mass-casualty situations — for the chance to practice before they treat real patients in the field.

Some nursing schools do only less-immersive table-top simulations, if they do simulations at all. But the College of Nursing and Health Professions invests thousands of dollars into equipment and trains a crew of around 35 faculty, staff and simulated patient actors to make this experience as realistic as possible. At the same time, the college ensures that the events are coordinated with meaningful debriefing sessions and that they create a psychologically safe learning environment for students, says Helen Teng, assistant clinical professor and the course chair.

Simulations like this help students in nursing and other health-related fields develop skills in interprofessional teamwork, multiple patient management and crisis resource management, as well as communication, collaboration and leadership.

"It is good to expose our students to these ways of thinking and encourage them and engage in their psycho-motor domain of learning by doing," says Teng. — *Beth Ann Downey*

1

**THE SPACE**

Simulations are conducted in the College's simulation labs run through its Center for Interprofessional Clinical Simulation and Practice, whose purview encompasses more than 22,000 square feet of lab space and state-of-the-art simulation technology. Pictured is the 2,300-square-foot Human Patient Simulation Lab. Its two large configurable spaces contain three bays each, and each bay has two cameras and two overhead microphones for faculty to remotely observe their students. Each bay also has a monitor similar to those in hospitals to display a simulated patient's vital signs.

2

**THE STUDENTS**

Here, Audrey Tibay (left), Melissa Radcliff (center) and Luan Ta (right), all fifth-year nursing students, work to revive a simulated patient. Over the course of three hours of non-stop simulation, they'll encounter four separate disaster scenarios, each more stressful than the last. This scenario encompasses a fictional ER with multiple victims arriving following a mass casualty event. Expected chaos ensues as the students work to corral the confused while walk-ins vie for their attention.



JEFF FUSCO

3

**THE EQUIPMENT**

The simulations use high-fidelity, remote-controlled mannequins, like the SimMan Essential seen here, to portray patients. SimMan can mimic everything from human breathing and eye movement to vascular, cardiac and circulation abnormalities and distress. While this SimMan is leased, the average cost to purchase one can be anywhere from \$80,000 to \$150,000, according to the manufacturer Laerdal Medical. Students also practice using other hospital equipment, like the pictured emergency cart containing various medications, airway equipment and a defibrillator, and the bag-valve mask being used by Ta to treat SimMan's respiratory distress.

4

**THE EXTRAS**

Trained individuals (not pictured) are paid \$22 an hour to portray standardized patients. Some provide voicing to mannequins, screaming and crying through microphones in the control room. Others don *moulage*, or make up that simulates burns, cuts, bone breaks, etc. and interact with the students. The use of standardized patient actors is one of the things that helps to differentiate Drexel's simulation offerings from those of other schools, says Teng.



# 19

## Stories of Drexel Dragons Helping Others During COVID-19

Illustrations by Victor Juhasz

WHEN A CRISIS HITS, everyone looks for the cavalry. This spring, it wasn't Washington, D.C., or the Army Corps or the National Guard. Instead, almost immediately, ordinary people stepped up. Our tremendous community of faculty, staff, students and alumni leapt into action, bringing information, aid and gear to those impacted.

We learned of alumni who were pitching in to provide food, economic aid and emergency medical supplies to the city. On campus, students collected supplies and created resources to keep others informed and connected. Meanwhile dozens of faculty members launched new COVID-19 research projects, with 17 faculty awarded fundings for diagnostics, devices and scientific studies that promise to save lives and advance our understanding of the virus.

Though we selected 19 stories to share in *Drexel Magazine*, many more went untold. Here are some of the Dragons who answered crisis' call in the early weeks of the pandemic.



### 1 Anthony Buccì

Philadelphia's roster of delectable BYOBs and independent eateries is among the jewels that make this town

great. So when stay-at-home orders shut the local food scene down, local foodie Anthony Buccì (BS information systems and technology '04) stepped up.

In just six days in March, Buccì built and launched a website to pair foodies with unique dining experiences offered by local chefs. The "buy now, feast later" concept, called #SavePhillyEats, gave restaurateurs the cash they needed immediately to pay staff, bills and rent — a big deal in a city where restaurants are 18 percent of the businesses and 12 percent of the jobs, according to the Economy League of Greater Philadelphia.

Within 10 days of going live, #SavePhillyEats was working with more than 50 restaurants and bars and had helped them generate funds of \$150,000 to \$200,000.

"I have friends in the Philadelphia restaurant community, and the city has a wonderful and vibrant food culture which is a big part of Philly and Philly's culture as a whole," said Buccì, who made his name as the founder and former CEO of multi-million dollar motorcycle equipment and apparel website RevZilla.com.

Buccì enlisted several friends to bring his idea to fruition, including fellow Drexel alumni Chris Cashdollar (BS '99), who provided web development and branding services, and Dustin Carpio (BS '07), who handled video, content and live production needs.

One of the first restaurateurs to join the website was Buccì's friend and fellow Drexel grad Marc Vetri (BS marketing and finance '90), owner of Vetri Cucina and Fiorella Pasta. Vetri offered bonus gift cards as well as an intimate, multi-course chef's-counter experience worth \$10,000. The funds allowed him to continue to pay his salaried staff and provide health care benefits after his businesses closed.

"It's a great way for a customer to help and not feel like they are just donating money," Vetri said of #SavePhillyEats. "They are actually buying something significant — a win-win for all parties involved."

On Easter Sunday, chefs involved in #SavePhillyEats paid it forward by providing holiday meals to about 3,500 health care workers at hospitals and testing sites.

"It's everyone's time to help right now," Buccì said, "especially those of us in unique positions to amplify or create additional support structures." — Beth Ann Downey



**2 Grant Geiger and Patrick Fenningham**  
In normal times, Philadelphia-based EIR Healthcare produces prefabricated hospital rooms for rapid installation in new hospitals.

But EIR Healthcare's modular hospital rooms can also function as mobile units to treat patients in a pandemic. They can even be built as negative-pressure chambers, the gold standard in isolating infectious patients.

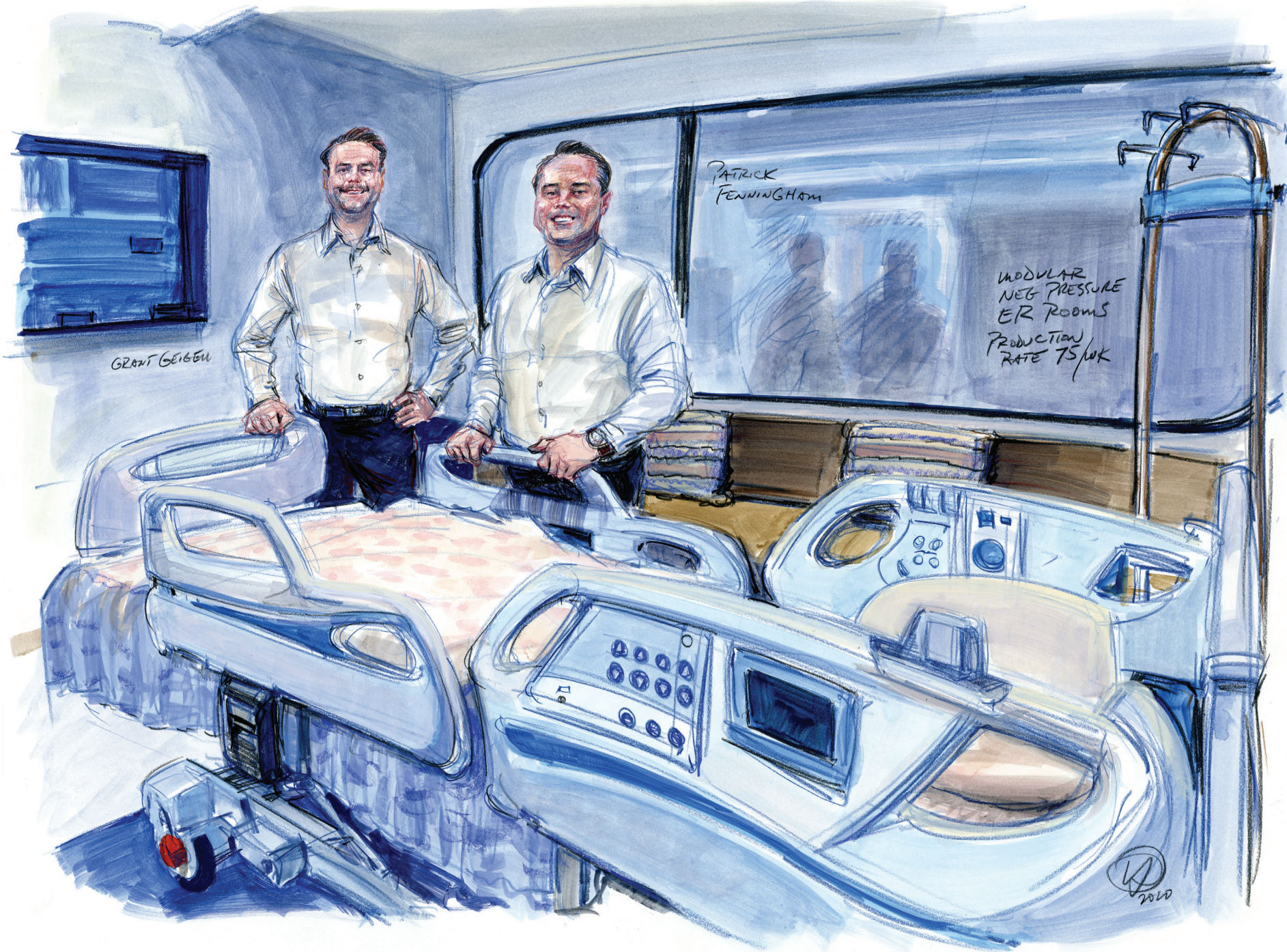
"If I manufacture patient rooms for a building or I manufacture something temporary...it's essentially the same product," said CEO Grant Geiger (BS/BA international business administration and marketing '11), who runs the company with Chief Product Officer Patrick Fenningham (BS biomedical engineering '11). "The only difference is where it's going. Instead of a building, it's going into a convention center or a gym."

When the coronavirus outbreak reached the United States, EIR Healthcare quickly partnered with three different manufacturers to ensure they could step up their production capability from just a couple of units a week to as many as 75. They entered discussions with officials from the University of Pennsylvania, Montgomery County in Pennsylvania, Bergen County in New Jersey and even the government of Kazakhstan.

Other cities have grappled with surges of COVID-19 patients by rapidly erecting emergency field hospitals. In Philadelphia, the Liacouras Center at Temple University was outfitted to take in up to 180 patients who were in the final stages of recovery. Even Drexel's Athletic Bubbles are on standby if needed.

Should the situation become dire in Philadelphia — or anywhere else — EIR Healthcare is ready.

"What we're trying to do is make sure that this is bigger than business," said Fenningham. "This is really talking about people in a life-or-death perspective." — **Jen Miller**



### 3 Karen Verderame

When the city went into lockdown, almost everyone brought work home with them. For Karen Verderame, that meant bringing home several colonies of hissing cockroaches, a couple of testy tarantulas and some centipedes.

As animal programs developer for the Academy of Natural Sciences of Drexel University, she led a team of essential personnel who cared for the museum's collection of hundreds of live animals and insects when the museum closed on March 13.

"Once the shutdown was initiated, we went into complete triage mode," Verderame recalled. There were contingency plans to activate, vital information to share, safety measures to put into place, work schedules and feed shipments to manage, and worst-case scenarios to prep for.

Thanks to her work, the many creatures depending on her team — 14 snakes, 13 turtles and tortoises, 10 lizards, three frogs, five rabbits, three armadillos, two guinea pigs, two ducks, two turkey vultures, one chinchilla, numerous live invertebrates and a variety of fish — will survive to see the return of class field trips. — **Beth Ann Downey**



### 4 Charles Cairns

The idea of using phone apps to track infections may make Americans uneasy, but there's no question that tracking technology helped quell outbreaks in China, Singapore and South Korea.

Here in the United States, Apple and Google are developing a cell phone beacon for instantaneous contact tracing, but full capability is reportedly months away.

In the meantime, there's the Drexel Health Tracker App, released in April. The app was developed by a team of collaborators led by Walter H. and Leonore Annenberg Dean of the College of Medicine and Senior Vice President of Medical Affairs Charles B. Cairns, MD.

It allows University faculty, staff and students to monitor their symptoms and receive urgent health alerts from the city and the University. Dragons can use the app to follow outbreaks of the SARS-CoV-2 virus over time and across locations. The developers see the app eventually being adopted and customized by other academic and medical institutions. — **Alissa Falcone**

### 5 Evan Ehlers

When Philadelphia ordered all non-essential businesses to close, thousands of pounds of food that had been destined for city restaurants were suddenly doomed for a landfill.

Or they could have been if not for Sharing Excess, a food-reallocation nonprofit run by Drexel alumnus Evan Ehlers (BA entrepreneurship/entrepreneurial studies '19).

During the first two weeks of the outbreak in mid-March, Sharing Excess staff worked 14- to 18-hour days, making about 50 pickups to its food service clients to rescue nearly 30,000 pounds of food (safely, with donated bulk bottles of hand sanitizer and latex gloves). That's about 10 percent of Sharing Excess' entire food donation haul over its two years of existence — in just 14 days.

Ehlers founded Sharing Excess in 2018 as a way for college students to donate unused portions of their campus meal plans, but it has grown to include 40 food service partners and seven university chapters that rely on Sharing Excess to redistribute their surplus food.

"We're the fast, convenient, agile delivery service that can take leftover food from any grocery store or restaurant and deliver that to a hunger relief organization or community center in about 30 minutes or less," Ehlers said.

As the pandemic response evolved, the city asked Sharing Excess to help move food from food banks like the Share Food Program and Philabundance to one of about 40 distribution sites citywide where households could pick up a box of food, free to all, no questions asked.

"This is definitely a really dark time for a lot of people," Ehlers said. "But I think it's really important that we all see the possibilities that can happen when we all come together to collaborate." — **Beth Ann Downey**







## 7 Scott Knowles

Drexel Department of History head Scott Knowles' first thought when the pandemic arrived was to do what he always does as a disaster historian: call up experts to find out more. After all, it's what he did after 9/11 and Hurricane Katrina. His second thought, though, was to do something completely new: broadcast his calls to the public and archive them for posterity.

On March 16, Knowles began hosting live discussions, referred to as #COVIDCalls, every weekday at 5 p.m. with historians, journalists, professors, researchers and other experts and professionals who could shed some light on the pandemic. Topics range from emergency preparedness, virus testing, grief, crime rates, rural health, past pandemics and disaster response, just to name a few. The recordings are available at [soundcloud.com/scott-knowles-433708957](https://soundcloud.com/scott-knowles-433708957).

Knowles wanted to paint a picture of what was happening not only in America, but around the world, where other experts were watching the crisis unfold in their home countries.

"Part of my research is about communication in disaster, so I'm literally doing that work in real time," said Knowles, who in 2011 published "The Disaster Experts: Mastering Risk in Modern America."

Along the way, this has been a once-in-a-lifetime chance to promote his field. "We do not have great capacity in the United States for multi-disciplinary disaster research, but I want to show that there is a community that can come together, and when their voices get together, it's pretty powerful," said Knowles. "I'd like to see something like a Union of Concerned Scientists, but for disaster. Can I do that with a daily one-hour webinar? No. But can we use this as an opportunity to build a stronger community of researchers? Absolutely!" — **Alissa Falcone**

## 6 Geneviève Dion

Just last September, Drexel's Pennsylvania Fabric Discovery Center at the Center for Functional Fabrics relocated into a state-of-the-art research facility at 3101 Market St. to develop next-generation functional textiles and original products. When the pandemic arrived six months later, the center's 3D knitting machines and cutting-edge prototypes became a lifeline to front-line workers in need of filtering masks.

Inside the 10,000-square-foot, \$7 million space, Director and Professor of Design Geneviève Dion rapidly assembled a team of six to move two mask prototypes — one for health care providers and one for the public — into 24/7 production, compressing years of R&D into a few weeks.

Within 24 hours of deciding to take on this project, Dion had the center reclassified as essential. A few days after that, she was already reviewing an initial design with College of Medicine colleagues. Within two weeks, the designs were in production, and by week four, her team had made about 1,200 washable, adjustable masks.

Dion estimates the masks are nearly as effective as respirators, though there has been no time for FDA testing. "The feedback we've received indicates that we're close," she said. "But you don't want to make false claims for a product, especially one that people's lives depend on."

Dion's target is to make 10,000 masks per week, for as long as needed. She's proud of how the young innovation center, which was created with public funds to revive the region's textile and garment manufacturing, has proved itself capable of a rapid response.

"The center was designed with that in mind, but it's rare to have the opportunity to fully demonstrate it," Dion said. "This emergency has forced us to show what we can do in a short amount of time." — **Beth Ann Downey**



## 8 Alexander Fridman

As scientists around the world began raising concerns that SARS-CoV-2 could remain airborne longer than previously believed, Drexel researchers were already dusting off an air sterilizer they built more than 10 years ago to combat anthrax attacks after 9/11.

The device is a filter created by College of Engineering Professor and Director of Drexel's C. & J. Nyheim Plasma Institute Alexander Fridman. It was proven to be more than 99 percent successful at removing anthrax spores from the air.

The filter uses cold plasma — air particles activated by electrical pulses — to blast apart airborne chemical contaminants and bacteria. The researchers speculate that forcing air through a grid of cold plasma could deactivate viral particles. Though coronaviruses are smaller than bacteria or anthrax spores, they have some of the same structural vulnerabilities.

Researchers are now adapting it for a new use, and for possible installation in home and industrial air handling units.

The project is supported by a \$200,000 National Science Foundation grant, one of the first to study ways to eliminate SARS-CoV-2 from the air. — **Alissa Falcone**



## 9 Arun Ramakrishnan, Michael Lane et al.

When calls went out in March for donations of personal protective equipment for staff in local hospitals and clinics, Dragons acted fast.

On the morning of March 24, faculty at the College of Nursing and Health Professions decided to donate the college's unused lab supplies. That afternoon, Director of Research Labs Arun Ramakrishnan collected 700 medical masks, 200 gowns and 25 containers of liquid and foam hand sanitizers. By nightfall, everything had been delivered to local hospitals and other critical organizations.

Meanwhile, College of Medicine Associate Professor Michael Lane led staff and graduate students on a hunt for unused equipment in research labs and supply closets. By the end of March, they had rounded up 16,600 exam gloves, 743 sterile gloves, 197 disposable gowns, 550 masks (including 23 N95 masks), 150 safety glasses and one large box of Lysol wipes.

A separate group led by medical students Kira Smith and Estefania Alba reached out to local businesses like construction companies, museums, hardware stores, auto shops, nail salons, tattoo parlors, veterinary hospitals and neighboring universities. In March, they were able to donate a large supply of N95 masks and nitrile gloves and gowns to St. Christopher's Hospital for Children, which Drexel co-owns with Tower Health. By mid-April they had collected even more — totaling 39,677 exam gloves, 2,349 procedure masks, 1,114 sterile gloves, 651 disposable gowns, 345 sewn masks, 280 safety goggles/glasses, 159 N95 respirators, 62 face shields, 45 Tyvek coveralls and hundreds of miscellaneous materials such as scrubs and cleaning supplies.

Scientists and staff at Drexel's Academy of Natural Sciences raided specimen-handling supplies to collect approximately 90 boxes of gloves, 100 masks, 30 boxes of wipes, three bottles of Purell and 420 safety goggles.

Even Drexel Sports Medicine donated masks and gloves normally used in the treatment of student-athletes to give to staff at St. Christopher's Hospital for Children. — **Alissa Falcone**



**10 Chad Butters**  
“Capitalism only goes so far...you’ve got to think of the environment you’re in,” said Chad Butters, MBA ’14, of his decision in mid-March to convert his entire distillery to making hand sanitizer.

A military vet who majored in entrepreneurship and innovation management, Butters is the owner of Eight Oaks Farm Distillery in New Tripoli, Pennsylvania. He founded the venture in January 2016 and runs it with his family, marketing “seed-to-spirits” liquors made from grains grown on their own community farm in Lehigh Valley. Bourbon, rye whisky, vodka and gin are the core business. Or were.

With a recipe shared by the World Health Organization, Eight Oaks joined big companies like Budweiser and Kentucky’s famed bourbon makers, as well as fellow alumni Vlad ’01 and Marat Mamedov ’07, two brothers who run Boardroom Spirits in Lansdale, Pennsylvania, in stepping up to solve the sanitizer shortage.

In the first week and a half, Eight Oaks made 5,000 bottles. Soon, daily production ramped up to 12,000 bottles.

On March 15, Eight Oaks posted about the operation on its Facebook page and started taking donations to pay for glycerin, hydrogen peroxide and other materials. The story went viral, with coverage in *Time*, *CNN*, and *The Wall Street Journal*.

By April 7, Butters had raised \$92,000 to support his effort and began donating one bottle of sanitizer for every \$1 donated.

The change also allowed him to keep his 25 employees on the job.

“It boiled down to what’s the right thing to do, and the right thing to do was to flip the switch here and try to get ahead of this and make some hand sanitizer,” Butters said. — **Jen Miller**

**11 Jared Therrien**  
Jared Therrien ’18 was at Target in early April when he saw something that needed fixing.

“I saw these labels on the ground,” he remembered. “They basically had a little logo of a foot and there was a whole bunch of text saying to keep 6 feet away, and nobody was paying attention to them. I thought to myself, ‘We could do this so much better.’”

Therrien, who graduated with a BS in product design and a minor in entrepreneurship and innovation, is the CEO of Emergency Information Systems (EIS), a startup he created as a student that designs labels and signage to help emergency responders find their way around buildings.

After returning from Target that day, he created the Project S•A•F•E Initiative — a set of intuitive and readable floor decals that encourage 6-foot spacing in public queues — with Nicole Feller-Johnson



’18, an adjunct faculty member in the Westphal College of Media Arts & Design, and several alumni and a student co-op.

EIS donates the labels to life-sustaining businesses and also offers a “buy one, donate one” system with paying clients. In the first two weeks, there were hundreds of orders from businesses around the country. And that’s just the start.

“We see this project and this product as being a need that’s ongoing as the CDC restrictions relax and as things reopen,” said Feller-Johnson. — **Alissa Falcone**

**12 Michael Silverglade**  
“It was a weird day,” Michael Silverglade ’20 recalled of March

12, the day that restrictions on large gatherings were issued in Pennsylvania.

In the blink of an eye, the social-distancing edicts ended the fourth-year music industry student’s internship with concert promoter Live Nation at its 2,500-capacity Philadelphia music venue The Fillmore. They also demolished his senior project, which was to manage a month-long tour of his band, Courier Club, before he graduated in June.

But Silverglade and his bandmates made something great from the situation. Within a few weeks, they built a virtual music festival on Minecraft called Block by Blockwest, featuring nearly 40 bands and three stages, with proceeds from donations and T-shirt sales going to the CDC’s COVID-19 relief fund.

The band reached out to artists such as Pussy Riot and Idles, asking each to record a 20-minute live set to

stream through the 3D block-building video game. Each band had a virtual stand for online merch sales, and the festival marketed an exclusive Block by Blockwest T-shirt.

Interest in the event was so intense that on the day it was scheduled, 100,000 virtual spectators crashed the server. The festival was rescheduled for May 16, when it drew nearly 140,000 viewers and raised \$7,600 for pandemic relief.

“We definitely turned a bad situation into a good thing through Block by Blockwest, because now it’s probably the coolest thing we’ve ever done as a band,” said Silverglade. “I think it was a blessing in disguise.” — **Beth Ann Downey**

**13 Nicholas Smith**

One of the earliest U.S. scientific studies of the SARS-CoV-2 virus was conducted by Drexel alumnus Nicholas D. Smith (PhD physics ’14, MS physics ’11) and Jeremy Smith (no relation), two University of Tennessee academics working at the Department of Energy’s Oak Ridge National Laboratory in Tennessee.

The Smiths used IBM’s Summit, the world’s fastest supercomputer capable of 200 quadrillion calculations a second, to shortlist potential drug candidates most likely to disarm the virus, in hopes of saving other scientists precious time developing a drug treatment.

Nicholas Smith began in January by building a computational model of the coronavirus’ spike protein, based on Chinese studies, and running molecular simulations. With Summit, he screened

8,000 well-characterized compounds, ranging from existing anti-fungal medicines and anti-virals to natural products derived from traditional medicinal herbs.

The SARS-CoV-2 virus is shaped like a ball with spikes on its surface made up of proteins. It spreads from person to person when those spikes are able to bind to a human cell receptor called ACE2. The hope is to identify a compound that binds to those spikes, which could slow or halt infections.

“With this virus, if you hit and disrupt any of the targets, you mess up the virus,” Smith said. “If you can at least reduce the function of viral proteins, that helps.”

By Feb. 20, Smith and Smith had identified 77 small-molecules and a ranked list of the remaining library worthy of further experiments. They published their results on ChemRxiv immediately rather than wait for peer review so that researchers at other universities wouldn’t lose time duplicating the work.

Smith said that depending on the computing power available to other researchers, his work will save them weeks, at least, of calculations. His next goal is to virtually screen millions of other compounds, which he hopes will shave a few years off the search for COVID-19 treatments. — **Jen Miller**

**14 Diane McNitt**  
*This letter came to Drexel Magazine from Diane McNitt, 63, a 1980 graduate of Design & Merchandising. She runs a home-based clothing alterations and*

*refashioning business in Lansdowne under the moniker “The Sewing Doctor.”*

Dear Editor,  
My love of sewing has been my “therapy” since I young girl. I still use the sewing machine I got as a Christmas gift when I was a sophomore at Drexel. Despite two surgeries on my right hand and needles in my elbow, I wanted to make masks. My husband and my son cut out the fabric and the ribbons, which was a huge help, and a way for our family to help the community.

The first weekend of April I turned our home into a sewing studio — cleaned cotton fabric was draped over chairs, dining room table was turned into a cutting table, ribbons were laid out to be cut for ties, ironing board was set up in the bedroom.

Using the skills I gained from my design classes, I used materials I had on hand and made them work. I cut up my mom’s nightgowns and my son’s T-shirts to use as soft fabric on the back of the masks and used scraps of fabric from previous projects.

I also donated a ton of my buttons for the health care workers as elastic is tough on their ears from wearing their mask all day. Some have put the elastic around a button on their headband.

It’s been a blessing to help out even in a small way.

**15 Marek Swoboda**  
Going from “impossible” to “perfect” in a

two-week timeframe is hard in most circumstances, but especially when creating ad-hoc medical hacks in an emergency.

Which is why Drexel alumnus and Assistant Teaching Professor Marek Swoboda (PhD biomedical engineering ’05) was initially skeptical when the University of Pennsylvania Health System came knocking on March 25 with a tall order: Create 500 ventilators in two weeks as back-up systems in case their hospitals see a COVID-19 surge.

But within five days, Swoboda and engineers from his Princeton Junction, New Jersey, startup RightAir — which is working on ventilators for chronic lung disease patients — had a prototype of a compact, non-mechanical device called a “Y-Vent” based on 50-year-old military field medicine technology.

The Y-Vent can be 3D printed in three hours, assembled in 10 minutes with hot glue, and can be attached to a standard oxygen tank or a small air blower to deliver pressurized air to an intubated patient. Though not FDA approved, it can save lives during an equipment shortage.

“It was just a perfect solution for this purpose, and people see it,” Swoboda said. Swoboda has since made the Y-Vent

design open-source for any hospital around the world facing the impossible. — **Beth Ann Downey**

**16 Wan and Wei-Heng Shih**

A husband-and-wife team at Drexel believes that a piezoelectric sensor they developed in their lab can be used to detect SARS-CoV-2 infection.

Professor Wan Y. Shih in the School of Biomedical Engineering, Science and Health Systems and Professor Wei-Heng Shih in the College of Engineering are co-inventors of a piezoelectric sensor — piezoelectric refers to the ability of certain materials to generate an electrical charge when pressure is applied — that is already being used successfully worldwide to detect breast tumors.

For their newest invention, they have coated a very thin piezoelectric sensor with probe RNA complementary to the RNA of the coronavirus. They expect that when the viral RNA binds to the probe RNA, the resonance frequency of the sensor will shift, indicating a positive infection.

Their test, which in April received funding from Drexel’s COVID-19 Rapid Response R&D fund, will be portable, inexpensive, and easy to use, says Wan Shih. “The test takes only 30 minutes from nasal swabs or saliva samples,” she said. “It is ideal to be made widely available at point of care.” — **Sonja Sherwood**

**17 Kelsey Clark**

As she watched people’s lives upended by the outbreak, doctoral student Kelsey Clark (MS psychology ’19, PhD clinical psychology ’22) was inspired by her training as both a scientist and a clinical practitioner to *do something*.

She created the “COVID-19 Resource List” — a public Google document over 500 items long — to connect people with information, support and services, with a focus on mental health. (Access the resource list here: [tinyurl.com/y9dgm6bf](https://tinyurl.com/y9dgm6bf).)

After publicizing the list on Twitter, she caught the attention of Psychologists Against COVID-19, a group of more than 100 psychologists nationwide, who invited her to join them in creating a central repository for pandemic-related resources.

“It has been encouraging to see how many resources are out there, and how many people are doing what they can to help,” she said. “We are all experiencing stress, discomfort and suffering... May we all be kind and compassionate toward ourselves during this time.” — **as told by Kelsey Clark**

**18 Gail Rosen et al.**  
Thanks to the work of a Drexel-led team, we know that there are at

least six to 10 slightly different versions of the SARS-CoV-2 virus in America, and many more worldwide.

The team studied global test results and identified mutations in the virus, using a quick-result tagging tool they developed called Informative Subtype Markers.

“This allows us to see the very specific fingerprint of SARS-CoV-2 from each region around the world,” said College of Engineering Associate Professor Gail Rosen, who lead the team that included doctoral student Zhengqiao Zhao and Bahrad A. Sokhansanj, an independent researcher. They found that the viral subtypes circulating in New York most likely arrived from Europe, whereas West Coast infections originated from Asia but were subsequently caused by a newer subtype that exists only in America.

This work is valuable because separate subtypes may respond differently to therapies or require unique containment measures. It could also possibly reveal mutation-resistant code that can be exploited by a vaccine.

The team made their genetic analysis tool available for COVID-19 researchers on GitHub. — **Britt Faulstick**



**19 Michele Marcolongo et al.**  
In early March, Professor Michele

Marcolongo, head of the Department of Materials Science and Engineering in the College of Engineering, received an urgent call from the chair of Einstein Hospital’s emergency room about their critical shortage of face shields. Could she help?

Within six days, Marcolongo had teamed up with Associate Professor Amy Throckmorton, Professor Ellen Bass, and graduate student Bryan Ferrick to develop a 3D-printed headband with a clear shield and foam padding. Within a month, with the help of additional Drexel researchers, 12 supply donors, and over 20 printers, the team assembled almost 2,500 “AJFlex Face Shields” for local health care workers.

“Our efforts can play a critical role in stopping the spread of COVID-19 in a way that directly helps protect the people most vital to curbing its impact,” Marcolongo noted. “It’s been a wonderful show of community among our engineers and it’s gratifying to know we are making a difference.” — **Alissa Falcone**



# WHO ↔ WILL

DAVID SHULKIN (MD '86, HD '19), FORMER SECRETARY OF THE DEPARTMENT OF VETERANS AFFAIRS IN THE TRUMP ADMINISTRATION, REFLECTS ON THE AFFLICTION OF AMERICAN PARTISANSHIP DURING THE CORONAVIRUS. WRITTEN BY SONJA SHERWOOD.

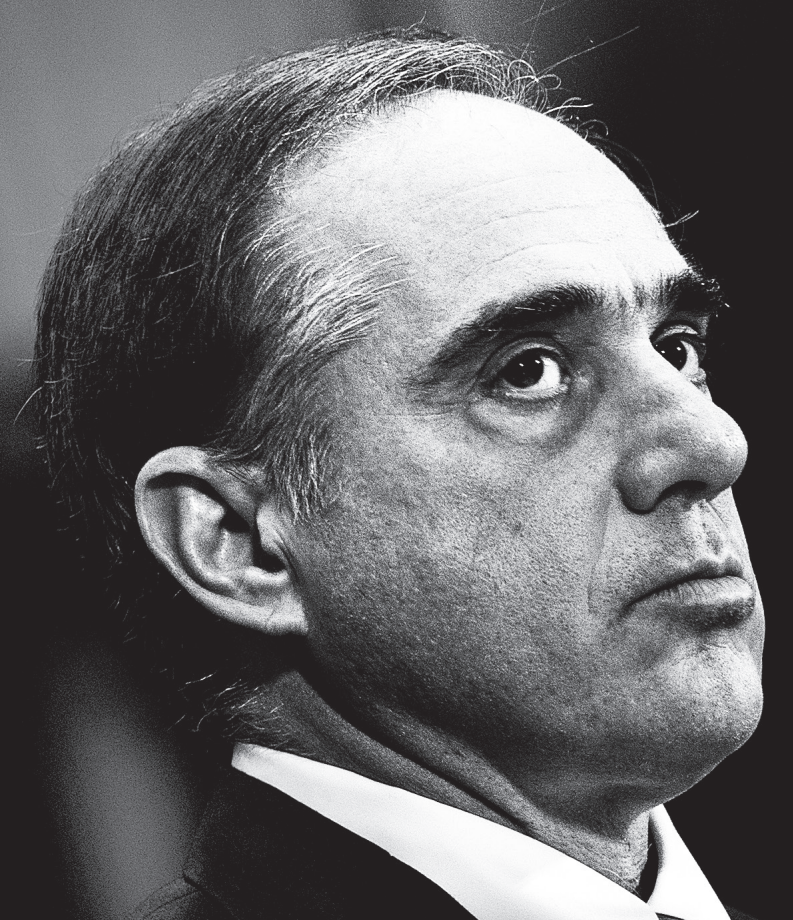
DAVID SHULKIN'S BOOK, "It Shouldn't Be This Hard to Serve Your Country" (PublicAffairs, Oct. 2019), is a detailed personal account of what it was like to serve in President Donald Trump's cabinet as ninth secretary of the Department of Veterans Affairs — a post that ended 13 months later with a Trump tweet.

In his book, Shulkin describes feeling pressure to please "the Mar-a-Lago crowd," particularly Trump pal Ike Perlmutter, chairman of Marvel Entertainment. He watched his work undermined by political appointees who viewed him as an obstacle to privatizing Veterans Affairs. Eventually, his reputation suffered when news media grouped him in with officials accused of misusing taxpayer money (less publicized was the report that cleared him).

Readers, however, may conclude that he is exactly the kind of person government needs — especially now, with the world hostage to disease. A physician trained at the Medical College of Pennsylvania (now part of Drexel's College of Medicine) with experience running major hospital systems in New York and New Jersey, Shulkin entered public service with a pragmatic desire to make government work for its constituents. His wide-ranging career includes serving as co-chair of Drexel's Department of Medicine and, later, as vice dean of the College of Medicine. He served Obama as undersecretary for health at Veterans Affairs before being recruited by Trump's campaign, and he is Trump's only cabinet pick to be unanimously confirmed. During his time at Veterans Affairs, he eliminated long wait times for 57,000 veterans with urgent needs, instituted same-day services at every V.A. facility, expanded telemedicine and improved accountability across the national system.

# US ↔ SEE

# THROUGH ↔ THIS?





He wrote this book to warn that political culture is becoming so “toxic, chaotic and subversive” that it is no longer easy for anyone in government to do their job. And regardless of whether one sees government as a benefactor or an intruder, times like these are when national leadership matters.

“I think everybody is rooting for the President and the administration to lead us through this crisis,” Shulkin told *Drexel Magazine*, “but a President and an administration are only as good as the people who surround them.”

*Drexel Magazine* spoke to Shulkin on March 24, soon after stay-at-home orders went into effect for southeastern Pennsylvania, as he was sheltering in place at his Gladwyne home with wife and fellow 1986 MCP graduate Merle Bari, MD, and his two grown children.



Shulkin and his family with President Obama on Veterans Day in 2016.

**Q. What was your first thought when it became clear that a pandemic was heading our way?**  
I think I was hoping that we would have people in charge doing what was necessary to prepare.

**Q. Did we? How do you rate the United States’ handling of the pandemic in the first 100 days?**  
No. Clearly the biggest issue is that we weren’t ready with diagnostic testing. Once we fell behind in the ability to test we had to essentially assume a worst-case scenario. That created fear and potentially reactions that didn’t fit the situation.

It now appears that we’re getting a better handle on the community spread. But the challenges we continue to see are when the information being given doesn’t match reality. Like when we’re told anybody can get a test and we know that’s not the case, or when we hear mixed messages about the importance of social distancing. That’s where there are opportunities to make

the government response work better for everyone.  
And when it comes to research, this country’s leadership is behind that of China. If you take a look at the 45 clinical trials being run right now, 38 are in China, six are in the United States and two are being done between China and the United States. We are finally seeing new clinical trials in the United States, but we’re playing catch up.

**Q. How is the United States positioned to weather this, relative to other developed countries?**  
I think we have both advantages and disadvantages. When you take a look at our health care infrastructure, the United States has a very sophisticated workforce and technological equipment.

But we have been shuttering hospitals in communities with low demand. As a result, we have far fewer beds than you would find in Asia or Europe. In Japan, for example, they have 12.8 hospital beds for every 1,000 people;

the United States has 2.8.

On the other hand, we are seeing an incredible innovative American spirit from our health care leadership. They created up to 50 to 60 percent additional hospital capacity by converting non-clinical spaces. We’ve seen the U.S. manufacturing industry make itself available like it did in World War II to help manufacture equipment ventilators and masks and medical supplies, and this is being done in record speed.

But when it comes to social distancing and isolation, it’s not natural for Americans to limit their activity. And we’re watching the President challenge some of the scientific advice by saying, look, you know, the cure may be worse than the virus itself...maybe we need to start returning to work. And that’s in direct conflict with medical advice.

**Q. Your book describes red tape, unclear directives and a kind of shadow cabinet of political appointees. Do you think these dysfunctions are so widespread they’ll impact our pandemic response?**  
I worry a great deal about that.

During times of crisis, you need people who are competent and have expertise and experience. That’s where the people who surround the government, who lead our agencies, are absolutely critical.

What I’ve seen during this administration is a battle between those who are career government officials — who have served multiple administrations and are there to focus on the mission and the work and not participate in partisanship — and those who are clearly partisans who are much more interested in winning political arguments than in the mission. That makes it very, very challenging for people to get work done.

I think we’re seeing a little bit of that play out right now, where you see tension between the advice from medical and scientific professionals, and the advice from people interested in the politics of the country and an election coming up. Ultimately the decisions that will be made will impact people’s lives.

**Q. There seemed to be a theme in your book of the Trump administration putting economic considerations ahead of the well-being of veterans themselves. Can we count on this administration to strike a reasonable balance between people’s health and the economy?**

Well, I do think that the President has a legitimate point of view, which is that ultimately the unintended consequences of fighting this virus will be very significant and in many cases have long-lasting consequences. There is going to be social isolation, which we know from past pandemics has a very high correlation with increased anxiety, depression and up to 35 percent of the population experiencing post-traumatic stress, and there will be people losing their livelihoods so that they can’t afford medications, health insurance, good food and quality care.

The problem here is this is not a decision that is one or the other. We have to address what we know works to get rid of the virus and to shorten the duration of the pandemic, and at the same time do whatever we can to lessen the economic and mental health consequences.

**Q. Do you think this experience could change the national conversation about the role or value of government in our health care?**

I think for sure it will change people’s view of government. Many people are just disgusted by the political games, by personal attacks, by the partisanship that has been on display every single day, and they had pretty much written off the value of government.

But when a crisis like this comes along it reinforces why it is essential that we have a good functioning government that can pull the country together. A virus doesn’t differentiate by political party, by race, by creed, by religion. It shows that we are a society that’s interconnected. And I think there are signs of hope that when we come out of this that maybe people won’t be as separate from one another or as hostile.

When it comes to something

like this, not having the means to be able to afford access to health care or tests or the right type of care has to be addressed, particularly by government. That’s why we’ve seen free testing come out of the coronavirus bill. That’s why we’re seeing hospitals being given subsidies in stimulus bills so that everybody in the community can be cared for. I think that speaks to the need that health care should be a right, not necessarily a privilege.

**Q. You’re the highest-ranking person to serve in both the Obama and the Trump administrations. The contrast you describe between how each administration vetted and treated you is alarming, but it doesn’t seem like you wrote your book to settle scores. What was your motivation?**

I didn’t want this to be a fire-and-fury book. I know that that probably would sell a lot more books. But my goal was to have a longer-lasting piece.

I want to say, look, if you’re serious about going into government, if you’re serious about helping other people, about leading large, complex organizations, here’s a book that adds a perspective that shares what that’s like. Not only what it might be like for you, but for your family.

What happened to me was an organized campaign by political appointees to spread myths and mistruths, who understand how to use the media to launch allegations that damage a person. We even found an email that was left on a copier machine where they laid out exactly their plan to get rid of my chief of staff because she was a Democrat; to get rid of my deputy secretary, because he didn’t follow their politics; to get rid of my undersecretary; to get rid of me and to replace all those people with people that were affiliated politically with their philosophy. They were successful in exactly following the plan. And that ended what I think was a great opportunity to continue the successes that we were having in fixing Veterans Affairs.

It didn’t really matter whether the accusations against me were true or not. Because if media runs with them and there isn’t a

forum to get the facts out, people assume they’re true. I wrote this book to lay out the facts of everything that happened and let people make up their own minds.

I also go into detail to share what happened to me to let people know how the current government is operating. If we do not reset the environment in which one serves, we’re not going to get the type of people whom we need in government.

**Q. The President was praising you right up to the end, yet no one intervened to rein in the political appointees who opposed you. Deep down, do you believe that Trump was sincerely on your side or was he tacitly on board with those who want to privatize Veterans Affairs?**

I don’t think the President was always aware of these people or their agenda. They are not visible to him. There are 4,200 of these political appointees dispersed throughout various agencies. I believe that some of these people were much more zealots in terms of their political partisanship and their political philosophies than the President himself.

Every President has a different version of this. What we’re seeing in this administration is not necessarily new territory, but we’re seeing that political loyalty is being given a much higher priority in who gets to sit around the table than necessarily competence at the job. That becomes clearest in times of crisis.

But that doesn’t mean that the President doesn’t want to do well for the country. It’s just that if you have people around you who are more concerned about politics than substance, it creates problems.

**Q. How have veterans been served by all of this? How should they feel about the policies of the past several years?**

I think Veterans Affairs is in a much stronger place now than it was when I entered government in 2015. And for a number of reasons, the leadership who replaced me at Veterans Affairs has continued to follow most of the initiatives that I started, and I’m pleased that they’ve done that.

Also, there’s an unwritten rule that when you leave government or when you’re fired, that you should go away and stay silent. And I just never signed up for that.

I spoke very publicly about my concerns about privatization. I think that lent some transparency so that Congress was able to put the Trump administration on the defensive to where they had to deny that that was their intent. I think that if I had gone away quietly we’d be seeing a very, very different picture today.

But I’m also realistic that if we take our eyes off the ball, there easily could be very strong efforts mounted to dismantle this system.

**Q. Why do you think it’s important to keep the Veterans Affairs health care system intact?**

The system serves a very specific population of 9.5 million wounded veterans with conditions that require specialized expertise that is not readily available in the private sector, and it’s the only place that delivers care in a way that honors their military service.

**WHEN A CRISIS LIKE THIS COMES ALONG IT REINFORCES WHY IT IS ESSENTIAL THAT WE HAVE A WELL-FUNCTIONING GOVERNMENT THAT CAN PULL THE COUNTRY TOGETHER.**

In addition, it trains more doctors, nurses, pharmacists, psychologists and social workers than any other health system in the country. If it went away as a training site, the rest of the country would have a deficit of qualified health care professionals. It also does close to \$1 billion of research every year that has led to amazing medical advances that Americans rely on, such as the hemodialysis machine, the first lung transplant and liver transplant in the country, the cardiac defibrillator, the association that an aspirin a day prevents heart disease, and the CAT scan.

And then there is the fourth mission of Veterans Affairs, which we’re seeing right now in this pandemic, which is that as the nation’s largest health care system, it’s a backup for the country.

When there is a national disaster, Veterans Affairs has more hospitals, doctors, nurses and facilities than anywhere else and it is capable to step in and help.

**Q. You’re a member of a large club of people fired by the President. The Brookings Institution’s tally of turnover among Trump’s executive office puts it at about 86 percent [as of May 15, 2020], not even including cabinet secretaries. How should we feel about this?**

On the day my book was released, I was supposed to be on many national network shows. I got bumped from them all because it was the exact day that the impeachment inquiry started.

In that context you were seeing career officials such as the Ukraine ambassador Marie Yovanovitch in the Congressional hearings talking about why she did her job, what she was focused on, how she took this so seriously. And then you had the administration officials saying she was unfit, she was a disaster and had to be removed from office.

Well, that was an analogy to what I experienced in government. And here in the pandemic again: It’s so important that you have people who actually are experienced and are competent.

I think that we have to be concerned. We have to be concerned that people be placed in their jobs because of their experience and the skills they possess. I think many of us are comforted when people like Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, who are world experts and have been through multiple administrations, are given a strong voice. But I think we have to watch whose advice the administration and the President ultimately takes. And, you know, this is still very much uncertain as we talk today.





A Year in the Life of a

# Philadelphia Teacher Resident

Philadelphia is one of a handful of cities experimenting with year-long apprenticeship programs to address teacher shortages in public schools. Now Drexel has joined the effort to train new math and science instructors who are well-prepared — and financially supported — from day one.

By BETH ANN DOWNEY

Photos by CHARLES SHAN CERRONE AND BRANDEN EASTWOOD

Illustrations by JOE ANDERSON

IT'S LATE SEPTEMBER 2018 and a new school year is underway at Albert M. Greenfield Elementary in Philadelphia's Fitler Square neighborhood. Inside Room 309, math teacher Jessica Charmont teaches linear equations, functions and algebra to her class of eighth graders. She also has a much more grown-up pupil in class today: 27-year-old Brittany Jackson, a Drexel University School of Education graduate student working toward her Pennsylvania teaching certification in middle school math.

Jackson will spend the academic year shadowing Charmont, learning from the seasoned instructor how to be an exceptional public school teacher. Jackson is part of a small cohort of School of Education grad students participating in the Philadelphia Teacher Residency (PTR) program, a full-time teacher-certification program aimed at producing well-prepared educators, with a current focus on math and science educators, to teach in the city's public schools.

Today, Jackson is looking over Charmont's shoulder at her laptop as they plan the day's lessons. The two chat about upcoming conferences and workshops and geek out about the class' TI-Nspire calculators. They go over concerns like timing and when to introduce new concepts to the class, and they share some laughs along the way. Then the bell rings, signaling the start of class.

"Log in, have a seat, notebooks out, pencils out," Charmont bellows, now all business.

Charmont and the class get right into solving equations. Students submit answers on their calculators and a breakdown of their responses appears on an interactive Smartboard screen at the front of the room.

The class is fast-paced and technology driven. At times, Charmont gives the students just 10 seconds to solve an equation. Then, with the press of a button, she can slow everything down.

"Ha! I have control!" she jokes as she halts the algebra lesson. "I can pause you whenever I want!"

From the back of the classroom, Jackson is settling pods of students. She takes a seat in the back once the class has reached its groove.

"I'm not used to standing all day," she whispers exhaustedly, out of ear-shot of the students.

But for Jackson, being on her feet all day is a small price to pay. She always wanted to teach, but after earning a bachelor's degree in mathematics from Rutgers University, she found it would be too difficult to also earn her certification as it would mean going back to school and picking up another degree in education. She fell into a series of customer service and finance positions, but the PTR program allowed her to change lanes toward the career she's always wanted.

She's already been doing some grading and working one-on-one and in small groups with students, but soon she will move from observer to active teacher.

"I think that being able to kind of sit back and see what's happening while students are learning gives me a lot of insight in how to engage students and react to different behaviors," Jackson says. "I just announced my takeover to two of the classes, and I want them to know that they're integral to my learning — I'm learning from them and they're learning from me."



# Class Experiments

School districts around the country are experimenting with teacher residency models like the one recently adopted in Philadelphia in hopes of improving their teacher pipelines.

One of the first districts to adopt the model was Chicago in 2001, followed by Boston and Denver in 2003. More recently, the Dallas Independent School District pledged \$19 million in funding for three teacher residency programs to train as many as 500 candidates within five years. About 80 to 100 residency programs operate nationwide, estimates Barbara McKenna, spokesperson for the California-based advocacy organization Learning Policy Institute.

Resident teachers are graduate-level college students who apprentice with an experienced teacher for a year of “residency” inside a public school while

enrolled in coursework with a partner university, sometimes with a salary, stipend or tuition waiver. After earning their teaching credentials, they commit to work in the district for several years.

In Philadelphia, Drexel participants receive 50 percent off their tuition rate as compared to the baseline graduate student rate, plus a salary (currently \$38,611) and benefits from the School District of Philadelphia, as well as a scholarship that covers 75 percent of the already-discounted tuition. Both institutions are making an investment in this model to make the transition to the teaching workforce more affordable for participants.

“Nationally, there’s a teacher shortage that a lot of districts and organizations are trying to find actionable solutions to,” says Chanell Bates, director of strategy and operations for the School District of Philadelphia’s Office of Talent Support Services. “Teacher residency programs are typically cited as a great path toward addressing teacher shortages. So...the School District of Philadelphia started to think through what it would mean to create a version of it for ourselves.”

Although research is still emerging, proponents contend that teacher residency programs produce educators who are better prepared and compensated, as well as less burdened by student debt — plus, hopefully, happier with their career choice.

Ill-prepared teachers are two to three times more likely to leave the profession after their first year than teachers with comprehensive preparation, according to the Learning Policy Institute. Moreover, the Institute reports, “research shows that the more debt college students incur, the less likely they are to choose to work in a lower-wage profession like teaching.”

In 2016–2017, the National Center for Teacher Residencies, a Chicago-based organization which assists a network of high-performing residency programs, surveyed 73 principals and 199 graduates involved in residency programs. The NCTR found that 91 percent of the principals agreed that residents outperform teachers prepared through other pathways, and 95 percent of the graduates said they believed they entered the classroom with more effective skills than the average new teacher.

In addition to Drexel, Philadelphia’s program draws graduate education students

## Diverse Pathways, Diverse Classrooms

One of the goals of the Philadelphia Teacher Residency program is to draw professionals from non-traditional fields and diverse backgrounds into teaching.

A strong teacher residency program does more than ensure a pipeline of effective instructors. It sponsors diversity of all kinds — by drawing professionals from a variety of fields into teaching as a second career, and by helping to ensure that teachers reflect students’ racial, cultural and religious backgrounds, says Chanell Bates, director of strategy and operations for the district’s Office of Talent Support Services.

The Philadelphia Teacher Residency (PTR) program does this by offering salary, benefits and mentorship that attract people to the teaching profession. The program also aims to accept a proportion of residents each year who identify as a person of color.

“We have a shortage of teachers of color, teachers who look like the students they’re teaching,” says Valerie Klein, assistant clinical professor and program director for Teacher Education programs in Drexel’s School of Education. “Part of that is because we have only had limited and often traditional pathways to becoming a teacher and for a variety of reasons, including cost reasons and time, these pathways have not been or seemed accessible to everyone. So [the program is] shorter, funded and I think that creates opportunities for more people to become teachers.”

Ami Patel Hopkins credits the program with helping her to return to teaching after taking a different career path. Hopkins earned a BA in psychology from Penn State University and worked as both a first-grade teacher and a high school guidance counselor aide before spending more than 10 years in the education policy field. After working in the Philadelphia Mayor’s Office of Education under Michael Nutter and helping to manage both Drexel and Penn’s PTR programs through the Philadelphia Education Fund, Hopkins wanted to transition back to the classroom, and she knew exactly how she wanted to do it.

“[The PTR program] gives me the opportunity to really get my feet wet because I get to work with a mentor teacher while earning a salary and

benefits,” she said about the program last year, when she was a resident at Cook-Wissahickon School in northwest Philadelphia. “That helps a lot. And it’s exciting for me to see that there’s more attention to it, because I honestly think it’s the best model of teacher preparation.”

The impact of this can be felt in the classroom, like when Hopkins and her mentor teacher Diane O’Fee-Powers were helping sixth- through eighth-grade students prepare for their science fair presentations last year. Hopkins settled in with seventh graders who needed last-minute help completing their presentations. They all conducted a similar experiment, hypothesizing and testing which surfaces a small Sphero robot would go faster on by measuring distance and time.

Science fair partners Naomi McKinnie and Alana McNally, both 12, said they had to redo their experiment three times before getting accurate results.

“I feel like it actually kind of prepared me a little bit for the real world, that it’s not going to be handed on a golden platter for you,” McNally said. “You’ve actually got to work and sometimes it doesn’t always come the first time.”

Another thing preparing them for the real world was having a teacher like Hopkins. Affectionately referred to as “Mrs. PH” by students, Hopkins is among the fewer than 1 percent of Pennsylvania teachers who are of Asian descent, according to Pennsylvania Department of Education personnel data from 2016–17. She made a point of discussing her background with her students — some of whom she says had never met someone of Indian heritage before.

“She always teaches us about her past,” McKinnie said. “She teaches about her country and how her parents are immigrants. She runs for cancer and stuff like that. So she teaches us about important things to her and she can kind of relate to us because we all have important things.”

Hopkins completed her residency in June 2019 and is now in charge of a classroom of her own, teaching fifth- and sixth-graders science at the Science Leadership Academy Middle School (SLAMS) in University City.

She says the biggest resource that the PTR program provided was self-confidence. “I had the whole of last year to figure myself out again,” she says. “Now I can just focus on learning how SLAMS works and the teaching part.”

from the University of Pennsylvania, Temple University and Relay/GSE, the latter of which was the school district’s sole partner when it launched the PTR program in 2017. Each future educator pledges to teach math, science, English or Spanish in the district’s middle or high schools for at least three years following graduation. Drexel PTR students are all focused on filling this STEM pipeline.

That can make a difference in subjects in which teacher vacancies are high. Forty-three states including Pennsylvania reported teacher shortages in math and science subjects for the 2017–2018 school year to the U.S. Department of Education.

“Just imagine what it would be like to never have a physics teacher,” says Bates. “[That’s the case] in some areas of the city, and it’s a pervasive problem. We are hoping that though the short-term cost of PTR is high...the short-term benefit is that we have fewer vacant positions, and the long-term benefit is that we get teachers who are committed to the district.”

Some form of residency program has existed at Drexel since 2013, but the 2018–2019 school year was the first time Drexel entered the formal partnership with the School District of Philadelphia. Since then, Drexel PTR students have maintained an 86 percent retention rate and have achieved a 100 percent hiring rate within the school district.

For Jackson, the district’s salary and tuition coverage sealed the deal.

“I really couldn’t think of a better program to be a part of,” she says. “And I would not be having this experience without [compensation] because I have bills to pay. There’s no way I could do what I’m doing and have a different job [on the side].”

## Math Problems

The time and capital invested in teacher residents is the School District of Philadelphia “putting their money where their mouth is,” according to Sarah Ulrich, associate dean of Teacher Education and Undergraduate Affairs for Drexel’s School of Education. “Philadelphia is one of the few large districts that’s really investing that much in the residency model.”

The program attracts individuals from a variety of backgrounds, but they all have one thing in common, she says. “Our most successful students are truly committed to teaching. They really want to be in Philadelphia and invest in Philadelphia and grow roots in Philadelphia and establish their careers in Philadelphia.”

“When we look at the backgrounds of our residents, we’re excited to see former researchers or folks who’ve worked in labs or run businesses or done other things



Brittany Jackson apprenticed at Greenfield Elementary last year and is now a teacher at Hill-Freedman World Academy.

that have ultimately contributed to the environments of our schools, but who may not have, in their traditional undergraduate education, chosen to study teaching,” Bates says of the program’s participants.

Drexel supports the city’s program in numerous ways through both its curriculum and intense mentorship and cohort engagement.

Residency teachers supplement their online coursework with face-to-face, on-campus meetings on the final Friday of each month throughout the academic term. The get-togethers allow residents to share best practices (or sometimes, commiseration) as they discuss their classroom experiences.

And starting this year, residents also have time off from teaching every Wednesday afternoon to meet with advisors, talk with instructors and work on their coursework.

“We’re curious to see how these Wednesday afternoons help them manage the coursework,” says Valerie Klein, assistant clinical professor and program director for Teacher Education programs in Drexel’s School of Education. “We want them to have a day where it wasn’t necessarily the case that they had to do it at night maybe after their kids went to bed and they just finished grading, like ‘Now I can look at my courses with the 2 percent of my brain power left.’”

With Philadelphia’s school district being large and diverse, residents are encouraged to visit other established teachers in their building to observe other teaching styles, and to visit other schools to see what classes are like in other neighborhoods.

This is why Jackson made visits to Penn Treaty School in Philadelphia’s Fishtown neighborhood and to the General Louis Wagner Middle School in West Oak Lane. The visits helped her see what her post-graduation teaching jobs might be like, she said, since Greenfield is relatively high performing and in a more affluent area than the typical district school.

“I witnessed two different teachers teaching to a class where no one was listening,” she recalls of one visit. “I remember thinking to myself, ‘I don’t want my classroom to be like this.’”



Ami Patel Hopkins ’19 apprenticed at Cook-Wissahickon School in northwest Philadelphia last year, and is now running her own classroom at Science Leadership Academy Middle School in Philadelphia’s University City section.





Even after the program ends and the students have graduated, their professional guidance continues. Drexel provides three years of post-program support to PTR students at no cost, including professional development, onsite coaching and networking opportunities. Graduates can also obtain additional certifications or a master's degree still at a 50 percent tuition discount.

"We say once PTR, always PTR," Ulrich says. "As teachers, we're lifelong learners."

## Social Studies

It's now late January at Greenfield Elementary, and Jackson and Charmont are prepping for class during a quiet period. This time, the roles of master and pupil are reversed; Charmont is looking over Jackson's shoulder as Jackson prepares to take over the day's lesson on decimals and fractions.

Charmont says it's gratifying to see how far Jackson has come in her ability to command the classroom. "When she was first here, she was more of an amazing assistant," Charmont notes. "Over time, she is taking control of the classroom, which is wonderful. She's doing exactly what she should be doing. She's managing transitions. She's establishing routines for the students. She is developing strong lessons that engage the students with a variety of modalities... You're experimenting with so many ways to engage them."

Though the school year is only midway, Jackson already feels that she'll be leaving in June with many new skills — like establishing effective reward systems, managing time and re-focusing student attention.

The program creates a natural feedback loop that aids the learning process, Jackson adds. Even when Jackson is leading a class, Charmont takes opportunities during the lesson to whisper suggestions into Jackson's ear. Or, vice versa, Jackson will sneak over to Charmont's desk to ask a question.

"I'm trying to get into a routine of taking notes and giving her direct feedback, now that we're in this more stable situation where I don't have to monitor every detail," Charmont says.

Ideally, such intimacy comes naturally in an apprenticeship, but even when it doesn't, the PTR program employs site directors, or University liaisons with education backgrounds, who visit classrooms weekly to provide additional help and feedback.

Pam Bryan, an adjunct with the School of Education who has been mentoring teachers for over 20 years, says her job as a site director is to promote positive communication between all parties, to help everyone grow.

"I provide communication support," she says. "I'm a third person who's not [always] around, so I can listen to both [the resident and mentor] objectively. They're together all year long and may have different organizational, leadership and teaching preferences. So, how do you maneuver the differences?"

She recalls one pair she worked with who successfully navigated their differences and helped the

students reach success by the end of the school year.

"They had many differences: world experiences, teaching styles, educational philosophies and working styles," Bryan says of the resident and mentor. "What they shared was their desire for the students to experience academic success and that became their common working ground. From that point of reference, they built a practice classroom experience that focused on collaboration and exploring new ideas. It was a growth opportunity for all."



## Final Exam

By late May there are only a couple of weeks left in the school year at Greenfield. This prep period, Jackson is planning for class completely independently while Charmont works with students one-on-one.

Once class is underway, Jackson crouches down next to a student who hadn't completed some missing assignments.

"You're an A student," she encourages him. Then she tells him a story about how she moved recently, and she saved money little by little to ensure she could afford to do so — turning it into a lesson about planning ahead and setting goals.

The scene captures the biggest lesson Jackson says she learned in her residency year that she will take with her into her own classroom.

"It's important to be consistent, and to always hold the students accountable — holding them to very high expectations," she says.

Jackson went on after her residency year to teach sixth- and seventh-grade math at Hill-Freedman World Academy in the East Mt. Airy section of Philadelphia starting in the fall of 2019.

Greenfield Principal Dan Lazar was sad to see her go.

"If we had had an opening to hire her, I think we probably would have because of how great she is," he says. "She took every opportunity she was given to learn and to engage and to teach and just absorbed everything her mentor teacher was giving her. She really became part of the community here... It wasn't a one-way street. We definitely benefitted from having her here as well."

Testimonials like these showcase the power of the PTR program.

"If we can shorten that learning curve and retain people after the residency, I think we're knocking it out of the park and demonstrating that the investment is worthwhile," Bates says.

"[The PTR program] gives me the opportunity to really get my feet wet... I honestly think it's the best model of teacher preparation," said Ami Patel Hopkins '19.

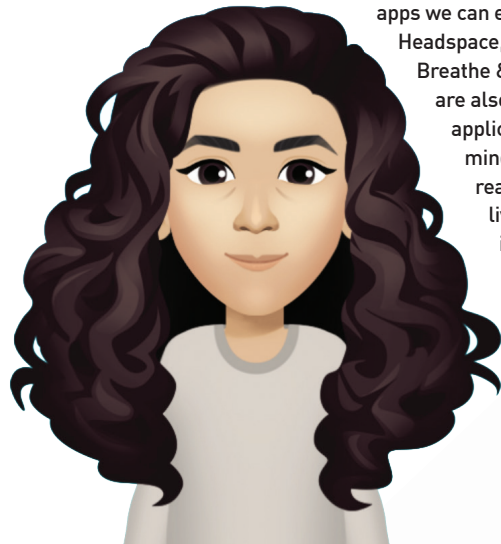




# Dance, Cook, Listen, Breathe

Tips from Drexel faculty on how to maintain balance and well-being in an upended world.

*There's a lot going on in the world right now, and we've all had to make major adjustments to our daily lives. So much change can make anxieties run high, but there are ways to manage yourself creatively and effectively while you're keeping safe. Here are some tips and ideas for keeping calm from faculty and staff from Drexel's Creative Arts Therapies Department in the College of Nursing and Health Professions. — Alissa Falcone*



## NURTURE A GREEN SPACE

Says Program Coordinator Kristen Norine →

“Gardening can be creative, whether it’s small potted houseplants, a container garden in a city backyard or in a yard in the suburbs. Plant care is all in the details. Where is the best place for a plant so it can thrive and can enhance the visual aspect it brings to your surroundings? What can you repurpose to help a plant reach its potential by creating a trellis or hanging container? If growing herbs and flowers, consider the best place for those aromas.”

## MIND YOUR DIGITAL MINDFULNESS

Says Assistant Clinical Professor Abby Dougherty →

“Deep breathing sends a message to our brains to calm down. There are many wonderful mindfulness apps we can easily use such as Headspace, Calm and Stop Breathe & Think. There are also many wonderful applications for mindfulness in virtual reality. You can meditate live as a VR avatar in AltspaceVR with people all around the world.”

## LISTEN TO MUSIC

Says Professor and Director of the PhD Program in Creative Arts Therapies Joke Bradt →

“Music has lots of health-promoting qualities. Most of you will have already experienced that music can improve your mood and reduce your stress. Listening to music can also make you feel supported and less lonely. Music is not “just” a feel-good thing. Neuro-imaging studies have shown that music impacts areas of the brain that play a crucial role in reducing stress hormones and releasing dopamine and endorphins (i.e. the feel-good hormones). Research has also shown that listening to music and singing improves your immune system. So try using some focused music listening or, even better, sing along to your favorite song!”

## GO FOR A HIKE

Says Associate Clinical Professor and Director of Art Therapy and Counseling Natalie Carlton →

“Being in nature can be creative and restorative. Nature can also engage multiple levels of sensory engagement and remind us of ‘scale’ beyond humanness. Our bodies, psyches and minds in nature can enjoy alternative soundscapes while taking in the minutia of sight, sound and texture that can be crowded out. Being in nature is essentially being with ourselves as attentive to small details while encouraging an endless ‘mind wander.’”



## COOKING CAN BE CREATIVE

Says Associate Professor Girija Kaimal →

“Cooking is one of the few activities in life that can engage all our senses. Use the time at home to feel the textures, smells, sights, tastes and sounds of foods. Take time to create a new dish from things in the pantry. Or better still, find a favorite family recipe, savor the tastes, lay out the dish, enjoy the colors and smells and create a mealtime to cherish.”

## JUST DANCE

Says Assistant Clinical Professor Dawn Morningstar →

“Dancing can give you vitality, energy and lift your mood. Pick a song with a good beat that makes you feel happy. Dance in your kitchen, living room or down your hallway. Invite those in your home to join you. Dance like no one is watching — and nobody will be watching you since they are all [keeping their distance] anyway.”

## TREAT YOURSELF

Says Admissions Coordinator Kade Haskins →

“It is extremely important to be great to yourself during stressful times. Treat yourself to some things that you might not normally do. Listen to calming music and paint. Meditate. Make a travel wish list. Find a new recipe on Pinterest and cook with your loved ones. Utilize every moment of being home and, most important, don’t forget to call your loved ones who are long distance. There is nothing like a familiar voice in unprecedented times.”

## SUPPORT YOUR SENSORY DIET

Says Associate Clinical Professor and Program Director for Dance/ Movement Therapy & Counseling Christina Devereux →

“Just like we want to make sure that we nourish our bodies with a healthy diet, we also need to nourish our minds and bodies with a sensory diet. For example, provide opportunities where you start the day with different sensory experiences. Perhaps light a candle to engage your sense of smell, or pick fresh flowers with a walk in nature. Have areas where vibrant colors or visual information engages our observation. Engage our sense of hearing by putting on an audio book, or some music. And finally, engage the tactile sense where we can take what is heard into something that we build. Use variation of sensory experiences to keep the flow throughout the day.”







Nominate an outstanding alumnus or student at [drexel.edu/alumni/about/awards](https://drexel.edu/alumni/about/awards).

# Alumni Awards Recognize Distinguished Dragons

Each year, the Drexel Alumni Awards honor the outstanding accomplishments of alumni and students.

*This year's award recipients represent how entrepreneurs, advocates, engineers and business, community and creative leaders can create solutions, spur progress and tangibly enhance peoples' lives. We recognize the following Dragons for their boundless capacity for innovation, their creativity and their determination to improve their communities and beyond.*

## 1. A SOCIAL JUSTICE ACTIVIST AND PHOTOJOURNALIST

*Young Alumni Entrepreneur Award*

### RACHEL WISNIEWSKI

BA photography '16

Owner, Rachel Wisniewski Photography

Wisniewski has combined her passions for social justice and photojournalism to speak to issues such as HIV/AIDS, income inequality, LGBT rights and the #MeToo movement. She says that she hopes to "use photojournalism to educate, dispel stereotypes and provide platforms to causes that have been under-reported."

## 2. A YOUNG ENTREPRENEUR COMBATting TEEN SUICIDE

*Outstanding Student Award*

### GABBY FROST

Class of 2020, music industry

CEO and Founder of Buddy Project

At 15 years old, after hearing many of her friends online expressing feelings of loneliness and depression, Frost started the organization Buddy Project as an online support system for young people suffering from suicidal thoughts and mental health issues. "Just giving people a community gives them a sense of belonging. I knew I wanted to create that," she says.



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## 3. A CHAMPION FOR WOMEN LEADERS IN ENGINEERING

*Service to Profession Award*

### ELIZABETH HOFFMAN

BS materials science and engineering '02, PhD '07

Director of Innovation and University Engagement, Savannah River National Laboratory

Hoffman works to integrate laboratory-wide programs to expand and deepen research that supports Department of Energy missions. Her nominator, former College of Engineering Department Head and Professor Michele Marcolongo, says, "As a woman leader in a largely male-dominated field, Liz serves as a role model to others to achieve their potential within science and engineering fields."

## 4. A VOICE FOR ASIAN AMERICANS, REFUGEES AND IMMIGRANTS

*Irick Society Award for Civic Engagement*

### NARY KITH

BS business administration '03, MS family therapy '07

Kith came to the United States as a refugee from the Khmer Rouge-ruled Cambodia and has been on a mission to serve the Asian-American and refugee population. "Since graduation in 2007, Nary has used her education, her experience and her hard-earned privilege to give back to her community — to raise up families and individuals in need so that they, too, may thrive in this country," says her nominator Jocelyn Jennings, MFT '07.

## 6. A PIONEER IN ULTRASOUND TECHNOLOGY

*Young Alumni Emerging Leader Award*

### JAYDEV DAVE

MS biomedical engineering '08, PhD '13

Associate Professor, Department of Radiology, Thomas Jefferson University

Dave is transferring his prior thesis work at Drexel into potentially life-saving clinical trials. He has emerged as a pioneer in the field of nonlinear ultrasound with his work to noninvasively monitor and detect cardiac disease. "He frequently lectures undergraduate and graduate students on medical ultrasound and also serves as a thesis advisor to biomedical engineering graduate students at Drexel," says his nominator John Eisenbrey, MS '09, PhD '10.

## 7. AN ADVOCATE FOR THE UNDERREPRESENTED IN ACADEMIC SPACES

*Faculty/Staff Alumni Award for Campus Impact*

### NATALIE CHERNETS

PhD electrical engineering '14

Director of Postdoctoral Affairs and Professional Development, Associate Director of the MD/PhD Program, Drexel College of Medicine

Chernets regularly goes beyond her daily duties of supporting, promoting and advocating for Drexel's postdoctoral and MD/PhD communities. "She works hard to make sure that there is representation of women and underrepresented minorities in academic spaces and she does so, boldly, with a strong sense of determination and collaboration across the University," says her nominator, Shawwna Thomas-El, BS '90, MS '96, PhD '19.

## 5. A ROLE MODEL FOR YOUNG PEOPLE IN STEM

*Young Alumni Distinguished Service Award*

### GABRIEL R. BURKS

MS/PhD materials science and engineering '18

Postdoctoral Research Associate, University of Illinois Urbana-Champaign

Burks wears many hats — all of which are dedicated to introducing STEM education to those who are underrepresented and underserved. "His work of being an educator and engineer extends beyond the lab or the classroom to positively impacting his community and society as a whole," says his nominator, former College of Engineering Department Head and Professor, Michele Marcolongo.

## 8. A TRAILBLAZER IN SUSTAINABLE DESIGN

*Alumni Entrepreneur Award*

### MAX ZAHNISER

BS architecture '03

CEO, Nexus City Coho

Zahniser is a Philadelphia leader in the areas of regenerative design and sustainability, starting the city's only sustainable co-working space, Nexus City Coho. And his work helps the Drexel community as well. "Max co-developed the Sustainable Built Environment minor in the Westphal College of Media Arts & Design, and continues to teach in it, while also advising students interested in careers in his area," says his nominator and member of the Alumni Board of Governors, Paul Gondek, BS '74.

## CAREERS

## 50s

John C. Monsul, BS retail management '53, appeared before the Fairfax County Board of Supervisors to receive a special award for his TV show, "Communicating Today."

## 60s

Charles A. Cianfrani, BS physics and atmosphere science '64, published his eighth book, "The Journey — Achieving Sustained Organizational Success."

Lawrence W. Lazarus, MD '67 and Jeffrey Foster, MD, co-authored the bestseller, "Insider's Guide to Quality, Affordable Healthcare."

Stan Silverman, BS chemical engineering '69, MBA '74, published his book, "Be Different! The Key to Business and Career Success."

Richard N. Westcott, BS business administration '60, is the author of 26 books and a lifelong newspaper and magazine writer and editor. He has been elected to four halls of fame, has appeared on 10 baseball film documentaries and is past president of the Philadelphia Sports Writers Association.

## 70s

Lois G. Davidson, BS human behavior and development '79, unveiled the First Light Project Pilot Farm Project located within the West Berks Street warehouse of Philabundance.

Virginia E. Hall, MD '72, is chair of the Foundation of the Pennsylvania Medical Society and serves on the board of the Harrisburg Symphony Orchestra.

Roger Midgette, BS business administration '70, was appointed to the AARP Foundation Tax-Aide National Technology and Security Committee.



## CAREERS

**Ana L. Pujols-McKee, MD '79**, has been recognized by *Modern Healthcare* as one of 2020's Top 25 Minority Leaders.

**Jonathan J. Tabas, BS civil engineering '74**, became president of the Pennsylvania Society of Land Surveyors.

## 80s

**Martin G. Belisario, Esq., BS mechanical engineering '85**, was named the Best Lawyers 2020 Lawyer of the Year in the practice area of patent law.

**Michael J. Bozek, MBA '82**, was appointed to the board of trustees of Samaritan Healthcare and Hospice.

**Glenn Alan Brinckman, BS mechanical engineering '87, MS mechanical engineering '90**, was named CEO of Global Plasma Solutions Inc.

**Dominic J. DeSimone, BS accounting '88**, was named to the *Philadelphia Business Journal's* Best of the Bar: Philadelphia's Top Lawyers list.

**Amy E. Furness, BS retail management '89**, was elected vice president-sustaining of PLAC. PLAC is a nonprofit association of product manufacturers, suppliers, retailers, and select regulatory, litigation and appellate professionals.

**Stephen M. Hall, MBA '82**, was recognized as the 2020 Delaware Valley Engineer of the Year.

**Dottie Leonardi, BS finance '86**, was promoted to shareholder at Drucker & Scaccetti.

**David E. Longacre III, BS retail management '80**, represented the United States in the recent UIPM Biathlon/Triathlon World Championship held Oct. 26 and 27 in St. Petersburg, Florida.



CO-OP

# Perspective from 25-Year Co-op Manager

*One alumnus has been hiring Drexel co-op students for the same employer for a quarter of a century. — Beth Ann Downey*

Bill Waldron '90 has been working for AT&T for 30 years and through four name changes, and he's met a ton of Drexel co-op students.

For 25 of his 30 years, he has been a direct manager of Drexel engineering co-op students, working with up to eight students per six-month cycle. He's the reason AT&T became a co-op employer, in fact. When he started at the company, there weren't any. A 1990 electrical and computer engineering grad himself, he was quick to initiate a co-op program as soon as he landed a supervisory role.

"We have had co-ops/interns from other schools on occasion, and Drexel students are typically more prepared for the work experience," says Waldron, who is now AT&T Mobility's radio network design manager. "It's not just a 'summer job' for them. The six-month cycle gives them a more valuable experience — the bulk of the co-ops' contributions happen during their last three months."

Some of those co-op students have created software tools still in use today, Waldron says, and others have automated tasks, saving the company time and money.

"A lot of our staff is former co-ops," he says. "Probably a third of our staff."

Over the decades, one big change he's seen is a lot more female students vying for engineering positions.

"I keep a list of all the co-ops we've hired by year, and in the '90s we had 20 percent women, in the 2000s it was 27 percent, and in the 2010s it was 41 percent. Since 2013, it's been over 50 percent," he says. "We're looking for the best candidate available. We don't care male, female, whatever, but the women engineers have been outstanding lately. We see a lot more résumés from women than we used to ... that's been good to see."

**Vicki Poponi, BS chemical engineering '84**, moderated a panel on U.S.–China relations at The Conference Board 2019 Fall Policy Conference and was appointed to Drexel's College of Computing and Informatics Advisory Board.

## 90s

**Glenn T. Ault, MD '93**, was elected to serve as the president of the American Board of Colon and Rectal Surgery.

**Gina Furia Rubel, BS corporate communication '91**, was appointed co-chair of the Philadelphia Bar Association's Law Firm Risk Management Committee.

**Scott D. Heisman, BS information systems '93**, was promoted to chief integration officer at Versus LLC.

**Robert S. Hutchinson, BS architectural engineering '90**, announced his solo exhibition entitled "Memory Houses at Mexico City's Museo Casa Luis Barragán."

**Richard C. Liu, BS corporate communication '94**, was named to the board of directors of Valley Youth House in Bethlehem, Pennsylvania.

**Christine Palmer Hennigan, BS finance '90**, was honored as a 2019 Power Woman by *Main Line Today Magazine*.

**Elmer Pinzon, MD '94; Mike Adonizzio, MD '93; and Jack Lee, MD '93**, met up in Baton Rouge, Louisiana, for the LSU vs. Florida football game in October 2019.

**Thomas J. Riordan, MD '93**, gave a presentation on the PA State Prescription Drug Monitoring program at the Patient Safety-Risk Management Conference.

**Mark V. Wiley, BS applied sociology '96**, wrote and produced a kung fu/mafia/romantic comedy feature film called "Made in Chinatown."

## CROSS ROADS

## CLASS NOTES

### WEDDINGS AND BABY DRAGONS

## 00s

**Christopher Andrew Bloss, MD '00**, was appointed associate director for St. Peter's Health Partners Center for Minimally Invasive Surgery.

**Heather E. Clauss, MD '02**, was named senior associate dean of faculty affairs for the Lewis Katz School of Medicine at Temple University.

**Jessica Coughlin Sharp, BS communications '02**, was named the 2019 Young Entrepreneur of the Year by The Chamber of Commerce for Greater Philadelphia.

**Yanatha Desouvre, BS business administration '01**, recorded a cross-generational duet of Jacques Brel's "Ne Me Quitte Pas" with his late uncle Daniel Charles Coulanges.

**Andrew Knox, BS history and politics '04**, will be included in the 2020 edition of "The Best Lawyers in America."

**Ben Legum, BS biomedical engineering '08, MS materials engineering '08; Jennifer Vondran, BS biomedical engineering '07, MS materials engineering '07; and Amber Stiles, BS biomedical engineering '08, MBA '11, JD '13**, published the book, "Engineering Innovation: From Idea to Market Through Concepts and Case Studies."

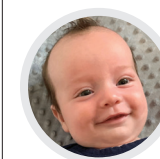
**Daniels J. Marques, BS business administration '09**, was promoted to shareholder at Drucker & Scaccetti.

**Scott C. Millhouse, BS mechanical engineering '04**, was promoted to commander in the U.S. Navy.

**Emily Record, BS computer engineering '04**, was appointed Guilford College's first women's rugby head coach in the school's history.



**LEFT Matthew Ryan, BS entrepreneurship '15, and Annette O'Malley Ryan, BS entertainment arts management '15**, were married at St. John the Evangelist in Philadelphia on Sept. 9, 2017.



**Thomas Fone, BS civil engineering/architectural engineering '13, and Amanda Guertin, BS mechanical engineering '13**, welcomed a son on July 15, 2019.



**Scott Goehringer, BS/MS mechanical engineering '11, MS engineering management '16 and Sarah Goehringer, BS elementary education '11, MS educational learning technologies '11**, welcomed a daughter, Gemma Skye Goehringer, on Nov. 20, 2018.

**TOP LEFT Steven Cornella, BS computer science '11, and Jessica Appgar, BA communications '11, MS '14**, were married on July 28, 2019.

**TOP RIGHT Timothy J. Wilwert, BS mechanical engineering '12, and Nicole Elizabeth Kaufman, BS marketing '14**, were engaged in Paris in the Trocadero Gardens while traveling for his Alpha Pi Lambda brother's wedding.

**MIDDLE Scott Keane, BS accounting '13, and Taylor Ferrara, BSN '15**, were married Nov. 30, 2019.

**BOTTOM RIGHT Travis J. Hart, BS/MS mechanical engineering '17, and Emily Lyn Ballantyne, BS mechanical engineering '17**, were married on Aug. 17, 2019.



## NURSING

**Lindsey Snyder, BS biological sciences '06**, was selected as a 2019 WW Pennsylvania Teaching Fellow by the Woodrow Wilson National Fellowship Foundation.

**Jason N. Thompson, biomedical engineering '07**, joined the law firm Panitch Schwarze Belisario & Nadel LLP as a technical advisor.

**Matt Zuino, MS information systems '04**, was named Baptist Health's new executive vice president and chief operating officer.

## 10s

**Marni Berger, JD '10**, made partner at Post & Schell P.C.

**Peter D. Coyl, MS information science and technology '10**, was elected to the executive board of the Freedom to Read Foundation, a First Amendment rights organization.

**Meredith Dominguez, JD '18**, began work as a Philadelphia city solicitor with the Child Welfare Unit.

**Patti M. Donahue, MS sport management '15**, earned her PhD in sport management from Troy University.

**Garrett Field, JD '19**, and **Cassandra Saylor, JD '19**, joined Goldberg, Miller & Rubin's Philadelphia office as associates.

**Lawrence E. Fried, MD '11**, an attending at Children's Hospital of Philadelphia, started an MBA program at Wharton School of Business and received an HRSA grant to study transition of care as pediatric epilepsy patients age out.

**Melissa Green, JD '13**, was named the 2019 Top Lawyer by *Delaware Today*.

**Jesse T. Gromley, BS/MS engineering '10**, has been named the 2020 Delaware Valley Young Engineer of the Year.

# Year of the Nurse

## RITA K. ADENIRAN, DRNP '11

Improving Quality of Care through Opportunity and Inclusion

*Around the world, nurses and midwives are often the main or only providers of health care in their communities. The World Health Organization has named 2020 the Year of the Nurse and Midwife to honor the critical role they play in serving the public and to advocate for greater investment in the field. Here at Drexel, we're celebrating by showcasing the tremendous accomplishments of the College of Nursing and Health Professions and its alumni. — Louisa Wilson*

"Drexel helps you be the best version of yourself. It's where the sky is the limit," says Rita K. Adeniran, DrNP '11. For Adeniran, life experience inspired a passion for nursing, helping other nurses reach their full potential, and promoting the value of inclusion. Drexel's College of Nursing and Health Professions (CNHP) gave her the tools to be an important contributor to the field.

"I grew up in a village in Nigeria," says Adeniran. "I didn't fully understand what nurses do, but I thought of them as smart and professional. I dreamed of being one of them." She was adamant about following that dream despite facing considerable discrimination. "I was a confident and intelligent girl in a patriarchal society," she explains. "Sometimes books were not purchased for me because I was considered a waste of resources."

In nursing school, she encountered the same barriers. In Nigeria, nurses are groomed to be subordinate to physicians. "I loved nursing, but there were limitations for advancement," she says.

Moving to the United States was life changing. "Nursing in the U.S. is everything I wanted it to be," says Adeniran. "As a nurse, I could use my brain. I provide specialized care, advocate for patients, and leverage my critical thinking skills, working side by side with physicians and other members of the inter-professional care team for the best health outcomes."

She pursued advanced education in nursing knowing that it was the key to fulfilling her ambitions.

Still, she sometimes struggled to be seen as capable and accomplished as she was. "People saw my differences — my born country and my accent

— and equated those differences with lower intelligence," she says.

Drexel was different. Adeniran came to Drexel to earn her doctorate in nursing practice, an important step to reaching executive levels of health care administration, and she felt accepted right away. "Drexel really values diversity and empowered me by letting me know I belonged," she says.

Drexel's emphasis on experiential education stood out to Adeniran. As a student, she was also working full time as a Global Nurse Ambassador in the University of Pennsylvania's Health System. She says that everything she did at Drexel applied directly to her work as a Global Nurse Ambassador and to her development of inclusion programs for both American and internationally trained nurses. "When nurses of diverse backgrounds understand, include and listen to each other, and when they have opportunities for professional advancement, quality of care for patients improves," she says.

Today, Adeniran continues the work of opportunity and inclusion as assistant clinical professor of Drexel's CNHP and as president and CEO of Innovative and Inclusive Global Solutions, a Philadelphia-area consulting firm that helps health care organizations maximize the potential of their diverse staffs.

Reflecting upon Drexel's role in her life, Adeniran remarks, "Drexel equipped me with the knowledge, skills and attitudes necessary to advance in my profession. I could not be prouder to be a faculty member, and I give back regularly to advance academic excellence and expand research. I'm proud to be a Dragon!"



**Bojana Ilic, JD '18**, was named associate of Mergers & Acquisitions at PricewaterhouseCoopers.

**Adele C. Kilgus, BS business administration '12**, was promoted to managing associate at Drucker & Scaccetti.

**Matthew P. Miliana, JD '18**, passed the July 2019 Delaware Bar exam and is an associate at Young Conaway Stargatt & Taylor LLP.

**Nicholas Paolo Pileggi, BS finance '14**, joined Marshall Financial Group where he will serve as an associate financial planner.

**Zachary J. Perkins, JD '17**, joined Blank Rome's Real Estate group in Philadelphia as an associate.

**Michael Rock, BS accounting '15**, was promoted to managing associate at Drucker & Scaccetti.

**Michelle C. Streifthau-Livizos, JD '18**, joined Morris, Nichols, Arsht & Tunnell LLP in its Intellectual Property Litigation group as an attorney.

**Kelsey F. Trainor, JD '16**, was a guest on "BBC World News" to talk about the WNBA's news collective bargaining statement.

**Kory Ashley Trott, MPH '13**, was named the director of Virginia Tech's Research Integrity and Consultation program.

**Jennifer L. Waters, MS engineering management '11**, was promoted to office manager of Urban Engineers Philadelphia headquarters.

**Austin David Williams, MD '13**, published "Surgery Morning Report: Beyond the Pearls," a case-based review of surgery for medical students and residents.

*Correction: Due to an incorrect information provided through an information service, Jared V. Simons was incorrectly included in Friends We'll Miss in fall 19 issue. We regret the error.*

## OBITUARIES

## Friends We'll Miss

### 1930s

**Arthur J. Norris**, BS Business Administration '39  
**Margaret Martin Pratt**, Cert. Secretarial '33  
**Joel Shrager**, MD Medicine '38

### 1940s

**Harriett Boyer Adams**, Cert. Library Science '46  
**Anna May Shutts Austin**, BS Home Economics '43  
**Grace Marple Beilstein**, RN Nursing '46  
**M. Lorraine Blasser Betz**, BS Retail Management '46  
**Lewis H. Biben**, MD Medicine '49  
**Betty Reiss Collins**, BS Home Economics '41  
**John W. Crowe**, BS Civil Engineering '42  
**Ruth E. Diamond**, MLS Library Science '42  
**Donald Ewart**, BS Business Administration '47  
**Betty Currinder Fisch**, BS Secretarial '45  
**Helene Ackerman Folin**, RN Nursing '45  
**George L. Ford**, BS Chemical Engineering '49  
**Franklin M. Graver**, BS Business Administration '49  
**William F. Haskell**, Cert. Secretarial '43  
**Mary Elwell Howrie**, RN Nursing '43  
**Marguerite Flynn Hunt**, BS Business Teacher Education '43  
**Frances Ebersole Ingram**, BS Retail Management '42  
**Wilson Alderfer Landis**, BS Business Administration '47  
**Joseph Letwin**, BS Mechanical Engineering '48  
**Dorothy Boris Martindale**, BS Business Teacher Education '49  
**Frank L. Miller**, MD Medicine '41  
**William T. Minshall**, BS Civil Engineering '48  
**Thomas E. Nawalinski**, BS Electrical Engineering '48  
**Eleanor Gayman Oakley**, BS Home Economics '49  
**Shirley Goss Reese**, BS Business Teacher Education '47  
**William David Rummel**, MD Medicine '48  
**Betty Pendlebury Savage**, Cert. Secretarial '47

**Robert S. Seeherman**, MD Medicine '49  
**Joseph M. Seligman**, BS Electrical Engineering '48  
**Eleanor Friedrich Siegle**, Cert. Secretarial '49  
**Ruth Richter Smith**, BS Home Economics '48  
**James F. Stewart**, BS Electrical Engineering '47  
**Ursula Herpel Stewart**, Cert. Home Economics '49  
**John Storer**, MD Medicine '45  
**Hugh F. Sweeney**, Cert. Mechanical Engineering '43, BS '54  
**Ingeborg Syllm-Rapoport**, MD Medicine '42  
**Edna Wendorf Thornton**, RN Nursing '43  
**Jean Wolfe Tudman**, BS Home Economics '42  
**Jean Baker Van Scoik**, BS Home Economics '47  
**Esther Louise Walton**, RN Nursing '46  
**Robert V. Williams**, BS Retail Management '48  
**Jane Steiger Wingerd**, Cert. Secretarial '43

### 1950s

**Louis W. Adams**, BS Chemical Engineering '57  
**Arthur A. Allen**, BS Mechanical Engineering '59  
**Russell E. Allen**, BS Electrical Engineering '59  
**John A. Axi**, MLS Library Science '58  
**Charles D. Barbour**, BS Civil Engineering '59  
**Richard W. Barlow**, BS Business Administration '50  
**Lora Lehmann Baum**, Cert. Retail Management '54  
**Edward F. Berger**, Cert. Electrical Engineering '50  
**W. Donald Breder**, BS Electrical Engineering '51, MBA Business Administration '74  
**Nancy H. Bright**, MD Medicine '54  
**Kathryn Stackhouse Britton**, BS Home Economics '58  
**Herbert H. Brown**, BS Business Administration '54  
**Carl A. Brown**, BS Chemical Engineering '58  
**James N. Canfield**, BS Mechanical Engineering '53  
**Francis J. Cebula**, BS Chemical Engineering '56  
**Lillian Mariano Chance**, RN Nursing '55  
**Norma Anderson Christiansen**, BS Home Economics '52  
**Mark G. Cohen**, MD Medicine '52  
**Cyrus I. Cohen**, BS Business Administration '57  
**Asa L. Colson**, BS Business Administration '53  
**Geoffrey A. Corson**, MD Medicine '54  
**Barbara Ann Crothers-Lake**, MD Medicine '59  
**William A. Darby**, Cert. Machine Design '52  
**George J. Demos**, BS Electrical Engineering '51  
**David R. Donovan**, BS Commerce & Engineering '51  
**Rose Herbrick Duckworth**, RN Nursing '57  
**Joseph G. Dzwonczyk**, BS Electrical Engineering '53, MBA Business Administration '59  
**Barbara Elliot**, AS Medical Lab Tech '52  
**Frank J. Emig**, BS Civil Engineering '51  
**Ruth Endicott**, MD Medicine '53  
**E. David First**, BS Business Administration '50  
**Howard B. France**, MBA Business Administration '59  
**Samuel C. Franklin**, MS Electrical Engineering '59  
**Barbara Hamm Fugmann**, BS Home Economics '56  
**Bruce L. Gage**, BS Business Administration '50  
**Barbara Dickinson Galloway**, RN Nursing '56  
**Barry A. Galman**, BS Mechanical Engineering '55  
**Douglas B. Gandy**, BS Commerce & Engineering '59  
**Everett S. Gest**, BS Commerce & Engineering '57  
**Doris May Gilmore**, BS Home Economics '53  
**Josephine Ramonas Gudolonis**, MLS Library Science '59  
**M. Duffield Harsh**, BS Electrical Engineering '50  
**James W. Heaton**, BS Mechanical Engineering '56  
**Elizabeth Reese Hebeler**, BS Retail Management '57  
**Richard E. Heinbach**, BS Mechanical Engineering '59  
**Lester Helmus**, BS Chemical Engineering '52  
**Jeanette M. Higgins**, Cert. Library Science '56  
**Robert C. Hires**, BS Business Administration '53  
**Albert E. Hornsey**, BS Mechanical Engineering '52



## TRIBUTE

# Tribute to a Friend in China

*Xiaodong Han, MBA '03, was a dedicated regional network volunteer and elected director of the Drexel Alumni Board of Governors. — Lara Geragi*

Drexel lost an advocate in China when Xiaodong Han, MBA '03, passed away on Dec. 29. Han, who was 46, helped to build a more organized Drexel community in China. With fellow alumni Bobby Franklin '08 and Alex Sun '10, Han brought the Dragon community together for the annual Global Night of Networking in Shanghai every year. He continued to serve as a network leader for the city and recruited alumni volunteers in Shenzhen and Beijing to do the same.

"I got to know Xiaodong exactly 20 years ago when he came to Drexel for his MBA and I was just graduating," says longtime friend Han Wang '00. "He was instrumental in uniting the whole Drexel China community and organizing activities to promote Drexel and build closer relationships among alumni from all classes."

Friends recall how Han proudly sported his Drexel gear — from baseball caps to sweatshirts to T-shirts — and would happily meet with current co-op and study-abroad students in the region. He was always on the lookout for ways to forge partnerships with local universities, such as Shanghai Tech, to support alumni engagement.

Franklin recalls Han as positive, happy and fun to be around. "The Dragon community in China was devastated to hear about his sudden passing and we hope to honor him by continuing his legacy of a strong Drexel network in China that always remembers his inspiration," he says.

Han joined the Alumni Board of Governors in 2018, becoming the first elected director to be based in China. "Because of his location, many of us on the board never had the opportunity to meet Xiaodong in person," says Amish Desai '03, chair of the Alumni Board of Governors. "But his enthusiasm was always noticed, even through his participation in conference calls and Zoom meetings. We are grateful for his impact on several areas of the board."

In his professional life, Han was the managing partner at Taichi, a company he founded in 2007. Taichi helped foreign companies source products from China.

Han will be missed by many Dragons, friends and family members including his wife, Clara Huo '05, and his daughter, Carol. His family has kept the cause of death private.

"His English name is Happy," says Wang. "I think he wanted everyone to be happy everyday and he would do everything to make it a happier world."



**Thomas W. Hunter**, MD Medicine '52  
**Lillian Basmajian Jamgochian**, BS Home Economics '58  
**Raymond W. Johnston**, BS Mechanical Engineering '56  
**Robert W. Jones**, BS Business Administration '53  
**Dorothy Goldstein Kapenstein**, Cert. Library Science '53  
**William C. Kashatus**, MD Medicine '59

**Helen Holmes Keesey**, Cert. Home Economics '53  
**Donald J. Kieser**, BS Mechanical Engineering '57  
**Robert M. Koerner**, BS Civil Engineering '56, MS '63  
**Albert S. Kramer**, MD Medicine '50  
**Mary Lerch Lawrence**, RN Nursing '51

**Lawrence V. Lolli**, BS Mechanical Engineering '56  
**Jean Litzenberg Lowe**, BS Home Economics '51  
**Roger L. MacKoff**, BS Business Administration '59  
**Ronald G. Mann**, Cert. Mechanical Engineering '53  
**Donald C. Marowski**, BS Business Administration '59

**John N. Marshall**, BS Metallurgical Engineering '53  
**Joseph E. McCaffrey**, Cert. Civil Engineering '55, BS '58  
**Joyce Dissinger McCann**, RN Nursing '57  
**Nancy F. McCullough**, RN Nursing '54

**Saul Meyer**, BS Electrical Engineering '50  
**Marijayne Mitton**, BS Home Economics '50  
**Elliott E. Moore**, Cert. Chemical Engineering '53, BS '55  
**R. Jack Munyan**, MBA Business Administration '56  
**Daniel D. Musselman**, BS Business Administration '58

**Robert M. Myers**, MS Chemistry '58  
**Armand J. Nasuti**, Cert. Architecture '54  
**Viola Nazemetz**, RN Nursing '52  
**John B. Nolte**, Cert. Chemical Engineering '58

**John Paul Oberholtzer**, Cert. Mechanical Engineering '59  
**Albert T. Olenzak**, BS Chemical Engineering '55  
**Jere Wilson O'Neill**, BS Electrical Engineering '53

**Francis R. Owsiany**, Cert. Business Administration '53  
**Edward H. Perazzoli**, Cert. Mechanical Engineering '52

**Barry Pickell**, BS Business Administration '53  
**Lucy Barbara Piotrowska**, MD Medicine '53  
**Gabriel D. Planamento**, Cert. Mechanical Engineering '57, BS '59

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'79  
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