COVID POINTS TO FUTURE PANDEMICS

By Grace Lazzara

The fifth annual Richard V. Lee, MD, Lecture in Global Health, presented by noted COVID-19 expert Ashish K. Jha in November 2020, was a study in dichotomies.

Jha, dean of Brown University’s School of Public Health, leads national analysis of key COVID-19 issues and appears frequently in national news outlets. While predicting that the world is entering an “age of pandemics,” he also made a “bold and risky” prediction that the lifespan of the COVID-19 pandemic would be around 18 months.

And, although the popular Lee Lecture traditionally takes place in person, this year’s virtual event allowed more than 500 people from around the globe to hear Jha speak.

Jha’s prediction of an “age of pandemics” emerges from his work co-leading an international panel looking at the world’s response to the Ebola outbreak. “It became clear that a big pandemic was coming,” he said. So, in 2015, he created a course about preventing the next pandemic, which included asking a panel of experts if the world would be ready if a global pandemic occurred in five years.

“Everyone said no,” he recalled, noting that every factor that led to the COVID-19 pandemic will be around for a long time. For instance, novel viruses almost always spread from animals to humans, and humans are more frequently coming into contact with animals for a range of reasons, like climate change. As well, growing globalization drives the spread of local outbreaks around the world — a defining characteristic of a pandemic.

Jha quickly put his stake in the ground with an admittedly “bold and risky” forecast that COVID-19 will be an 18-month pandemic. Right now, he said, “We’re at the bottom of the fifth inning of a nine-inning game.” Placing the beginning of the pandemic as Jan. 1, 2020 — the day after China informed the World Health Organization of a new source of viral pneumonia of unknown cause in Wuhan — Jha believes the pandemic will be under reasonable control by, “optimistically,” June 2021.

November 2020 through January 2021 will be difficult: “Cold weather is driving [infection] because it’s hard for people to be outdoors anymore, and the virus spreads better when air is cold and dry,” he said. (Given the latest infection statistics, Jha’s calculation that the United States will be first country to see 100,000 cases in one day seems likely.)

By February and March, new technologies will lead to widespread testing, which will make an “enormous difference” in terms of how much protection exists in the community. Next, Jha said, is the emergency-use designation for possibly three or more vaccines. If 60%-70% of people decide to get a vaccine that is 70%-80% effective, with front-line and high-risk peo-

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LOOKING AHEAD: A NEW BEGINNING?

With the approval and initial distribution of two of the most promising vaccines as I write this (Dec. 2020), it appears the end of the COVID pandemic is in sight. By the end of 2021, it is hoped a large enough percentage of people in the United States will have received a safe and efficacious vaccine to create the conditions for so-called “herd immunity” in the US.

Depending on the situation in other countries, the new year should eventually see the resumption of more regular international travel and with it the accustomed levels of student and scholar mobility—indeed, possibly in larger numbers due to pent-up demand.

Under the new US administration, flows of international students to the US will once again increase. US students will again have the opportunity to study abroad and undertake internships or experiential learning trips to other countries. Faculty will be able to travel to international conferences and work in-person with collaborators overseas.

However, a simple return to the status quo ante in international education seems unlikely, and one of the challenges going forward will be to take on board the lessons learned during the pandemic.

One lesson of course is the unanticipated and powerful role of virtual communication and exchange as an alternative to travel. For students studying remotely in spring and fall 2020 it sometimes did not seem to matter whether they were on campus in the US or in their home country—online modalities leveled the playing field, as it were.

At UB we have been gratified by the generally good feedback both students and faculty have provided regarding their online teaching and learning experiences in the spring and fall semesters.

This fall, in particular, we have been concerned that our international students studying remotely in their own countries, especially those just starting at UB, might find the challenge too daunting. Fortunately, our students and their faculty have proven it can be done successfully. This is a further tribute to their own flexibility and willingness to adapt, and to the university’s resilience in making such a challenging transition.

Does the universal experience of “going online” mean university teaching will be much less “place-based” in the future? Whether it is practiced by international students enrolled at US institutions or by American students pursuing education abroad, will “virtual study abroad” catch on as an alternative to the real thing? How much staying power such COVID-inspired innovations have remains to be seen.

In setting forth policy recommendations for the incoming Biden administration, NAFSA: Association of International Educators has focused on two commendable priorities: (1) “Establish a welcoming environment for international students and scholars,” and (2) “Ensure the global competency of US college graduates through study abroad.”

Each of these broad recommendations is a pillar of international education and subsumes a host of specific changes to the policies and practices of the Trump administration that would facilitate the return of inbound and outbound mobility and exchange as we have long known it.

However, as important and necessary as these priorities are going forward, do they address the environment that COVID has transformed? What do they say about the role of virtual modalities for international education, or the future alternatives to international travel? In short, how will international education depart from past practices in a fundamental way?

Just as importantly, COVID and the consequent economic crisis has caused a severe budgetary contraction in higher education, limiting what institutions can do going forward—how will this impact the future internationalization of higher education? This circumstance, too, calls upon the creativity and resourcefulness of practitioners in moving the field forward in a new and challenging environment.

As NAFSA has noted, “The COVID-19 pandemic has obviously dramatically impacted student mobility, potentially making the 2020-21 academic year ‘the year without study abroad.’ Without additional financial and policy support, it could take years for study abroad to fully recover, leaving students with fewer international education opportunities, institutions with fewer international collaborations, and the country less prepared to tackle the global challenges or compete in the global marketplace.”

International educators, and educators generally, have rightly seen the pandemic of 2020 not as a temporary and ephemeral disruption of “the way we’ve always done things,” but rather as an opportunity to reflect on past practices and to reimagine the future. Will there be a new beginning of sorts for international education? I, for one, can’t wait to find out.

John J. Wood has served as Interim Vice Provost since September 1, 2018.
FROM WUHAN TO BUFFALO: PREDICTING THE PATH OF COVID

By Ellen Goldbaum

Professor Jennifer Surtees is a biochemist at UB. For more than two decades, her research has focused on genome stability and how mutations threaten that stability and sometimes lead to cancer.

But when the COVID-19 pandemic caused the temporary shutdown of UB research laboratories last March, Surtees, like many of her colleagues, couldn’t help but consider how her expertise might be applied to the novel coronavirus.

“When the pandemic started, there was a huge surge of interest research-wise into the pandemic and trying to understand how the virus moved around,” says Surtees, associate professor of biochemistry in the Jacobs School of Medicine and Biomedical Sciences at UB and director of UB’s Genome, Environment and Microbiome Community of Excellence.

“I had watched the early genome sequencing coming out of Seattle and California, and I thought we could totally do this here,” she says.

Surtees contacted UB’s Office of the Vice President for Research and Economic Development to ask if anyone at UB was doing genome sequencing of the SARS-COV2 virus isolated from Western New York patients. No one was.

So she contacted Teresa Quattrin, senior associate dean for research in the Jacobs School and Special Populations Core director in the Clinical and Translational Science Institute; Gale Burstein, Erie County health commissioner and a Jacobs School faculty member; and Carleen Pope, administrative coordinator of the Erie County Public Health Laboratory. All were enthusiastic about Surtees’ idea.

“It’s an interesting epidemiological question to get a sense of where the virus is circulating in our community,” Surtees says. “Are there versions that are more pathogenic or infectious? I wanted to see what we could learn about the accumulation of mutations in Western New York patients.”

Surtees explains that rapid genomic sequencing could be used alongside contact tracing to understand transmission of the virus through communities, with the goal of understanding how mutations affect clinical outcomes.

“The goal with this project is to get a sense of the evolution of the virus, and where it came from, to find out its genomic epidemiology, to try and understand the biology of this virus,” she says.

To do that, she worked with researchers in the sequencing core headed by Norma J. Nowak, executive director of UB’s New York State Center of Excellence in Bioinformatics and Life Sciences.

Donald Yergeau, associate director of genomic technologies in the Genomics and Bioinformatics Core, established a wet lab pipeline to convert the viral (SARS-CoV-2) RNA genomes derived from patients to DNA through reverse-transcription.

A phylogeny, or evolutionary tree, of SARS-CoV-2 genome sequences from around the world, with Erie County samples shown in red.

The DNA version of the entire genome for each sample was amplified in small fragments and subjected to next-generation sequencing.

Jonathan Bard, a senior bioinformatician, then established a bioinformatics pipeline to compare the sequenced Erie County genomes with the reference genome, the original virus that circulated in Wuhan, China, to identify any changes or mutations in the genome.

“These genome sequences were uploaded into the nextstrain.org platform to assess phylogeny, a kind of family tree for the viral strains in Erie County,” Surtees explains. “This predicts the path the virus may have taken to get from Wuhan to Buffalo.”

By July, Surtees had received Institutional Review Board approval to study the first batch of 50 de-identified (anonymous) samples isolated from nasal swabs from Western New York patients with COVID-19. They retrieved reliable sequence data from 32 of the samples. Now that that pipeline is in place, Surtees and her team can crank

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ple getting vaccinated first, by June “things could be measurably better.”

His timeline is specific to the U.S. and Europe. The timeline is longer for the rest of the world and largely depends on vaccine development. “Our ability to make billions of doses is an enormous challenge,” he said. Progress could also stall if the vaccine isn’t as effective, or if people decide not to take it. But, Jha pointed out, “Even if, by February, 10%-15% of people get vaccinated, we might get to a point where we start seeing a slowing of the virus.”

The development, manufacture, distribution and delivery of a vaccine or vaccines is a vital link in the chain of success, and Jha emphasizes the need to get it done right. “It’s very complicated, and there’s a lot of logistical and supply chain issues that are going to hamper us,” he explained.

Another key link is the public health field itself. While the whole world now understands the importance of the public health field, public health professionals also have to make sure to work with people outside of their discipline — education specialists, economists, sociologists and others. The world is not going to leave the ultimate solution to the pandemic just to public health experts, so “we need to broadly engage people outside our field,” he added.

Jha thinks the greatest failure of the U.S.’s federal response to the pandemic was the failure to take the virus seriously and communicate that effectively to the country. “If we had federal leadership in March that said this is a very serious thing. But we’re America. We can do hard things, and we can get going,” Jha said. “That would have made an enormous difference because I think Americans would have been able to mentally prepare.”

Jha ended his talk by recommending two ways to get through COVID-19 fatigue. First, he urged using technology like Facetime as a way of connecting and staying engaged with people. Secondly: “See each other. We shouldn’t be locked down. Even on cold days, put on some warm clothes, and go for a walk with a friend if you can.

“I do believe we will get through this; pandemics do come to an end, and this one will as well. While we might deal with this virus for a long time, lives will go back to a new version of normal. That might even be a better version, and it’s up to us to take care of each other.”

The Richard V. Lee Lectureship in Global Health is presented by the School of Public Health and Health Professions in memory of Lee, a former UB faculty member. “Dr. Lee was a giant in many areas and, certainly, in global public health,” Jha said. “It’s an honor to be part of anything associated with him.” ◊

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through new samples much more quickly.

“Over time, mutations accumulate; that’s just life,” Surtees says, “It happens in all organisms that replicate their genomes. Studying mutations provides us with an ‘evolutionary path.’

“It tells us which genomes are more closely related, the same way we can tell how closely people are related by looking at changes in their DNA sequences. The more mutations that two genomes have in common, the more closely related they are. Genomic sequencing also allows us to see how quickly the virus is mutating.”

“The question is to find out how mutations may affect infectivity of the virus, to find out which, if any, mutations are functional and which are just being carried along,” she continues.

In the first batch of samples from patients who were sick with COVID-19 in early April, the majority, approximately two thirds, of virus samples from Western New Yorkers seemed to be of European origin, primarily Italy, France and Spain. The remaining third appears to have come through China and Singapore.

Surtees says the data from the samples will prove more valuable if it is possible to gather more information, such as gender, age and travel history, from the patients from whom the samples were taken. Since the samples were deidentified, that will require permission from Erie County and from each individual patient, as well as approval by UB’s IRB.

Recently, the UB researchers received another 200 samples from the Erie County Public Health Laboratory, which they are running through the pipeline as well.

Surtees has received a small grant from the SUNY Research Foundation to pursue this work, as well as some funding from UB’s Genome, Environment and Microbiome Community of Excellence.

She also has begun collaborating on the COVID-19 research with Amy Jacobs, a virologist and research associate professor in the Department of Microbiology and Immunology in the Jacobs School, and with Omer Gokcumen, an evolutionary biologist and associate professor of biological sciences in the College of Arts and Sciences.

They have applied for external funding from the National Institute of Allergy and Infectious Disease of the National Institutes of Health. ◊

Ellen Goldbaum is a senior science editor for University Communications.

Grace Lazzara is special assistant to the dean for external affairs in SPHHP.

The Richard V. Lee Lectureship in Global Health is presented by the School of Public Health and Health Professions in memory of Lee, a former UB faculty member. “Dr. Lee was a giant in many areas and, certainly, in global public health,” Jha said. “It’s an honor to be part of anything associated with him.” ◊
LATVIAN FACULTY VISIT UB TO PREPARE NEW COMPUTER SCIENCE PROGRAM

By Nicole Capozziello

Eight faculty from the Republic of Latvia were among the many students at the University at Buffalo this spring to experience the transition to online learning in response to the global coronavirus pandemic.

Alla Anohina-Naumeca, Katrina Bolocko, Uldis Donins, Henrihs Gorskis, Jevgenijs (Eugene) Proskurins, Mara Pudane, Liga Zarina and Solvita Zarina arrived on campus in January of 2020, as the second group of participants in a new collaborative program that aims to train Latvian faculty members in U.S. teaching methods in computer science.

“This is the biggest effort on the part of Latvia in general—educational institutions, the commercial side, the private sector, and the government—to coalesce around IT, an issue that’s important for the future economic development of the country,” says Voldemars (Arvids) Innus, former UB vice president and chief information officer, and one of the initiators of the program.

“And it’s exciting that the University at Buffalo is a part of it.”

The students hail from Riga Technical University, Riga Stradinš University and University of Latvia. While all of the participants’ current careers center around IT, the group included professors, a dean, an actuary, and information systems staff, all united in their passion for IT education and industry, and expanding their skillsets for the benefit of Latvian society.

“A main goal of the program is to provide faculty members with the core knowledge and skills necessary to be able to teach in an interdisciplinary program,” says Jeffrey Errington, associate dean for undergraduate education in the School of Engineering and Applied Sciences, and program liaison. “We are tailoring the course load to each participant’s unique background and interests, drawing on the breadth of courses offered at UB.”

Participants take part in two, nonconsecutive semesters on campus, during which they gain first-hand exposure to the technical programs and pedagogy of a computer science program at a major U.S. research institution. After the first semester, the participants return to Latvia to integrate what they have learned, and then come back to UB to complete a second, more specialized semester.

The foundation of the first semester’s academic course load is comprised of SEAS courses: STEM Communications, Computing Education Research, and two upper level courses in CSE. Students also take an interdisciplinary course in the School of Management, intended to give them a broad understanding of business and a base of skills needed for roles in areas such as project management.

Celebrating interdisciplinary learning as much as possible, the students can take a wide variety of courses, including Method and Theory in Archeology, Social Network Analytics, and Intro to Cognitive Science.

“My favorite part of the program has been the chance to look at the study process from the student perspective but with the eyes of an instructor,” says Māra Pudane, a researcher and PhD student from Riga Technical University.

“The biggest takeaways for me were from the foundation of engineering education course, which helped me put together the puzzle of creating course content and successfully delivering it to the students,” says Uldis Donins, the head of Riga Stradinš University’s IT department’s Information Systems Unit. “The extensive use of group assignments and group projects in courses, including interdisciplinary courses like STEM communications, was also very interesting to me. With my experience and background in the software development industry, I can clearly see how students and their future employers are benefitting from evolving their soft skills.”

Participants not only had the opportunity to be immersed in an American university classroom—which they say is both more personalized and demands a greater frequency of smaller assignments—from the student side, but to take part in other opportunities for learning, entertainment and community. Before the transition to online learning in March, the Latvian scholars enjoyed taking part in on-campus events, including a therapy dog visit, and attending faculty candidate seminars.

“Among other good experiences that I have had or ob-
served at UB, I’ve been impressed with the availability of extensive library resources and services, the option to get help at the Center for Excellence in Writing, the numerous seminars and workshops, and the opportunities at the sports center,” says Liga Zarina, a researcher and assistant professor at the University of Latvia.

Latvia has a leader in IT since its time in the Soviet Union. However, IT everywhere has greatly changed over the last couple of decades, and so have the skills needed to adapt, succeed, and endure, as both a professional and an organization. According to Innus, who’s been involved in education in Latvia since the 90s, the skills that were highly sought after and marketable 30 years ago—namely centered on coding—have greatly expanded.

“Today it’s important to have a broad base of knowledge and skills, including the ability to work successfully within teams, interact with other teams and understand the big picture,” says Innus. He says that in general, education in the US has historically been more interdisciplinary than its European counterparts. A recognition of this reality led the Latvian government to search for an ideal collaborative partner with whom to build on their strengths.

Seeds for the program were planted in April of 2018, when a group from Riga, including the Vice Rector of Research from Riga Technical University, the Deans of Computer Science from both Riga Technical University and the University of Latvia, and a representative from the Latvian Ministry of Economics, all came to campus to discuss a potential partnership with the School of Engineering and Applied Sciences. They had reached out to Innus, who’s been stewarding a strong relationship between UB and the Riga Business School for decades, about the possibility of collaboratively creating an interdisciplinary program.

The Latvian government considered schools from around the world, and SEAS was ultimately selected as the best match. This program is just beginning and stakeholders in Latvia and in Buffalo are excited to grow it over the next few years.

“I am delighted that UB is continuing our three-decades-long collaboration with partners in Latvia to develop and deliver this exciting new interdisciplinary program in IT education. We take great pride in having been a founding partner in the development of the highly successful Riga Business School and welcome the opportunity to strengthen our engagement in Latvia through this mutually beneficial new initiative,” says John Wood, UB interim provost of international education.

“What’s really exciting is that this effort has now been broadened by the Latvian government into the Advanced Digital Excellence Strategy for the country,” says Innus. “What we’ve already achieved is the foundation for a broader strategy—one that may lead to a more long-term and deeper association between Riga and Buffalo.”

Nicole Capozziello is a graduate student in the School of Social Work.

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Tional CBOs and NGOs. The projects helped students understand the work of the organization, the socio-cultural context in which that work is done, and how that work relates to the SDG studied. Selected partner organizations had a defined need that could be met through projects during the program. Students worked in small groups to develop, complete and present the projects as part of their coursework.

Courses included featured presentations, readings, discussions and activities presented online. Much of the work was completed asynchronously, providing flexibility to fit students’ schedules. Discussions and activities started with general concepts and became more focused as the lens of study was applied. The final week of the program included presentation of projects, reflection and future application of learning.

Cynthia Tysick of UB Libraries was an instructor for the program. She focused on SDG #10, Reducing Inequalities. She led six students from across SUNY through the lens of advocacy for the disabled in West Africa. Students learned about ways the disabled communities in Ghana are stereotyped and marginalized in relation to healthcare, education, and social acceptance by Tysick’s global partner, Paul Kordieh of the National Resource Center for Children with Disabilities (Accra, Ghana).

Students in her course worked used what they learned in the storytelling course to create two deliverables for the NRCCD. The first was a video to be played at the Virtual Summit on Innovative Technologies for the Disabled Community that Kordieh and other NGO partners in Ghana are organizing in January 2021. The video is about breaking stereotypes as well as how important it is for those who are physical and neuro diverse to be taught how to communicate. The second deliverable used the power of theater/drama. Students created a three-act play with three actors that highlighted the unique skills and abilities of two people in their workplace. In mid-August 2020 they presented them to Kordieh and the other Ghanaian global partners. The NGOs explained that the students’ work would impact, for the positive, the lives of hundreds of children across Ghana.

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UB HOSTS VIRTUAL BLOOMSDAY

By Marcene Robinson

James Joyce lovers worldwide were invited to join UB for the 2020 James Joyce Collection Virtual Bloomsday Celebration, an evening to honor the famed writer’s landmark book *Ulysses*, considered by many to be the greatest novel of the 20th century.

Held on June 16 the same day the novel takes place in 1904—Bloomsday is an annual celebration across the globe that remembers the enigmatic story of a day in the life of *Ulysses* protagonist Leopold Bloom in Dublin, Ireland. Nearly 100 years after its publication in 1922, the novel continues to capture the hearts, minds and imaginations of readers.

Since its inception, Bloomsday has been celebrated in many ways, including walking tours in Dublin that retrace Bloom’s wanderings in the book, period costume pub crawls and theatrical performances. Amidst the social distancing restrictions of the COVID-19 pandemic, Bloomsday 2020 celebrations primarily took place virtually, and UB was leading the fun.

With the world’s largest and most comprehensive collection of James Joyce materials, the UB Poetry Collection hosted a distinctive Bloomsday event for 255 attendees online, featuring readings from Ireland’s Ambassador to the United States Daniel Mulhall, acclaimed Irish authors Edna O’Brien and Colm Tóibín, New York State Sen. Tim Kennedy and other notable guests.

Organized by the UB Poetry Collection and Office of Alumni Engagement, the program included remarks by President Satish K. Tripathi, Poetry Collection Curator James Maynard, Poetry Collection Assistant Curator Alison Fraser and Michael Groden, a Joyce scholar and distinguished university professor emeritus at the University of Western Ontario.

Featured guests include:

- Daniel Mulhall, Ireland’s 18th ambassador to the United States.
- Colm Tóibín, Irish novelist, playwright and poet, and author of *Brooklyn*.
- David Norris, Senator in Ireland, Joyce scholar and civil rights activist.
- Katherine McSharry, deputy director of the National Library of Ireland.
- Brigid Hughes, founding editor of literary journal and publisher *A Public Space*.
- Michael Silverblatt, host of “Bookworm,” a nationally syndicated program on KCRW.
- Simon O’Connor, director of the Museum of Literature Ireland.
- Vincent O’Neill, artistic director of Buffalo’s Irish Classical Theatre Company and director of theatre performance in the UB Department of Theatre and Dance.
- Anne Fogarty, director of the James Joyce Research Centre at University College Dublin.
- Margaret Kelleher, chair of Anglo-Irish literature and drama at University College Dublin.
- Molly Peacock, Buffalo-born poet and essayist.
- Gillian McCain, poet and author.

Joyce is regarded as one of the most influential writers of the 20th century and is among the most highly researched literary figures of all time.

UB is home to the largest collection of materials on Joyce in the world, including more than 10,000 pages of his working papers, notebooks and manuscripts, as well as photographs, portraits, memorabilia and private library, providing unmatched glimpses into the author’s writing process and literary relationships.

The James Joyce Collection—part of the UB Poetry Collection, the library of record for 20th- and 21st-century Anglophone poetry—is a destination for scholars around the world.

Marcene Robinson is associate director for community relations for University Communications.
SUNY COIL GLOBAL COMMONS OFFERS VIRTUAL GLOBAL LEARNING

In an initiative to provide virtual global learning during the pandemic, the Office of Global Affairs in SUNY System Administration collaborated with the campuses to develop the SUNY Global Commons.

This program afforded students throughout the system the opportunity to work virtually with community-based organizations (CBOs) and nongovernmental organizations (NGOs) based in Africa and the Middle East on projects addressing one of six selected UN Sustainable Development Goals (SDGs).

During this six-week, six-credit program in summer 2020, students and representatives of these organizations discussed their work, their cultural context and their needs.

Students then applied what they learned in their Intercultural Storytelling and Sustainable Development Goal focused courses to develop story-based materials for these organizations. These projects are available on a Project Showcase website.

CBOs and NGOs are doing important work with communities around the world, often operating with few resources. During the global pandemic, these resources are being stretched even further. The projects students completed with these organizations helped tell their story, from their perspective, and give them materials they can use in their work.

Students gained skills in storytelling, intercultural communications, and collaborative project development by telling the story of one of these partner organizations.

Coursework on intercultural storytelling and international perspectives on one of the six SDGs listed below provided concepts and knowledge that students apply to the project.

Registration for the program includes two courses—Intercultural Storytelling for Sustainable Development and one of the SDG-focused courses:

1. International Perspectives on Poverty
2. International Perspectives on Gender Equality
3. International Perspectives on Climate Action
4. International Perspectives on Sustainable Cities and Communities
5. International Perspectives on Reducing Inequalities
6. International Perspectives on Good Health and Well-being

At the beginning of the program, participants learned about the partner organizations and the final projects. Students worked on these projects with peers from other SUNY campuses along with contacts from our international partner organizations around the world.

All students took the Intercultural Storytelling course as well as the SDG-focused course of their choice. Both courses followed a similar approach, starting with foundational concepts and issues, followed by a deeper examination of these concepts and issues through a particular framework, such as a disciplinary lens of study or the medium in which a story is told.

Students explored storytelling through various mediums, for example, storytelling through written narrative, or storytelling through video. The medium allowed students to explore how storytelling is developed through that medium and will include international comparisons of storytelling traditions in that medium.

The SDG focused courses also started with foundational concepts of that goal. Students can then choose to explore the issues through a particular lens, which could be disciplinary, topical or geographical. For example, students could explore International Perspectives on Climate Action through an economic lens, or through the lens of Climate Action in South America.

The culmination of the courses was the application of knowledge and skills through the development of a storytelling project about an international organization’s work on the SDG, which was the focus of the program in weeks 4 & 5. The project-based learning component of the SUNY Global Commons was inspired by the Project Portal initiative developed by Mara Huber, associate dean for undergraduate research and experiential learning at UB.

Dr. Huber collaborated on the development of the Global Commons and facilitated connections to the interna-
UNDERRGRADUATE IMPACT ON GLOBAL HEALTH EQUITY RESEARCH

By Lisa Vahapoglu

Community of Excellence in Global Health Equity (CGHE) Co-Director Professor Katarzyna (Kasia) Kordas wants to set the record straight. “Many undergraduates think that their contributions to global health equity research are, by definition, insignificant,” Kordas states. “They are wrong.”

Kordas adds that this common misapprehension is understandable because frequently, undergraduates do things like prepare laboratory reagents, conduct literature searches, or data entry—activities that do not seem intrinsically interesting or impressive.

“There are certainly more complex aspects of generating research findings, including those that require advanced training and education,” Kordas notes.

“However, nothing in global health research—or really, any research field—is possible without the activities that build solid foundations for the generation of knowledge. These are created and built out, every day, by undergraduates.”

Many college students—who, as high school students, were advised to add meaningful volunteer activities to their resumes for college admission purposes—understand the value of contributing to faculty-led research. Participation in faculty-led research may start with basic tasks but as students master those skills, tasks can quickly turn more complex.

The relationships undergraduate students build with their research groups can bring camaraderie, be a source of advice and mentorship, lead to post-graduation jobs, and strengthen graduate school applications.

Dr. Emmanuel Frimpong Boamah, Co-Lead of CGHE’s Food Equity team and assistant professor in the Department of Urban and Regional Planning has worked with many undergraduate research assistants. He notes: “Engaging undergraduate students in global research is a translocal learning endeavor.

“Our students are increasingly aware that ‘thinking global and acting local’ is not a cliché; it should be our everyday lived and professional realities, which the COVID-19 pandemic makes abundantly clear. Global processes are increasingly affecting local communities, and the students we work with want answers to redefine their neighborhoods.”

However, CGHE Global Child team Co-Lead Dr. Nadine (Shaanta) Murshid notes that there is an inequity problem baked into undergraduate research opportunities. “Many students view contributing to research projects as just another hoop that they have to jump through,” Murshid notes.

However, only a subset of these students know from their parents or association with high socio-economic social networks, that contributing to faculty-led research clears a path forward. “While ‘connected,’ relatively-advanced students understand that doing research will enlarge professional opportunities and serve as the springboard to graduate school, first-generation and other non-traditional college students do not necessarily know this.”

“It’s important for all of us in the university community to practice inclusivity and advance equity in academic opportunities,” agrees Kordas. “And we—faculty, staff, and fellow students—can do this by making a point of discussing with first-generation students the importance of contributing to research projects while they are undergraduates.

“We should also recognize that many students cannot join research projects as volunteers because they need to work instead. We need to do a better job of advocating for and offering paid research opportunities for undergraduate students.”

Undergraduates join research projects in a variety of ways. They might hear about a project in a lecture or seminar, or be directly recruited by a professor or TA.

Alternatively, a student might take the initiative, sending an email or knocking on a faculty member’s door, directly expressing interest in the research area of the faculty member. Important in this process is first, the recognition that most faculty welcome these inquiries, but second, the willingness to continue trying.

Students should not get discouraged when a lab is full, but instead, try again the following semester or try contacting another research group or project that interests them.

Ms. Rosanna Valencia is one undergraduate student whose contributions to a research project helped to define both the project and her own interests.

A student of architecture and a member of the UB Louis Stokes Alliance for Minority Participation (LSAMP), Valencia worked with the Food Systems Planning and Healthy Communities Lab on Buffalo’s “Healthy Corner Store Initiative”, a collaborative partnership that grew out of a community report presented by the John R. Oishei Foundation’s Mobile Safety Net Team.

“Being a part of a research project as an undergraduate helps students incorporate real life problems into their studies, as well as form strong connections with faculty and professors” Valencia states.

At UB, the Experiential Learning Network (ELN) Project Portal provides an additional mechanism for undergraduates to identify both UB-based research opportunities as well as external research-based learning opportunities.

Dr. Mara Huber, associate dean for undergraduate research and experiential learning and ELN director has made a point of utilizing the Strategic Development Goals

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GHANA PROGRAM GRADUATES 22 FUTURE LEADERS

By Kevin Manne

Twenty-two new graduates are equipped with the leadership skills to take their careers to the next level after completing the Leadership Empowerment Academy Program (LEAP), a global collaboration between the University of Cape Coast and the University at Buffalo School of Management’s Center for Leadership and Organizational Effectiveness (CLOE).

The socially-distanced graduation ceremony took place at the University of Cape Coast in Ghana, Africa, on July 10. Representatives from UB attended virtually via video conference, including Paul Tesluk, dean of the UB School of Management, who shared graduation remarks.

“This pandemic has brought about many challenges, but it has also brought about optimism, ingenuity, empathy, love and support,” says Tesluk. “It has also highlighted the importance of leadership—and completing this program amid such challenges is something that will contribute to the growth and development of these graduates for the rest of their lives.”

LEAP is a yearlong program that teaches graduate students in the University of Cape Coast about analytical thinking, self-reflection, creative problem-solving and interpersonal relationships, giving them a competitive advantage in the job market. This was the program’s third cohort of students, with 70 graduates in total. The next program begins Aug. 7, 2021.

Throughout the year, students participate in four in-person sessions, typically with three in Ghana and one in Buffalo, but that session was made virtual this year due to the COVID-19 pandemic. Participants also have the opportunity to attend CLOE’s annual leadership conference.

LEAP is part of a growing portfolio of global programs available from the UB School of Management, including a slate of virtual global learning experiences scheduled for this fall.

Launched in fall 2013, CLOE strives to create more effective leaders and organizations. One of the center’s key objectives is to advance research and teaching in the area of leadership and its impact on organizational effectiveness. It also supports UB 2020’s goals of accelerating academic excellence, translating scholarship and developing leadership capabilities in UB students and business leaders.

The UB School of Management is recognized for its emphasis on real-world learning, community and economic impact, and the global perspective of its faculty, students and alumni. The school also has been ranked by Bloomberg Businessweek, Forbes and U.S. News & World Report for the quality of its programs and the return on investment it provides its graduates.

Kevin Manne is assistant director of communications for the School of Management.

UNDERGRADUATE RESEARCH

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of the United Nations to provide a global equity frame to undergraduate research opportunities posted on the Project Portal.

“We are working to list NGO partners by SDG so that students can browse both by country and also by the focus of their work,” Huber explains.

“The design of the Project Portal permits students to view opportunities with a particular global NGO, or to explore opportunities that respond to general SDGs or more precise sub-goals. Once students have identified their focus, they will clarify their intended project with ELN oversight, and find a faculty content expert to give feedback as their projects evolve.”

CGHE values undergraduate students and their important contributions to science. Through our established partnerships with faculty at UB, students in fields from political science to public health, and mathematics to biomedical sciences add value to and benefit from important research that aims to improve health equity for communities around the world.

Learn more about student contributions to global health equity research: explore student research posters as well as CGHE-funded student research projects. We welcome student engagement within our research teams: contact Programs Manager, Jessica Scates at jmscates@buffalo.edu, to learn how you can get involved.

Regardless of how global health equity research is pursued, Kordas wants students to know that their contributions are valued. “To a very great extent, the work that undergraduates perform at research universities like UB make it possible for research itself to exist—for knowledge to grow—and for findings and potential solutions to be disseminated to the world.”

Kordas concludes. “It’s important for faculty to voice their appreciation to undergraduates. But even more importantly, we should underscore to them that while they are gaining skills and pursuing an education, they can, in an concrete manner, contribute to the advancement of science and help create a more just and equitable world.”

Dr. Lisa Vahapoglu served as program coordinator for the Community for Global Health Equity.
GAINING NEW NURSING PERSPECTIVES IN GHANA

By Grace Gerass

In winter session 2020, two students and two faculty members from the School of Nursing traveled over 5,000 miles from Buffalo to Accra, the capital and largest city of Ghana.

Olivia Cox, RN, Adult-Gerontology DNP ’20 graduate, and Jessica Rachow-Pangrazio, RN, Adult Health Nursing DNP student, joined faculty members Carla Jungquist, PhD, ANP-BC, FAAN, and Mary Rose Guaghan, RN, MSN—all with individuals from the Jacobs School of Medicine and Biomedical Sciences and School of Management—on a multidisciplinary trip that taught them more about themselves and their profession.

On their first day, the group set up a clinic in the Agbogbloshie Market, a trading center situated on the banks of the Korle Lagoon, northwest of Accra’s Central Business District. In one day alone, the clinic served more than 200 patients with health screenings and primary care.

“Everyone was very accepting and wanted us there,” Rachow-Pangrazio says. “I thought there would be some hesitation because we were outsiders, but we were able to get stakeholder buy-in before we got there. Dr. Dorothy partners with a group that has affiliation with the locals, and they worked with village chiefs, churches and senior community members to alert the general population.”

The trip to Ghana was arranged by Dorothy Siaw-Asamoah, PhD, clinical assistant professor and faculty director of global programs for UB School of Management.

“I was also surprised at the methods they used to attract people to the market,” Rachow-Pangrazio adds. “They don’t have a lot of resources, so they used a big speaker to blast music in the area. That’s how people knew that we were doing a clinic.”

The next day, the group traveled to Tema, Ghana, for a tour of Narh-Bita Hospital, which is a private hospital in the area.

“Doctors are sparse in Ghana,” Cox says. “They don’t pay them very well, and health insurance doesn’t come in on time. Typically, doctors are foreign-educated and they don’t come back. Because of that, nurses play a much large role in their healthcare system.”

Cox explained that while the country has made a lot of strides in its 60-year existence as an independent country, laws and regulations aren’t always enforced. This has caused a large problem in health care, which is why it can take anywhere from one to three years to pay health care providers (and sometimes they don’t get paid at all).

On day three, they went back to the Agbogbloshie Market, where they served over 200 more patients.

“It’s great that nursing students participate in this trip because they were able to just jump in and handle things,” Cox says. “The School of Nursing has been hands on since day one. In clinicals, you’re given a couple of minutes to come up with a care plan and then you need to implement it. That’s exactly what we did in Ghana.”

“Everything you’ve learned is put to this person right now,” she adds. “You can’t always go by the books because you don’t have every resource in every setting. You need to use critical thinking in real time, and the way the school educates nurses is well-suited for that type of setting.”

The next day, they toured and provided primary care at Nsawam Government Hospital.

“The whole maternity ward was run by nurses—there was no doctor in sight,” Cox says. “In many large facilities, there are maybe six or seven doctors, which is not a lot. Doctors also take turns going out and seeing people in the community, so that also affects their availability. Nurses play a huge role in keeping that place going from labor to recovery and the NICU area. They do it all with no assistance.”

In Ghana, nurses are able to pursue a two-year or four-year education. All nursing programs are authorized by the state government, and when students complete their education, they’re placed in position. Two-year nurses wear green scrubs, and four-year nurses (who often hold supervisor positions) wear white scrubs.

On New Year’s Eve, the group visited the Nsawam Government Hospital School Clinic, where they cared for Arabic Immigrants without health care.

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The students had the opportunity to observe and participate in medical practices that were different from what they had experienced in the United States. They were able to see health care providers working to improve access to care and support those who were most in need. 

As the students performed health screenings and provided primary care for over 200 patients, they encountered children who had never seen a medical professional before. They observed doctors and nurses working to increase children’s access to hospital settings and vaccinations. They were amazed by the number of children seeking health care on their own, even just for wellness checks. Cox says, “We learned this was due to public health initiatives and a real generational shift. Many of the adults we saw had never seen a medical professional before, but the children empowered themselves to take advantage of these health care opportunities.”

After a busy week, the students were able to take a break to visit the Cape Coast for some rest and relaxation. Overall, Rachow-Pangrazio and Cox agreed the experience was both life-changing and eye-opening. “Learning someone else’s perspective is always important,” Rachow-Pangrazio says. “You can do this by seeing where they came from, why they think the way they do. I left feeling gratitude for humankind and grateful for our privileges.”

“I came away from this trip realizing we’re all the same,” Cox says. “We have the same struggles. We all want to educate children and give them a better life. We may be in different stations in life, but at the end of the day we’re all the same. If you can go on a trip like this and see yourself in those people, you should be able to bring it home and treat your patients with the same compassion.”

“Global experiences, such as our trip, allow students to learn outside the box of the university setting,” Jungquist says. “They learn to be flexible and to use their basic skills for assessment. They also gain the perspective of respect for those less fortunate. Experiences, such as this one, feed the students’ souls and spirits, as well as their minds.”

Trips like these are made possible with support from the Carol S. Brewer Global Health Fund.®

Grace Gerass is assistant director for communications and alumni engagement for the School of Nursing.
GLOBAL MEDICAL TEAM SHIFTS FOCUS TO COVID CRISIS IN THE US

By Ellen Goldbaum

The Global Surgical and Medical Support Group (GSMSG) sends U.S.-trained physicians to conflict zones to treat patients in places like Iraq and Syria, and provide medical care and training when local health care systems are overwhelmed.

This year, the organization, founded by a UB surgical resident who used to work in national security and counterterrorism, is also operating stateside, erecting mobile clinics to aid in fighting the COVID-19 pandemic.

The group has previously deployed within the continental U.S. in response to hurricanes that hit Florida, but expanded domestic operations earlier in 2020 when the COVID-19 pandemic began surging in the New York City region.

Aaron Epstein, a third-year surgical resident at UB who founded GSMSG in 2014 as a Georgetown University medical student, is now president. For his work with GSMSG, Epstein was honored in 2020 with the American College of Surgeons/Pfizer Resident Volunteerism Award.

When New York City’s health care system was overwhelmed with COVID-19 patients, Epstein was contacted by retired U.S. Army Col. Robert Mabry, who formerly ran elite U.S. Special Operations medical teams. The request was for help staffing the Ryan Larkin Field Hospital in northern Manhattan, a facility that was being directed by U.S. Army Colonel Missy Givens and U.S. Army Doctor of Nursing Kate Kemplin.

According to Epstein, many of the physicians and other medical professionals who volunteer with GSMSG have military or defense backgrounds. “It’s a natural connection,” he says.

“I put out the call to my entire listserv of a few thousand,” he says. “I think we had 150 slots to staff and we got about 800 responses. So we ended up having to turn people away for the New York City site, but there was still a nationwide need for staffing. Team members were still asking, ‘what can we do?’ So we instructed them to mobilize in their communities and start staffing.”

The group has sent resources, physicians and nurses to international locations, including the tiny Caribbean island of St. Martin, where GSMSG team members helped staff an improvised intensive care unit. Epstein noted that many hospitals on small island nations, as well as many countries in the developing world, lack facilities like ICUs that are standard in more industrialized nations.

When COVID-19 cases surged in the U.S. throughout the South and the West, the organization mobilized where the need was greatest. After GSMSG team members mobilized in New York City, they were contacted by HHI Corp., an engineering and construction company that is building mobile triage units during the pandemic.

“They saw what we did with staffing in New York and were interested in donating to us a mobile triage unit — a mini clinic that sits on seven tractor-trailers,” Epstein says.

“My first idea was we should put it in Buffalo, but by that time in mid-May the COVID-19 patient flow was well past the peak, so we reached out to our network to see where there was still pressing need. Folks in Miami were just starting to see the propagation of this wave of the pandemic, so we decided that would be a good place to establish a clinic.”

The mobile clinic was completed in the summer and shipped to Miami and integrated into the Jackson Healthcare System for processing COVID-19 patients for triage. GSMSG volunteers assisted in setting up and managing the clinic.

“Miami and the Jackson Healthcare System serve as a major health care hub for South Florida,” he says. “But the region is also a major point of entry for international medical and surgical patients arriving from Central and South America, as well as the Caribbean islands. The catchment area covered by this system is truly massive and allowed us to impact those far beyond the borders of this country.”

As a native Floridian, Epstein gets the usual question from Western New Yorkers, which is some variation of why on earth did he pick Buffalo for residency.
CHASING A CRAZY DREAM: AN INDONESIAN STARTUP CHANGES THE WORLD

By Matthew Biddle

S ara Dhewanto’s blood runs UB blue. Dhewanto, MBA ’02, first came to Buffalo from Indonesia in the early 1980s when her parents, Asmir and Irid Farida Agoes, UB Distinguished Alumna, attended UB for their master’s degrees in geography and American studies, respectively. Irid would later earn her doctorate in American studies from UB, and Dhewanto’s brother, Pasha Agoes, completed his bachelor’s in communication and is now working toward his PhD here.

So, when Dhewanto and her husband, Harrio, decided to earn their MBAs, it was only natural they selected the UB School of Management. In addition, there was the powerful precedent of Indonesian business leader Tanri Abeng, who came to UB to study Management in the 1960s and later founded the UB Alumni Association Chapter in Jakarta.

Soon after arriving in Buffalo, the Dhewantos found community with other Indonesian expats on campus and around Buffalo—relationships that became critical when they had their first baby during the program.

“We knew every Indonesian in Buffalo—the community is that close-knit,” she says. “Having that support system enabled us to complete the program with a newborn.”

Dhewanto credits the Career Resource Center with making the connection that led to her first post-MBA job and her MBA with providing the financial skills she needed to succeed there. After graduating in 2002, Dhewanto joined ExxonMobil as a financial analyst and was eventually promoted to manager of its Treasury Department in Indonesia. In that role, she was charged with minimizing risk and overseeing every ExxonMobil transaction in the country.

After a decade with the oil and gas corporation, however, Dhewanto realized something: “I thought, ‘It’s been a good 10 years, but is this what I want to do for another 20 years?’ No, I wanted to make a difference and do something for my country.”

Dhewanto joined the Millennium Challenge Account – Indonesia, an organization created as part of a $600 million grant from the U.S. government to reduce poverty and invest in community health, among other initiatives. As chief financial officer, Dhewanto worked to ensure every dollar was dispersed appropriately to beneficiaries across Indonesia, an archipelago of more than 17,000 islands.

“That was incredibly difficult because around three-quarters of Indonesians don’t have bank accounts, so you can’t just transfer the money,” she says. “We tried everything, and the only way we could actually get the money to people was to have my staff carry around loads of cash in luggage and distribute it in envelopes, one by one. How ridiculous is that?” She knew there had to be a better way—and quit her job to focus on creating it.

With her husband, Harrio, Dhewanto co-founded duithape, which enables clients to efficiently and safely make payments to unbanked individuals across the country. For example, for the charity Dompet Dhua-

fa, duithape helped distribute food to thousands of people in the form of grocery vouchers.

“We adapt our technology to those we serve,” Dhewanto explains. “All people need to do is go to one of the 2,700 stores that work with us and show their ID, and the store’s system can confirm they have an e-voucher. They can choose whatever food they want, when they need it, just a few hundred feet from where they live.”

Since launching four years ago, duithape has won the U.S. State Department’s 2019 GIST APEC Catalyst Pitch Competition and represented Asia at this year’s Seedstars World Competition. For the first three quarters of 2020, Dhewanto estimates the startup helped its clients reach more than 68,000 people in both large cities and remote areas throughout Indonesia, resulting in an economic impact of more than $1.2 million (about 17.9 billion Indonesian rupiah).

“We have a pretty crazy dream—changing the world. I know it’s cliché, but somebody has to be crazy enough to think they can do it for it to even be a possibility,” Dhewanto says. “The government and other companies have tried to do this for years, and they have all failed. But, if we do succeed, we actually get to impact people’s lives and make a difference. That’s something worth fighting for.” @
An analysis by a UB-led research team using two estimates of undocumented immigration suggests that, on average, this population reduced or had no effect on crime in 154 U.S. metropolitan areas studied, including places such as New York City, Chicago and Las Vegas.

“Even after estimating the undocumented immigrant population in U.S. metropolitan areas in two different ways, we found that undocumented immigrants had no significant effect on violent crime and actually had a significant negative effect on property crime,” says Robert Adelman, associate professor and chair of sociology. “This suggests that increases in the undocumented population are accompanied by decreases, on average, in property crime in U.S. metropolitan areas.”

The findings, published Oct. 3 in the Journal of Crime and Justice, are consistent with the results of a 2017 study of the relationship between immigration and crime by an Adelman-led team.

The earlier study used four decades of data on the documented foreign-born population in the U.S., which also showed, on average, no significant link between immigration patterns and increased crime in a sample of 200 U.S. metropolitan areas.

The new study does not, either explicitly or implicitly, address whether or not individual immigrants do or do not commit crimes, Adelman points out.

“People from all backgrounds commit crimes. However, the bulk of the evidence indicates that, at least at the metropolitan level, in places where there are more immigrants, there also seems to be more economic and cultural vitality.”

The findings of Adelman’s team about the relationship between immigration and crime are not isolated or unusual conclusions. The majority of similarly themed studies in recent decades also found no significant relationship between immigration and crime.

However, those earlier studies by other researchers rarely explored the potential impact of undocumented immigration on crime, largely because until recently there were no reliable estimates of the size of the undocumented population.

The just-published analysis of the relationship between immigration and crime, though, used recent data compiled by the Pew Research Center and the Migration Policy Institute. The cross-sectional data provide a one-time, one-year snapshot that is illuminating, but is a different approach than the 40 years of data used in the longitudinal 2017 study.

The strength of the current analysis is that it used two different estimates of undocumented immigrants — and the results are overwhelmingly similar regardless of which estimate is considered.

“Because these data [in the current study] are not longitudinal, it’s much more difficult to establish causality than when you have data that lets you look at an effect over time, but the findings are still useful because of the undocumented measures compared in the study,” says Adelman.

“There is a serious body of high-quality scholarship among those who study immigration and crime whose work in general simply does not find this overwhelming negative portrait of immigrants that has been painted in the current political climate.”

Adelman, an expert on patterns, trends and processes related to immigration who also serves as chair of UB’s Department of Sociology, has long-standing interests in social, racial and economic inequality, with a particular interest in outcomes associated with immigrants and their integration into American society.

“Studying the link between immigration and crime is important because it’s one of the factors that is misinterpreted in American society,” he says. “The full context of immigration is complex, with competing narratives and scholarship.”

And the answers are not always straightforward, Adelman notes. “Some groups benefit from immigration, while others may realize competition from immigration, but all of this has to be placed on the table so that we can debate the issues with facts, data and the scientific method,” he says.

He was joined on this study by co-authors Yulin Yang, a postdoctoral fellow at Cornell University; Lesley Williams Reid, University of Alabama professor of criminology; James Bachmeier, Temple University associate professor of sociology; and Mike Maciag, public policy journalist, Maciag Research. ☑️

Bert Gambini is a news content manager for University Communications.
PhD RESEARCH ON MIGRANT DOMESTIC WORKERS IN LEBANON

By Charlotte Hsu

The global pandemic has revealed how some of the world’s most vulnerable workers are also among the most essential.

One example: migrant domestic workers, who are hired to complete household labor such as cooking, cleaning, child care and grocery shopping, says Gabriella Nassif, a UB PhD candidate.

Through her dissertation research, Nassif will seek to partner with current and former migrant domestic workers in Lebanon to document and understand their experiences both during and prior to COVID-19.

The work these women do is often undervalued, leaving them marginalized, with low pay, minimal benefits and limited job security, Nassif says.

And yet, she adds, “the only thing keeping many families in Lebanon going during COVID-19 is these migrant domestic workers. Some have masks, and some don’t, but they’re still going out, whether it be to buy groceries, walk their employers’ dogs, or to fill prescriptions at the pharmacy. They’re in the streets while everyone else is safely tucked away in their homes. It’s shocking to see.”

Nassif — a student in the Department of Global Gender and Sexuality Studies, College of Arts and Sciences — has received a $20,000 Dissertation Fellowship from the American Association of University Women to complete her PhD research.

Her focus will be on women who have traveled from Ethiopia, Sri Lanka, Bangladesh, the Philippines and other countries to work in Lebanese households. She hopes to connect with these workers through community organizations that support and advocate for migrant domestic workers in Beirut, Lebanon’s capital and largest city.

Through interviews and other research, Nassif’s dissertation will examine such questions as how perceptions of gender and race shape the way communities in Lebanon view and value domestic labor. Even before COVID-19, the situation of Lebanon’s migrant domestic workers had been growing ever-more perilous as the nation entered its worst economic crisis in decades.

“You have just this super, super precarious and marginalized existence for these women in Lebanon, and I wanted to learn more about their lives and their relationship with Lebanese society,” Nassif says.

“For much of the Middle East, there’s a dearth of data on women and labor. Globally, research on migrant domestic workers tends to focus overwhelmingly on women who migrate from the Global South to what are traditionally known as developed countries, like in Europe and North America.”

Nassif, who grew up in Shorewood, Wisconsin, holds both U.S. and Lebanese citizenship. Her father is from Lebanon, and as a child she used to take summer trips there with her family.

Today, Nassif splits time between Buffalo and Beirut. In Lebanon, she has worked for the Arab Institute for Women at the Lebanese American University, and as an independent research consultant to various United Nations organizations, with a focus on gender in development and humanitarian programming.

Charlotte Hsu is a news content manager for University Communications.
REDUCING THE GLOBAL PROBLEM OF PLASTIC POLLUTION

By Cory Nealon

Plastic pollution is among the world’s most pressing environmental issues, threatening drinking water, wildlife, food supplies and more.

To address this multifaceted problem, University at Buffalo researchers are developing a novel set of tools that aim to reduce plastic waste and decrease the production of plastic.

This includes a robotic system that relies on machine learning and other technologies to autonomously improve its ability to sort plastics, as well as environmentally responsible solvents and new chemistries that breakdown plastics to make them easier to reuse.

“Not only is this work critically important to our planet, it also contributes to the country’s advanced manufacturing capabilities. It will help meet both consumer demand for and corporate commitments to incorporating recycled plastics into commercial products,” says Paschalis Alexandridis, UB Distinguished Professor in the Department of Chemical and Biological Engineering, who is leading the multidisciplinary effort.

The project is supported by a four-year, $2 million grant the U.S. National Science Foundation (NSF) awarded UB this fall.

It aims to improve the nation’s plastic recycling efforts, which have been muddled since China curtailed plastic waste importing in 2017 with its “National Sword” policy. It also includes public outreach strategies, such as recruiting students underrepresented in STEM (science, technology, engineering and math) fields.

Alexandridis, who also holds an appointment in UB’s Department of Civil, Structural and Environmental Engineering, is the grant’s principal investigator. He leads the research team which blends expertise from diverse fields, including computer science, physics, chemistry, chemical engineering, environmental engineering and economics.

Co-investigators from the UB School of Engineering and Applied Sciences include Karthik Dantu, associate professor in the Department of Computer Science and Engineering, and Marina Tsianou, associate professor in the Department of Chemical and Biological Engineering. Additional co-investigators from the Department of Chemistry in the UB College of Arts and Sciences include Javid Rzayev, professor and associate chair, and Luis Velarde, associate professor.

Additional researchers on the project include: John D. Atkinson, associate professor in the Department of Civil, Structural and Environmental Engineering; Amit Goyal, director of UB’s RENEW (Research and Education in eEnergy, Environment and Water) Institute and a SUNY Empire Innovation Professor in chemical and biological engineering; Michael A. Shelly, environmental economist and research assistant professor in the RENEW Institute; and Thomas G. Thundat, SUNY Empire Innovation Professor in the Department of Chemical and Biological Engineering and the RENEW Institute.

The robotic system under development will combine novel sensor technology that can register the molecular signature of each piece of plastic, and machine learning that, on the basis of these molecular signatures, identifies in real-time the specific type of each piece of plastic.

By integrating this system with existing technologies, researchers aim to create an advanced mixed waste sorting process that also captures and reuses other materials often found in plastic recycling streams, such as contaminants and non-polymeric waste, that make recycling difficult and expensive.

In addition to the robotic system, the research team is investigating how to use environmentally responsible solvents to recover desirable plastics from mixed plastic streams. The solvents would separate the plastic from additives or impurities, and render it suitable for reuse in new products.

The approach, known as chemical recycling, has low greenhouse gas emissions compared to other recycling methods.

The research team also will develop new chemical ways for the controlled breakdown of plastic molecules into valuable raw materials. For example, there is a group of plastics called polyolefins that are used in food packaging, toys and other products. Recovered and purified polyolefins could be upcycled to produce waxes used in adhesives, coatings and printing inks. They can also serve as building blocks for additive manufacturing technologies.

The work is important, Alexandridis says, because plastics are incredibly durable and accumulating in landfills and the environment, where they contaminate waterways and animal life. Recapturing value from end-of-life plastic materials can help push the U.S. and other nations toward the long-term goal of creating a circular economy for plastics, he says.

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GLOBAL CONSORTIUM ADDRESSES DESTRUCTION OF CORAL

An international consortium of scientists has created the first-ever common framework for increasing comparability of research findings on coral bleaching.

“Globally, coral reefs are threatened by increasing temperatures, leading to coral bleaching and often death,” says Mary Alice Coffroth, research professor of geology in the UB College of Arts and Sciences, and a co-author of a paper on guidelines published online on Nov. 21 in the journal Ecological Applications.

Andréa Grottoli, a professor of earth sciences at The Ohio State University, was lead author.

Coral bleaching is a significant problem for the world’s ocean ecosystems: When coral becomes bleached, it loses the algae that live inside it, turning it white. Coral can survive a bleaching event, but being bleached puts corals at higher risk for disease and death. And that can be very damaging: Coral protects coastlines from erosion, offers a boost to tourism in coastal regions, and is an essential habitat to more than 25% of the world’s marine species.

Bleaching events have been happening with greater frequency and in greater numbers as the world’s atmosphere and oceans have warmed because of climate change.

The common framework covers a broad range of variables that scientists generally monitor in their experiments, including temperature, water flow, light and others. It does not dictate what levels of each should be present during an experiment into the causes of coral bleaching; rather, it offers a common framework for increasing comparability of reported variables.

“Following common guidelines will increase researchers’ ability to determine how corals may or may not survive bleaching in the coming decades, providing guidance in coral reef management and conservation efforts,” Coffroth explains.

“Researchers are actively pursuing experiments to understand coral bleaching and how corals may cope with this stress,” she says. “However, experimental approaches vary greatly, making inter-study comparisons difficult. This paper outlines recommendations for reporting experimental protocols so that coral bleaching experiments can be compared across species and locations, increasing the information gleaned from them and avoiding repeating experiments unnecessarily.”

“Reefs are in crisis,” Grottoli says. “And as scientists, we have a responsibility to do our jobs as quickly, cost-effectively, professionally and as well as we can. The proposed common framework is one mechanism for enhancing that.”

With Grottoli leading the effort, 27 scientists from the Coral Bleaching Research Coordination Network, representing 21 institutions around the world, worked together as part of a workshop at Ohio State in May 2019 to build the common framework.

Coffroth was part of this team, contributing scientific expertise and helping to write the paper.

“As a researcher studying the coral-algal symbiosis that breaks down during coral bleaching, I contributed my expertise on the microscopic algal endosymbionts (Symbiodiniaceae) in developing the guidelines for common measurements and response variables to be used in reporting results of coral bleaching experiments,” Coffroth says. “I also contributed to the overall development of the guidelines for reporting experimental conditions and results.”

Researchers are still trying to understand why some coral species seem to be more vulnerable to bleaching than others, Grottoli says, and setting up experiments with consistency will help the science move forward more quickly and economically. This work was funded by the National Science Foundation.

Equally important, he adds, is the outreach to students and the public. The researchers are designing a broad range of activities to recruit a diverse group of undergraduate students from local two- and four-year colleges who can participate in research and share knowledge with local communities. The idea of the project stemmed from ongoing multidisciplinary efforts to improve plastics recycling led by RENEW, such as the institute’s new state-funded effort to improve plastics recycling. Additional outreach on the importance of recycling is planned for middle and high school students, and the public.

The new NSF-funded project involves contributions from external partners, including Honeywell and Modern Corp. Funding comes from NSF’s Emerging Frontiers in Research and Innovation (EFRI) program.
By Charlotte Hsu

Chemicals that haven’t been manufactured in the U.S. for years or even decades are still turning up in the bodies of migratory terns in the Great Lakes region, a new study finds.

The research focused on three types of compounds: polybrominated diphenyl ethers (PBDEs), polychlorinated biphenyls (PCBs), and the breakdown products, called metabolites, of dichlorodiphenyltrichloroethane (DDT).

Scientists discovered all three kinds of chemicals in the organs of over two dozen common terns in breeding grounds along the Niagara River and the shore of Lake Erie. The pollutants were found at various life stages, in chicks, in juveniles and in adults.

Researchers also detected the compounds in emerald shiners, a small fish that is the terns’ primary food source in the area.

The research was published online on Sept. 3, 2020 in Environment International, and appears in the journal’s November issue. Authors included University at Buffalo chemists Diana Aga and Steven Travis, and SUNY Buffalo State biologist Alicia Pérez-Fuentetaja.

Sales of PBDEs, a class of flame retardants used in car seats, carpet padding, mattresses and many other household products, were phased out in the U.S. in 2013. Production of PCBs, once widely used as a coolant or insulating fluid in electrical transformers and capacitators, ended in the country in 1979.

And use of DDT, an insecticide, has been prohibited in the U.S. for almost half a century, since 1972. The metabolite of DDT that the team found in the birds and fish is called dichlorodiphenyl dichloroethylene (DDE).

“These chemicals are still there. They don’t just go away. With PCBs, for example, they haven’t been produced in the U.S. for a long time now, but you can still find them in the environment, in sediments and in water. They don’t degrade for many years. The fish eat organisms that accumulate them, and then the birds eat the fish,” says Aga, PhD, Henry M. Woodburn Professor of Chemistry in the University at Buffalo College of Arts and Sciences.

“The common tern is a threatened species in New York State, and their numbers have not increased much despite state efforts to provide nesting sites and surveillance. This study shows how wildlife is affected by human pollution of aquatic systems and how the chemicals we produce can have a multigenerational effect, being passed from mothers to chicks,” says Pérez-Fuentetaja, PhD, Professor of Biology at SUNY Buffalo State and Research Scientist at the Great Lakes Center at SUNY Buffalo State.

The levels of PCBs and PBDEs in the birds were high enough to potentially harm the birds’ health and affect population recovery, the authors write in their paper.

“The common tern is a threatened species in New York State, and their numbers have not increased much despite state efforts to provide nesting sites and surveillance. This study shows how wildlife is affected by human pollution of aquatic systems and how the chemicals we produce can have a multigenerational effect, being passed from mothers to chicks,” says Pérez-Fuentetaja, PhD, Professor of Biology at SUNY Buffalo State and Research Scientist at the Great Lakes Center at SUNY Buffalo State.

The findings illustrate how household and industrial chemicals have become ubiquitous in the environment, where they can endure for many years, posing risks to wildlife.

In the case of terns, the threat begins from the earliest moments of their lives, even before they hatch, says Travis, the paper’s first author, who successfully defended his PhD thesis at UB this fall.

He notes that the smallest chicks the team studied harbored higher concentrations of the chemicals than older birds and adults, indicating that the compounds are being passed from parent to progeny. To test this hypothesis, Travis has begun work on a study examining the levels of pollutants in the eggs of common terns and other wild aquatic birds.

“We see these really high concentrations in the smaller chicks, which indicates that there is maternal transfer of contaminants into the eggs,” he says.

“These substances interfere with the reproductive system and are endocrine disruptors,” Pérez-Fuentetaja says.

“They tax the terns’ livers as they have to try and get rid of these pollutants, but the bioaccumulative nature of PCBs, PBDEs and DDEs means that the birds will not be able to fully detoxify themselves, and that they will pass part of their body-load to the next generation. These substances can alter development and neurological processes and could cause deformities, cancers and impaired behavior.”

The research highlights the risks associated with legacy contaminants, as well as the urgency of protecting the environment as new issues surrounding other classes of persistent chemicals, such as per- and polyfluoroalkyl substances (PFAS), emerge. Aga says that once persistent pollutants become pervasive in water and soil, it’s very difficult to get rid of them.

The new study shows how long-banned chemicals continue to jeopardize the health of Great Lakes ecosystems.

“We can’t say that all the chemicals we’re seeing in the
INTERNATIONALLY ACCLAIMED CLIMATE SCIENTIST JOINS UB

By Charlotte Hsu

Sophie Nowicki, an internationally recognized expert on global climate change, ice sheet modeling and sea level rise, has joined the UB faculty.

Nowicki is Empire Innovation Professor in the Department of Geology, College of Arts and Sciences, and in the RENEW Institute, an interdisciplinary institute dedicated to research and education on globally pressing problems in energy, environment and water.

Nowicki’s work focuses on the Greenland and Antarctic ice sheets, their connections to the Earth’s climate system and their impact on sea level.

Prior to joining UB, Nowicki served as a research scientist and deputy chief for the Cryospheric Sciences Laboratory (Code 615) at NASA’s Goddard Space Flight Center, where her research included co-leading the Ice Sheet Model Intercomparison Project (ISMIP6).

This collaborative effort recently brought together more than 60 ice, ocean and atmosphere scientists from three dozen international institutions to generate new estimates—released in 2020—of the impact that Earth’s melting ice sheets could have on global sea levels by 2100.

“We are delighted that Sophie Nowicki, an internationally recognized expert with an exemplary record of research and service, has joined the UB RENEW Institute and the Department of Geology,” Robin Schulze, dean of the College of Arts and Sciences, and Amit Goyal, RENEW Institute director, said in a joint statement.

“She will boost UB’s position as a premier public research university. Her international intellectual leadership in climate change modeling will help bring together transdisciplinary and interdisciplinary faculty across UB and further development of large grant proposals in this area.”

Nowicki’s work is aligned with the Climate Change and Socioeconomic Impacts focus area of the RENEW Institute. In the Department of Geology, she joins a climate change research group comprised of leading ice scientists who are engaged in international collaborations devoted to understanding the past, present and future of the Greenland and Antarctic ice sheets — and ultimately, sea level rise — through paleoclimate field work, aerial and satellite monitoring of ice sheets, and state-of-the-art computational modeling.

Nowicki’s extensive expertise and partnerships will enhance these efforts. She has been instrumental in organizing and leading large science projects, garnering $7.5 million in research funds since 2010.

While at NASA Goddard, she was a science team member for Operation IceBridge and co-lead for SeaRISE (Sea-level Response to Ice Sheet Evolution), an international effort that investigated the sensitivity of the Greenland and Antarctic ice sheets to external environmental forcings. She led many projects, such as efforts to couple ice sheet models to the two Goddard climate models (i.e., GEOS-5 and ModelE), and an effort that investigated the feedbacks, processes and impacts of contemporary changes in the Arctic using satellite observations, ice sheet and climate models.

Additionally, Nowicki has served as a member of the NASA Sea Level Change Team; a member of the SEARCH Land Ice Action Team; an executive committee member for the Ice Sheet Mass Balance Intercomparison Exercise phase 2; a member of the Community Earth System Model Scientific Steering Committee; division head for ice sheets for the International Association of Cryospheric Sciences; and a member of the World Climate Research Programme Sea Level Change and Coastal Impacts Grand Challenge. She was invited to be a lead author on the Intergovernmental Panel on Climate Change’s sixth Assessment Report’s chapter on ocean, cryosphere and sea level change.

Nowicki’s favorite projects are community efforts such as SeaRISE and ISMIP6. She has received numerous awards, including recognition as the NASA Cryospheric Sciences Most Valuable Player, and awards for outstanding publications and scientific achievements. She says she is most proud of receiving the Goddard Honor Award for Mentoring, which recognized not only her work with postdoctoral researchers and early-career scientists, but also the amazing work that they did.

Nowicki holds a PhD in theoretical glaciology from University College London, and an MSc in remote sensing and image processing, and a bachelor’s degree in geophysics from the University of Edinburgh. ❄️
In honor of the late Robert Genco, a longtime professor and prolific researcher in the School of Dental Medicine, multinational oral health care company Sunstar Group has donated $1 million to establish a new endowed fund in Genco’s name.

It’s a fitting tribute to the 40-plus-year partnership Genco spearheaded for UB with the Japan-based Sunstar, which has led to numerous pioneering advancements in periodontal health.

“Dr. Genco guided Sunstar’s research and development at UB and we sincerely appreciated his long-term support, friendship and trust. He holds a special place in our hearts,” says Mayumi Kaneda, Sunstar Foundation director.

“He was a visionary with science and technology, and our chairman, my father Hiroo Kaneda, is a visionary with business and society — the two had a special bond. Together with UB, we hope this funding will help the dental profession better and more widely interact with the medical industry and bioinformatics for the improvement of global public health.”

“I was so excited when I heard the news and all I could think of was how proud Bob would be — he always liked to recognize people for their hard work,” says Genco’s widow, Frances. “I hope when people hear about this fund, they’ll honor what Bob stood for and will uphold his attitude not just about science, but about helping people. I’m very thankful to the Sunstar team, as I know they loved Bob and respected his work and his life, and they all pitched in to make this happen.”

The Sunstar Robert J. Genco Endowed Chair in Oral Biology will be a new faculty position that recognizes and supports faculty who are not only gifted teachers, but also scholars, researchers and applied learning innovators, and who facilitate medical and dental collaboration in oral biology and periodontal medicine in the School of Dental Medicine. The holder of the chair may also serve as a liaison between UB and Sunstar to continue Genco’s research legacy.

The endowed fund established by Sunstar also is part of the innovative SUNY Scholars of Excellence program, a giving incentive program funded by SUNY that supplements philanthropic investments to create endowed chairs and professorships, and enable SUNY institutions to fill these roles more expeditiously.

A SUNY Distinguished Professor of Oral Biology, Periodontics and Microbiology, Genco passed away in March 2019. He also held previous roles as UB Microbiome Center director, Department of Oral Biology chair, and UB Office of Science, Technology Transfer and Economic Outreach vice provost. The Journal of Dental Research described him as the “father of oral science.”

“I had the honor of being a student and colleague of Bob’s for 40 years,” says Joseph J. Zambon, SUNY Distinguished Teaching Professor and dean of the School of Dental Medicine.

“I also had the good fortune to work with many outstanding young researchers from Sunstar early in my career. The more than 40-year collaboration between Sunstar and UB culminating in the Sunstar Robert J. Genco Endowed Chair in Oral Biology is a fitting tribute to the person who shared Chairman Kaneda’s vision and made it a reality.”

Rodney Grabowski, vice president for university advancement, notes that endowed faculty positions “are critical to UB’s goal of becoming a top 25 public university, so we are deeply thankful to Sunstar for their generous investment in our institutional mission.”

“Our faculty research and scholarship are among the hallmarks of UB, and this is a gift that directly celebrates those attributes,” Grabowski says.

The school anticipates that the Sunstar Robert J. Genco Endowed Chair will be appointed within the next year.
TRAUMA-INFORMED CARE

PARTNERING ON TRAUMA-INFORMED CARE IN SLOVENIA

Trauma-Informed Care (TIC) is an organizational culture change process that asks agencies, schools, hospitals and businesses to both acknowledge the high prevalence of trauma and inform the way they do their work to avoid the potential of re-traumatizing both individuals and the workforce.

In January 2019, the Institute on Trauma and Trauma-Informed Care (ITTIC) published its Trauma-Informed Organizational Change Manual, which operationalizes planning, implementing and sustaining trauma-informed culture change.

The manual was written by UB School of Social Work Clinical Full Professor and Co-Director of ITTIC, Susan A. Green, and ITTIC Project Manager/Trainer, Samantha P. Koury.

While TIC has been gaining traction in the United States and many countries over the last decade, two organizational leaders in Ljubljana recognized the gap in trauma-informed education and practice in Slovenia—observing a lack of awareness regarding the consequences of traumatic experiences and application of this knowledge in day-to-day practice.

In May 2020, Mitja Svete, the president of Združenje za MOC (Reclaim the Power Association), and Nina Kocar, director of Luna vila, inštitut za zaščito otrok (Moon Fairy, Institute for Child Protection), reached out to Green after seeing the Trauma-Informed Organizational Change Manual available for download on ITTIC’s website in hopes of possible collaboration. Both organizations are non-profits working in the field of sexual violence and child sexual abuse.

“Our principle idea and desire is to introduce the concept and practice of Trauma-Informed Care and trauma-informed organizations in Slovenia, as well as broader in the European Union,” Svete and Koar note.

“Thus, we thought of applying the concepts of Trauma-Informed Care in three steps: 1) in our own organizations, 2) in selected organizations in Slovenia through a European Union (EU)-funded project, and 3) in selected organizations in the European Union through an EU-funded project.”

As part of their first steps to achieving their goals, Svete and Koar began personalized consultation and coaching with ITTIC as “Trauma-Informed Champions” in July 2020—meaning they would learn the framework and how to apply trauma-informed values and practices to their own organizations, and then be in the position to bring the information to others.

Both Champions meet virtually with Koury for 1.5 hours every 1-2 months to discuss and apply the trauma-informed organizational model to their own work. The Champions also complete small assignments consisting of reading from ITTIC’s Trauma-Informed Organizational Change Manual and written reflection in-between consults and have access to an online website hub called Samepage with various additional resources and materials.

Združenje za MOC’s mission is to provide comprehensive psychosocial assistance and support to those who have experienced sexual violence on their path to recovery. Lunina vila treats and prevents trauma in children resulting from sexual abuse and physical/emotional abuse and/or neglect.

“It’s been an incredible experience working with both of them so far,” says Koury. “To see the nuances of how what we know about trauma-informed culture change is operationalized in another country, and to be even a small part of informing what that implementation change looks like in their organizations and eventually at a much broader level has truly been an honor.”

After completing their own consultation and coaching in early 2021, the Champions plan to apply for EU funds to promote trauma-informed practices in other organizations in both Slovenia and in partner countries. ⚫
ELI RUCKENSTEIN, DISTINGUISHED CHEMICAL ENGINEER FROM ROMANIA

Eli Ruckenstein, a UB faculty member for nearly 50 years who was awarded the U.S. National Medal of Science for his groundbreaking research in chemical engineering and other fields, passed away Sept. 30, 2020. He was 95.

Lauded for his prolific and imaginative research, Ruckenstein, SUNY Distinguished Professor Emeritus, was one of the most influential chemical engineers of his era, as well as one of UB’s most renowned faculty members.

“Dr. Ruckenstein was a world-renowned scientist whose achievements revolutionized chemical engineering and had a profound impact on a wide range of other fields — from applied mathematics and computing to cancer research,” said President Satish K. Tripathi.

“He was held in the highest regard here at UB, and globally, for his limitless intellectual energy, innovation and creativity, as well as his astonishing breadth of scientific knowledge. Without question, he distinguished himself as one of the most eminent faculty members in the history of our institution, and one of the most eminent scientists the world has ever known.”

Kemper Lewis, dean of the School of Engineering and Applied Sciences, said Ruckenstein represented the very best of UB and epitomized the university’s mission of academic excellence and making a positive impact on the world.

“Put simply, Eli Ruckenstein exemplified what it means to be an engineer. He was inquisitive, thought-provoking and tireless in his pursuit of knowledge, always with the goal of pushing scientific discovery into new and boundary directions,” Lewis said. “His legacy and impact are globally renowned, and he will be dearly missed.”

Born in 1925 in Botosani, a small agricultural town in northern Romania, Ruckenstein started school at age 7, but at 14 was expelled due to anti-Semitic laws. The Jewish community responded by organizing a private high school where he excelled. In his last two years there, although he was compelled to perform forced labor six days a week, 12 hours a day, he managed to study independently, developing a love of mathematics and a penchant for self-teaching, which continued throughout his life.

His outstanding test scores earned him a spot in the chemical engineering program at the prestigious Polytechnic Institute in Bucharest, where he matriculated in 1944. There, he continued self-teaching, relying more on his own intellectual curiosity and the library than on formal classes. This approach, combined with an extraordinary memory, fostered a diverse and encyclopedic knowledge of the literature in chemical engineering and related fields, which became legendary among students and colleagues.

In 1948, he married Velina Rothstein, a chemist. Ruckenstein called his marriage “the best thing I have ever done.” The couple was married for more than seven decades. After completing his doctoral degree in 1949 with distinction, he was hired as an assistant professor in the Department of Chemical Engineering at the Polytechnic Institute, a remarkable achievement given that he was not a member of the Communist Party. However, earning a PhD at the time required being subjected toindoctrination and passing an exam on Marxism-Leninism. As a result, he defended his PhD thesis in 1966, after that requirement was lifted and he had already authored more than 100 scientific papers.

He won numerous important scientific awards in Romania, including the Prize of the Ministry of Education for research on turbulent heat and mass transfer (1958); the Prize of the Ministry of Education for education (1961); the “Gheorghe Spacu” Prize for Research in the Surface Phenomena Field awarded by the Romanian Academy (1964); and The Prize of the Ministry of Education for research in distillation (1964). In 1993, he was awarded a “Doctor Honoris Causa” by the Polytechnic Institute of Bucharest.

Before 1958, Romanian scientists could not publish in most Western journals. After this restriction was lifted, and the broader scientific community became aware of Ruckenstein’s seminal contributions, he was invited to spend six weeks at University College and Imperial College in London. He was later invited to visit Clarkson University in Potsdam, New York, with support from the U.S. National Science Foundation.

Ruckenstein then took a position as a tenured full professor at the University of Delaware, where he stayed until 1973, greatly expanding his research interests as he gained access to a wealth of scientific literature and resources that had been unavailable to him in Bucharest. It was also, however, a period of great personal challenge, as Ruckenstein and his wife were forced to leave their two teenage children behind in Romania. Only after two years, continued on p. 24
and extraordinary efforts, were the children able to join them in the U.S.

Today, his son, Andrei, is a theoretical physicist and chair of the Department of Physics at Boston University. His daughter, Lelia, a former book editor and literary critic, is now a legal research associate.

In 1973, Ruckenstein was recruited to UB as Faculty Professor of Engineering and Applied Sciences. In 1981, he was named SUNY Distinguished Professor, and he remained an extraordinarily productive member of the faculty for the rest of his life, authoring more than 900 additional journal publications, continuing long past his formal retirement in 2011. He authored roughly 50 papers after his 90th birthday, including a dozen in 2019 and several more this year.

For more than 45 years, Ruckenstein played a major role in the growth and development of what is now the Department of Chemical and Biological Engineering at UB. He brought national attention to the department, mentored dozens of students, researchers and young faculty members, and provided advice to generations of department chairs.

He also became legendary for his questions and comments at department seminars. For nearly any topic a seminar speaker might be addressing, Ruckenstein might say something like: “In the 1970s, we considered that problem and ....” Often, he would provide a profound insight, sometimes opening a whole new research direction for the speaker.

During his five decades in the U.S., Ruckenstein received countless honors for his groundbreaking contributions across many fields of research, most notably the National Medal of Science, which he received in a White House ceremony in 1999. Ruckenstein was elected to the National Academy of Engineering in 1990 and received the Founders Award from the Academy in 2004, an honor bestowed on a single engineer each year across all disciplines.

In 2012, Ruckenstein was elected to the American Academy of Arts and Sciences. From the American Institute of Chemical Engineers, he won the Alpha Chi Sigma Award for his work in transport phenomena, the Walker Award for his work in catalysis, and the Founders Award for his overall contributions to science.

From the American Chemical Society, he received the Kendall Award for his research in colloids and interfaces, the Langmuir Lecture Award for his contributions to macromolecules, the Schoellkopf Medal for his work in supported metal catalysts, and the Murphree Award in Industrial and Engineering Chemistry.

He was given the Humboldt Award by Germany for his work in surfactants and the Creativity Award by the National Science Foundation for his work in biomolecules.

Ruckenstein was honored with numerous invited appointments and visiting professorships around the world. A fellow of the American Institute of Chemical Engineers, he was named by the institute as one of 50 Chemical Engineers of the “Foundation Age” of chemical engineering.

UB has recognized Ruckenstein’s contributions with the Chancellor Charles P. Norton Medal, UB’s highest honor, as well as the Dean’s Award for Engineering Achievement and the Walter P. Cooke Award. Since 2009, the Department of Chemical and Biological Engineering has hosted an annual Ruckenstein Lecture.

From 2009 to 2019, Ruckenstein worked with former students and colleagues to publish eight volumes in which he organized his most important contributions in different areas over the decades. Their titles highlight the scope and breadth of his diverse scientific contributions in areas ranging from thermodynamics of solutions to nanodispersion to concentrated emulsion polymerization and many others.

Ruckenstein was also known among colleagues and friends for being an extraordinarily driven yet compassionate human being. While intensely focused on his research and dedicated to the success of his students and colleagues, he was deeply concerned with broader issues, including world history and philosophy.

He is survived by his wife, Velina, his son Andrei and daughter Lelia, their respective spouses, Shelagh Leahy and James O’Malley, and two grandchildren, Olivia and Leo Ruckenstein. 

INTERNATIONAL ACTIVITIES

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A presentation was given online. Hollister is also an invited speaker for the seventh annual European Conference on Information Literacy in Bamberg, Germany. His paper, “Using Open Pedagogy as an Information Literacy Intervention for LIS Students: A Case Study,” will detail the implementation of an open pedagogical framework in his Department of Information Science course, International Librarianship. As a result of the coronavirus pandemic, this conference is postponed until 2021.

In addition, Hollister’s article, “Collaborating with an International Partner Institution to Mitigate the Cost of Course Textbooks,” was recently accepted for publication in the Journal of Web Librarianship. This article details his work to improve textbook access and affordability in UB’s Singapore program.

Cynthia Tysick, associate librarian and director of Education Services, took part in developing and delivering the SUNY-wide COIL Global Commons pilot virtual study abroad in summer 2020 (see article p. 8 for a full description). Students had excellent feedback for the program, the courses based on the Sustainable Development Goals, participating global partners and final projects. The deliverables and all course content are under open licensing so they can be reused by anyone in the world with attribution.
INTERNATIONAL ACTIVITIES OF FACULTY AND STAFF

SCHOOL OF ARCHITECTURE AND PLANNING
Department of Architecture

In his latest book, Brian Carter, professor, explores Beijing-based architect Zhu Pei’s museum for the Imperial Kiln in Jingdezhen, China, a globally significant example of contemporary civic architecture that preserves and celebrates the remains of the region’s porcelain industry, dating back to the Ming and Qing dynasties. The Imperial Kiln Museum, designed by Zhu Pei in 2016, builds on a rich history of traditional craft and culture in Jingdezhen—a city that is known as “the porcelain capital of the world.” The long established brick kilns that fired the porcelain there also rooted the settlements that grew around them.

The design of the museum references these cultural histories and traces how they have informed both the design and materiality of the new building. Root and Contemporaryity—the latest publication in the buffaloBOOKS series—documents the work of the architect Zhu Pei and his design for the Museum for the Imperial Kiln in Jingdezhen in China. The book, which includes drawings, photographs and narratives from the designer, architects and a distinguished scholar in Chinese Studies, celebrates the visit of Zhu Pei to Buffalo and his presentation of the 2019 UB Confucius Institute Distinguished Architecture Lecture. This annual lecture, jointly sponsored by University at Buffalo’s School of Architecture and Planning and the Confucius Institute, brings leading architects, urban planners and scholars to Buffalo from China.

Korydon Smith, professor and chair, and Pavani Kalluri Ram, research professor in the School of Public Health and Health Professions, are co-editors of a new textbook, Transforming Global Health: Interdisciplinary Challenges, Perspectives, and Strategies (Springer, 2020), to which dozens of UB faculty, staff and students — plus community partners and research collaborators — have contributed. It provides a comprehensive, interdisciplinary look at the field of global health. The textbook presents the work of the university’s Community for Global Health Equity (CGHE), which aims to support those who can influence global health, like policymakers who can effect systemic and local change, and community members who can inspire, promote and implement solutions in their locales. Each chapter frames a problem and illustrates how interdisciplinary problem-solving can address the most pressing challenges in global health today. The goal, the co-editors say, is to spur critical and creative thinking about emerging and future problems, with many chapters offering novel case studies as a useful, accessible and compelling way to engage the complexities and challenges of global health.

COLLEGE OF ARTS AND SCIENCES
Department of Anthropology

Deborah Reed-Danahay, professor, has been named Chevalier dans l’Ordre des Palmes Académiques, awarded by the French government to scholars who have made significant contributions to the study of French society and culture. She published her sixth book, Bourdieu and Social Space: Mobilities, Trajectories, Emplacements (Berghahn, 2020) and the book chapter “Leave/Remain: Brexit, Emotions, and the Policing of Mobility among the French in London” (In Vered Amit and Noel Salazar, eds., Policing Mobilities, Berghahn Books, 2020). She has also published the article “Brexit, Liminality, and Ambiguities of Belonging: French Citizens in London” in the journal Ethnologia Europaea (30:2, 2020). In January 2020, while continuing her ethnographic research there, she presented an invited lecture in the University College London’s Anthropology Seminar Series entitled “A Sense of One’s Place: Bourdieu, Social Space, and (Im)mobilities.” In December 2019, she traveled to Bucharest to serve as an Invited Commentator/Discussant at the workshop World Literatures: Intercultural and Translingual Perspectives, held at Bucharest University and organized by the Cosmopolitan and Vernacular Dynamics in World Literatures research program based at Stockholm University. She also serves as a consultant to this research program. In November 2019, she was in Vancouver (50:2, Ethnologia Europaea) publishing the article “Brexit, Liminality, and Ambiguities of Belonging: Going French Citizens in London” at the joint professional meeting of the American Anthropological Association and the Canadian Association of Social Anthropologists.

Arts Management Program

Katja Praznik, associate professor in the Department of Media Study and director, gave a talk “Invisible Labor of Art: A Contribution toward a Labor Equity in the Arts” for the Contemporary Culture and Cultural Policy Lecture Series organized by Lokomotiva – Centre for New Initiative in Arts and Culture, Skopje, Macedonia in June 2020. Also in June, she held a lecture “Art as Labor: A Feminist Approach to a Disavowed Economy of Art” for participants of the informal educational program at Center for Women’s Studies, Zagreb, Croatia. In July 2020, she took part in a panel “Political Economy of Art: A Discussion with Katja Praznik and Sezgin Boyünk” for a project Vectors of Collective Imagination and Art Conversation Series organized by Kuda.org – Center for New Media, Novi Sad, Serbia. In September she gave a talk “From Cultural Workers to Socialist Entrepreneurs – the Dissolution of Art as Labor” at the conference Prearity or Self-Management? organized on the occasion of 100 Years – 200 Issues of Maska – performing arts journal and the Conglom Festival, Ljubljana, Slovenia. (Due to the pandemic, all talks were presented online and not in person as originally planned.) In spring 2020, Praznik’s essay “Women, Art and Labor, or the Limits of Representational Politics” was published in an edited volume City of Women Reflecting 2019/2020. In September 2020 her article “Artists as Workers” was published in the book chapter “The Undying of Yugoslav Socialism Politics, the Paid Unpaid Labor“ was published in Social Text 144, vol. 38, no 3. In October 2020 Praznik contributed an essay for an edited volume published in the framework of Reshape—an international research and development project that aims to imagine an alternative to the European arts ecosystem, and a short essay for an art newspaper Photography is Symbolic produced by artist Jaka Babnik for Gallery Photon, Ljubljana, Slovenia.

Department of Comparative Literature


Department of English

Cristianne Miller, SUNY Distinguished Professor and Edward H. Butler Professor of English, was invited keynote speaker for the Emily Dickinson International Society annual meeting, “Dickinson at a Distance,” July 31-Aug 1, 2020, hosted virtually by Amherst College, with co-directors from the U.S., England, France, and Taiwan. Her presentation was titled “Dickinson’s Letters: A Preview.”

Department of Ethnic Studies

Elizabeth Otto, professor of art history and visual studies, has won the Northeast Popular & American Culture Association’s 2020 Peter C. Rollins Book Prize, awarded annually for innovative scholarship in the fields of American and popular culture by a writer living or working in New York or New England. Otto’s eye-opening history, Haunted Bauhaus: Occult Spirituality, Gender Fluidity, Queer Identities, and Radical Politics (MIT Press, 2019) is a thoroughly detailed re-examination of the Bauhaus, the German art and design school whose brief history generated the creative momentum behind many of the 20th century’s most influential art movements. Otto’s work researching the history of the Bauhaus has led directly to the work currently underway on her next book project, tentatively titled “Bauhaus Under National Socialism.” While histories of the Bauhaus movement after the Bauhaus school was shut down under the Nazis in 1933 focus almost exclusively on those Bauhaus members who left Germany, in fact the vast majority stayed, and many of them collaborated with the regime — willingly and unwillingly.

Department of History

Andreas Daum, professor, spent the academic year 2019-20 in Germany as the recipient of the Humboldt Research Prize, the lifetime
achievement award of the Alexander von Humboldt Foundation. He delivered lectures at Cambridge University, England, the Societat Catalana de la Història de la Ciència i de la Tècnica, Barcelona, Spain, the Deutsches Museum and the Carl Friedrich von Siemens Foundation in Munich, and the universities of Hamburg and Munich. He also contributed to conferences at Vanderbilt University, the Berlin-Brandenburg Academy of Sciences and Humanities and the Humboldt Foundation in Berlin. Daum published an essay on the COVID pandemic in historical perspective in the Süddeutsche Zeitung, a leading German-language newspaper, emphasizing the farsighted approach to infectious diseases exemplified by Alexander von Humboldt two centuries ago.

Department of Music

James Currie, associate professor, was a presenter in October 2020 in the Silo Busting Seminar Series, organized by the Indeterminacy Consulting Group and hosted by both the B21 research institute at McGill University, Montreal, Canada, and the Fulbright Program. His seminar session is entitled “The Dying Art of Not Connecting.” In November 2020, he gave (virtually) one of the keynote addresses (title: “Beethoven’s Past”) at the Beethoven 250th Anniversary week at Sichuan Conservatory of Music in Chengdu, Sichuan, China. Also in fall 2020, his essay, “Love at a Distance in a Time of Mozart,” came out in the Newsletter of the Mozart Society of America (Volume 24, Number 2)—a society which is both American and Canadian.

Department of Philosophy

Lewis Powell, associate professor, was an invited speaker in a public forum on the philosophical roots of science fiction at the London School of Economics in December 2020, where he discussed contributions to early science fiction by philosophers like Margaret Cavendish and Voltaire, among others. In April 2021, he will be participating in a workshop organized at the University of L’Aquila in Italy on the role of intuitions in the history of philosophy (originally scheduled for the summer of 2020). Powell also serves as a member of the executive committee for the International Hume Society.

GRADUATE SCHOOL OF EDUCATION

Department of Counseling, School, and Educational Psychology

Yan Liu, who earned her MS in Mental Health Counseling in May 2020, led a team that established a local nonprofit to provide support to the immigrant community of Western New York. Liu is president of Bridges from Borders, which seeks to bridge the gap between the needs of the immigrant community and the formal social service system. The organization has launched a Mental Health Ambassador program targeting high school students to increase awareness of mental health issues in immigrant communities.

Department of Educational Leadership and Policy

Melinda Lemke, assistant professor, was appointed associate editor of the journal, Leadership and Policy in Schools, and co-lead with Kafuli Agbemenu, assistant professor in the School of Nursing, for the UB Community of Excellence in Global Health Equity; and Shubin, S., & Lemke, M., (Eds.). (2020). Special Issue – Children displaced across borders: Charting new directions for research from interdisciplinary perspectives. Children’s Geographies, 18(5), 505-515.

Department of Information Science

Heidi Julien, professor, chaired the international Steering Committee for the Information Behaviour in Context (ISIC) Conference, scheduled to be held in Pretoria, South Africa in September 2020. The conference went online, with a program including research conducted by authors from six continents. Julien moderated a panel and presented a paper at the conference as well.

Department of Learning and Instruction

Sarah A. Robert, associate professor and director of UB Social Studies Education Programs, continues to collaborate across borders to critique and understand the implications education policy from actors’ perspectives who are not seated at the policy table. She began the pandemic as an invited speaker for the “webinario”, Investigadores en educación en tiempos de crisis: Posiciones éticas, sponsored by the Red de Investigadores en Educación Chilena, May 19, 2020, to raise awareness of the layered political-economic and health crises facing education, educators, and researchers. She looks forward to presenting two papers at postponed international conferences. “Conflict, Policies-in-Process, and Policy Bundles: An anthropology of policy for challenging times” at the International Union of Anthropological and Ethnological Sciences, Sibenic, Croatia. And “Chernobyl is on Fire: A metaphor for women’s work before and during the global pandemic at the American Anthropological Association conference. Robert and co-editor, Jennifer E. Gaddis, continue preparation of the forthcoming edited book, Transforming School Food Politics Around the World, which will mark the 10th anniversary of Robert’s award-winning compilation, School food politics: the complex ecology of hunger and feeding in schools around the world (P. Lang, 2011), co-edited with Marcus Weaver-Hightower.

JACOBS SCHOOL OF MEDICINE AND BIOMEDICAL SCIENCES

Department of Neurology

Gil I. Wolfe, Irving and Rosemary Smith Chair and president of UBMD Neurology, served as co-chair of a panel of 16 international experts on myasthenia gravis (MG) to revise and expand recommendations for managing the disease. Their paper was published in the journal Neurology in Nov. 2020. He also co-chaired the same panel in 2016, when the guidelines were originally developed. The new guidance for clinicians is based on the latest evidence in the literature. This updated formal consensus guidance provides recommendations to clinicians caring for MG patients worldwide. MG is a rare autoimmune disease affecting neuromuscular function. As many as 60,000 Americans have been diagnosed with MG, and its incidence is increasing as a result of improved diagnostic techniques and an aging population. Symptoms of MG include droopy eyelids; blurred or double vision; difficulty in swallowing; and muscle weakness. One of the main revisions to the recommendations encourages thymectomy (surgical removal of the thymus gland) in the largest subpopulation of MG patients. This change is based on a clinical trial for which Wolfe was the principal investigator. Results of that trial were published in The New England Journal of Medicine in 2016 and in The Lancet Neurology in 2019.

Department of Pediatrics

Omar S. Alibrahim, clinical associate professor, is a co-author on the international COVID-19 guidelines for patients who will need to go on life support machines during their course of treatment. Ventilators may be among the best-known types of lifesaving medical equipment that the sickest COVID-19 patients need. But for a small number with-
in that critically ill population, even ventilators are not enough. Those patients, about 10 percent of COVID-19 patients in intensive care units (ICUs), will require life support machines that temporarily function as their heart and lungs.

SCHOOL OF PHARMACY AND PHARMA-CEUTICAL SCIENCES
Department of Pharmaceutical Sciences
Robert Bies, associate professor, was named a 2020 fellow of the International Society for Pharmacometrics (ISoP). The fellowship recognizes outstanding professional and scientific contributions to the global pharmacometrics community and sustained volunteer service to ISoP. Bies’ research focuses on the application of pharmacometrics in psychiatry, oncology, neurology and cardiovascular disease. He also studies novel methods development, including machine learning approaches to model selection and optimization. Bies contributed to the advancement of the pharmacometrics and pharmacodynamics. He is a board member of ISoP from 2014-17, and served as a founding member of the ISoP Statistics and Pharmacometrics Interest Group. He currently serves on the organization’s education committee.

Marilyn Morris, SUNY Distinguished Professor and chair, has been appointed a fellow of the International Pharmaceutical Federation (FIP). FIP fellowship recognizes FIP members who have distinguished themselves in and contributed to the advancement of the pharmaceutical sciences and practice of pharmacy, and have exhibited leadership in the fields internationally. Morris was recognized at the FIP Virtual 2020 Opening Ceremony on Sept. 13. A UB faculty member since 1985, Morris is one of the world’s preeminent scholars in the areas of drug membrane transport, pharmacokinetics and pharmacodynamics. She is widely recognized for her groundbreaking discoveries regarding the role of dietary flavonoids in drug interaction and drug resistance—research with enormous implications for patient care and drug therapy, particularly in the treatment of cancer.

Dhaval K. Shah, associate professor, will receive the 2020 North American New Investigator Award from the International Society for the Study of Xenobiotics (ISSX). The award is presented to an ISSX member in North America who has made significant contributions to their field of study. The recognition is presented in honor of scholar James R. Gillette, Ph.D. Shah’s work has significantly impacted the development of protein therapeutics, and many scientific principles and mathematical models developed by his lab are routinely used by pharmaceutical companies for drug development and regulatory submissions.

SCHOOL OF SOCIAL WORK

Filomena Critelli, associate professor, and Laura Lewis, clinical associate professor, co-directors of the School of Social Work’s Institute for Sustainable Global Engagement, received a $10,000 grant from the Council on Social Work Education’s Katherine A. Kendall Institute for International Social Work Education. Critelli and Lewis will use the funds to support their project, “Focus on Haiti: Turning the Lens on Media Advocacy and Global Human Rights Perspectives.”

Maria Rodriguez, assistant professor, who joined the School this fall, presented three papers with colleagues at the International Society for Political Psychology: “Glimpse into the Right: Understanding Gender and Sexuality Through Disinformation”; “#Halle: The German Public’s Responses to the Halle Synagogue Shooting”; and “Examining the Flow of Disinformation in the Alt-right: Towards Intervention Development.”

Melanie Sage, assistant professor, and Todd Sage, clinical assistant professor, presented the workshop, “Motivational Interviewing as an Evidence-based Practice in Child Welfare,” at the Kempe Center’s International Virtual Conference dedicated to innovative ideas and practices from around the world to transform child welfare. At the same conference, Melanie Sage, Associate Professor Annette Semanchin Jones, associate professor, and PhD student Seventy Hall presented the workshop, “Building Digital Resilience in Foster Youth as a Strategy to Support Important Relationships.” Hall has been selected to participate in the International Student Training Network for the International Partnership for Queer Youth Resilience (INQYR) at the University of Toronto.

UNIVERSITY LIBRARIES
Christopher Hollister, librarian, was an invited speaker for the Consortium of National and University Libraries 2020 annual conference in Limerick, Ireland. His talk, “Reclaiming the Scholarly Record: The Case Study of a Successful, Independent, Library-Published Journal,” demonstrates how scholars can leverage open access publishing to regain control of the literature in their fields from exploitative commercial publishers. As a result of the coronavirus pandemic, this presentation continues on p. 24.
UB ranked in the top 100 for universities with a Regional Research Reputation in U.S. News and World Report's 2021 edition of Best Global Universities. The rankings were released October 20, 2020.

Now in its seventh year, the overall ranking evaluates nearly 1,500 research universities spread across 86 countries.

In addition to the overall rankings, Best Global Universities includes country, regional and subject-specific rankings, such as engineering, economics and business, and computer science.

The Regional Research Reputation ranking measures academics' opinions of other universities within their regions. UB was No. 100 in this measure.

UB also improved in its rankings for publishing of scholarly books (from No. 210 in 2020 to No. 201 in 2021) and publication of conference proceedings (No. 291 in 2020 to No. 267 in 2021).

UB's book and conference rankings were the highest among the ranked SUNY research universities.

For subject rankings, UB's chemistry (No. 156), clinical medicine (No. 223), electrical engineering (No. 134), engineering (No. 318), nanoscience and nanotechnology (No. 121), pharmacology and toxicology (No. 134), and surgery (No. 145) programs ranked highest among the ranked SUNY research institutions.

UB's overall global ranking for 2021 is No. 277. Among domestic public institutions, UB comes in at No. 53.

The rankings are available at https://www.usnews.com/education/best-global-universities.

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