

UCLA College Magazine

2021 EDITION





BUILDING A MORE JUST AND EQUITABLE WORLD

The Deans of the UCLA College

From left to right:

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Senior Dean and
Dean of Humanities

Tracy Johnson

Dean of Life Sciences

Miguel García-Garibay

Dean of Physical Sciences

Darnell Hunt

Dean of Social Sciences

Adriana Galván

Dean of Undergraduate Education

Last month marked the one-year anniversary of the murder of George Floyd by a Minneapolis police officer, an event that sparked the largest public protests in U.S. history. The movement compelled institutions of every type to do more to end structural racism.

Here at UCLA, Chancellor Gene Block acknowledged the need to do more to support our Black students and to make our campus a more inclusive and just environment. In the UCLA College, we are working to address inequities through research, teaching and service, and are expanding programs, undergraduate scholarships and graduate fellowships — all with the hope of effecting lasting change both on our campus and in society.

In the main feature of this issue of UCLA College Magazine, we celebrate five Black Bruins — scientists, professors, activists and students — who are striving to make the world a more equitable place.

Each of them says community is the driving force behind their passion. Their stories offer proof that if we work together as a community, there's no limit to what we can achieve.

Note: This issue is in an all-digital format that lets readers dive more deeply into some of the stories.

As a land grant institution, the UCLA College of Letters and Science acknowledges the Gabrielino/Tongva peoples as the traditional land caretakers of Tovaangar (Los Angeles basin, So. Channel Islands).



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UCLA COLLEGE DEVELOPMENT

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Andrea Ghez with Lars-Erik Tindre, representing the Swedish embassy in Washington, D.C., at the presentation of Ghez's Nobel medal in Beverly Hills on Dec. 9, 2020.

LEARN MORE

Ghez is director of the UCLA Galactic Center Group, which just celebrated its 25th anniversary. Watch the online anniversary celebration featuring a presentation from Ghez at <https://youtu.be/1Szgcgj3rjE>

PHOTO: ANNETTE BUHL

Ghez Wins Nobel

Professor Andrea Ghez won the Nobel Prize in physics for her pioneering research on the Milky Way's supermassive black hole – becoming only the fourth woman to take the prize in that category and the first for astrophysics. She holds the Lauren B. Leichtman and Arthur E. Levine Chair in Astrophysics, and is the eighth UCLA faculty member to be named a Nobel laureate.



AAP AT 50

The nation's largest university-based student diversity program celebrates its 50th anniversary this year. The Academic Advancement Program, known on the UCLA campus as AAP, promotes academic achievement through academic advising, peer learning and collaborative learning workshops, mentoring to prepare students for graduate studies and professional schools, summer bridge programs for entering freshmen and transfer students, and scholarships for enrolled students.

Many students in the program come from high-need families, are the first in their families to attend college, are recent immigrants, or come from populations that have been historically underrepresented in higher education.

France Córdoba, Ayad Akhtar, Alejandro Aravena and Danielle Allen



WORTH STREAMING

With events going virtual during the pandemic, UCLA's thought-provoking lecture series are now just a few clicks away. Watch standout speakers from the past year:

Luskin Lecture for Thought Leadership

Astrophysicist France Córdoba

The first woman to be appointed chief scientist for NASA and the former director of the National Science Foundation, Córdoba addresses the world of science policy, which affects scientific progress as much as scientific discoveries themselves.

<https://youtu.be/tRwZYJEEy8>

Author Ayad Akhtar

Akhtar won the 2013 Pulitzer Prize for drama for his Tony-nominated play *Disgraced*. His latest work is the novel *Homeland Elegies*, which explores the experiences of a Muslim man who, like the author, grew up in Wisconsin as the son of Pakistani immigrants.

https://youtu.be/NlNgNfH_v50

Possible Worlds Lecture Series, presented by the UCLA Division of Humanities and the Berggruen Institute

"How Will We Live Together?" with Alejandro Aravena

Aravena is an architect and founder and executive director of the firm Elemental. In 2016, *The New York Times* named him one of the world's "creative geniuses" who had helped define culture.

<https://youtu.be/q7rWHImXt68>

"What Kind of Revolution Was That? Polarization and the Path Forward After January 6" with Danielle Allen

Allen, the James Bryant Conant University Professor at Harvard University and director of Harvard's Edmond J. Safra Center for Ethics, focuses on democratic theory, political sociology and the history of political thought.

<https://youtu.be/RW8p4Toe9cA>



BY THE NUMBERS

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UCLA College scientists named among the world's most influential scientific researchers, according to Clarivate's annual list of the most highly cited researchers

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UCLA College professors awarded 2021 Guggenheim Fellowships

5

UCLA College professors elected to the American Academy of Arts and Sciences

4

UCLA College professors named 2020 fellows of the American Association for the Advancement of Science

1

UCLA College faculty member awarded 2021 Sloan Research Fellowship

PHOTOS: (CLOCKWISE) COURTESY OF THE TUESDAY AGENCY; COURTESY OF AYAD AKHTAR; RITA ARAVENA; LAURA ROSE; ALAN NYIRI; COURTESY OF AAP



2019-2021
McNair
Research
Scholars,
part of AAP



Netflix action-thriller *The Old Guard*, directed by UCLA alumna Gina Prince-Bythewood, featured a cast that was 50% minority. The series landed in the top 10 streaming charts for all racial groups — No. 6 for Asian and Latino households, No. 5 for Black households and No. 9 for white households.

Diversity and the bottom line in Hollywood

While the pandemic wreaked havoc on “business as usual” in Hollywood, the 2021 Hollywood Diversity Report, published by the UCLA College Division of Social Sciences, continued as the longest-running, consistent analysis of gender and racial diversity in the film industry. Findings this year include:

Films with casts that were at least 21% minority enjoyed the highest online viewing ratings among all racial groups in the all-important 18–49 age category.

People of color and women are still underrepresented as film writers and directors and typically helmed lower-budget films.

Read the report at <https://ucla.in/2QITYoW>

SETTING THE STAGE

Oriah Amit, a graduate student in the Department of English, is serving as a historical consultant on the HBO science fiction drama *The Nevers*. Set in Victorian London, the series follows a group of women with supernatural abilities. Amit, whose dissertation focuses on late Victorian and Edwardian speculative fiction, used her expertise to advise on integrating aspects of London’s history at the turn of the 20th century into the world of the show.

Amit’s work as a historical consultant informed the creation of the show’s characters: She created biographies for characters that the writers wanted to base as closely as possible on real historical figures. She also advised on the technological and cultural aspects of the late Victorian period so that they could be accurately represented in the series; in terms of technology this includes the early history of the automobile, the telephone, the X-ray, sound amplification, and the expansion and electrification of the London underground, and for cultural references, period-appropriate slang.

She was also able to help the writers when the arc of the show departed from the historical record, for example, in the fifth episode, when a public execution is staged in a show set in 1899, despite the fact that public executions were banned in 1868. Amit used her in-depth knowledge of the period to help the writers create a framework for the execution plotline that would make sense in the historical context.



LEARN MORE

Watch an interview with Oriah Amit and learn more about her work on the show: <https://itsh.bo/2S2R6qL>



UCLA establishes Department of European Languages and Transcultural Studies

In a move that defies a national trend toward diminishing higher education language instruction, UCLA has renewed its commitment to languages by establishing the Department of European Languages and Transcultural Studies, or ELTS.

ELTS brings together the existing departments of Germanic languages, French and Francophone studies, Italian and Scandinavian, but aims to offer a wider and more holistic course of study, focusing on the breadth of languages and cultures across Europe.

The term “transcultural” emphasizes shared European roots and an expanded focus on the perspectives of filmmakers, writers and theorists from Africa, Asia, the Caribbean, Central and South America, and elsewhere. This approach allows for a more pointed, rigorous and comprehensive understanding of history and a more accurate contextualization of the European experience and legacy in the world.

“IF WE TRULY WANT OUR STUDENTS TO BE ACTIVE PARTICIPANTS IN AN INTELLECTUAL, MULTILINGUAL AND GLOBALIZED WORLD, WE MUST BE PREPARED TO MAKE BOLD CHANGES SUCH AS THIS.”

DAVID SCHABERG, SENIOR DEAN OF THE UCLA COLLEGE AND DEAN OF HUMANITIES

RANKINGS



U.S. News & World Report ranked UCLA the top public university in national rankings



UCLA was No. 2 among U.S. public universities and 15th in the world in Times Higher Education's World University Rankings

LEARN MORE

To learn more about these stories, visit <https://college.ucla.edu/college-magazine>



- BY BRITTANY KING
- ILLUSTRATIONS BY JOHNNALYNN HOLLAND

Changemakers

Their peers recognize them for their contributions to their respective fields, but these five Black Bruins say they do it all for their community.

Community is defined as a group of people living in the same place, or having a particular characteristic in common. But it's so much more than that. Community is family, it's safety, it's family reunions in the summertime and soulful sounds on a Sunday morning.

Since the arrival of the first slave ship to America in 1619, the history of Black Americans has often been marked by devastation, brutality and inequities in health, wealth and education. Recently, the COVID-19 pandemic, coupled with the movement for Black lives, has highlighted these inequities in ways that are impossible to ignore.

Still, the Black community does not mark itself by these attributes. During this same time period, Black people have bonded over Verzuz battles on Twitter and collectively mourned and celebrated the giant creative talents lost in the last year like Chadwick Boseman, DMX and Cicely Tyson.

Even during an unprecedented pandemic, where the need for distance was crucial, Black people still made space to (safely) connect as a community in person, whether at Black Lives Matter protests or waiting in hourslong lines to vote last fall.

Pandemic or not, community is central to the Black experience in America. That's why for these five Bruins, community has been essential to their work. Their communities serve as their North Star, the reason they do what they do.

Whether they were the only Black face in their classes, experiencing daily microaggressions or explaining to their peers how their Blackness makes their work richer, these individuals have found and even created a space for themselves and other members of the Black community by being intentional, showing up and asking hard questions, creating online hashtags that lead to in-person connections, and sharing parts of their personal journeys in a way that encourages and invites others to do the same.

These individuals have risen to incredible heights not just because of who they are, but also because of who the people around them are: excellent.

• HUMANITIES

Richard Yarborough

BOOKS WERE ESSENTIAL to professor Richard Yarborough's childhood. Growing up, he said, his mother read, his father read, and there was always a revolving door of books lying around the house.

"I remember the day I got my first library card, I read everything! I was especially interested in science fiction and fantasy. Literature was an escape. It was a way for me to stay sane when I was growing up," he said.

Despite being surrounded by books, it wasn't until he was in graduate school that he began to gravitate to Black Literature. In fact, he didn't take his first Black Literature class until his second year of graduate school, which was also the first time he had a Black teacher. After that, he was hooked.

Yarborough joined UCLA's faculty in 1979 where he currently has a split appointment in the English and the African American Studies departments. In his 42 years at UCLA he's grown the Black Literature class offerings from one class to seven. Topics range from African Literature to the Harlem Renaissance. He's been motivated to expand the class offerings in Black Literature as a way to give students something he didn't have in his educational experience.

"My family always had a social network in the Black community, but I was the only Black student in my class for 12 years. I experienced a level of alienation that sensitized me to the importance and benefits of connections through culture because I didn't have them at school," he said. "That has really made me appreciate the importance of connection and community. To not have had a Black teacher until I entered my Ph.D. program made me committed to playing a mentoring role for as many students as I possibly could."



• LIFE SCIENCES

Vickie Mays

“Part of what we’ve been able to see at the BRITE Center is that outside stress causes physiological changes, and those changes result in negative physical and mental health outcomes.”

PROFESSOR VICKIE MAYS has always approached her work seeking to ask one question: Who is being left out? As the pandemic was unfolding, her pursuit of this question led her to working with the U.S. Congress to address how the Black community has been disproportionately affected by COVID-19.

“I began to see this pattern of people who I knew in the Black community losing family and friends, especially those with pre-existing health conditions. I didn’t see a lot of people [in the medical field] stepping up to address this, so I did,” Mays says of her work with Congress and at UCLA’s BRITE Center for Science, Research & Policy. “When I started looking for data, I saw we had a major problem and we couldn’t answer why.”

For years, her research has looked at race-based discrimination and how it affects not just the mental health of Black Americans, but their physical health as well.

“There is often a blaming of Black people for their health outcomes, but it’s not just a problem of individual behavior,” she explains. “Part of what we’ve been able to see at the BRITE Center

is that outside stress causes physiological changes, and those changes result in negative physical and mental health outcomes.”

Mays explained that there are situations that Black people experience on a daily basis that should be mundane, but are not because of how others perceive them. For example, going inside a convenience store for a snack.

“There’s a sense of, ‘Am I going to be followed, watched, accused of stealing?’ From a cognitive processing standpoint, you already understand the outcome can be pretty bad. So your blood pressure is going up – and that can happen to any Black American many times a day. Is that good for your health? No.”

It’s these findings that Mays is determined to share to help shift misconceptions of health problems in the Black community. She also shares this research as a nod to those who came before her.

“My parents would say, ‘Your education is not just for you. There were people who fought for you to go to school,’” she said. “So if there are issues, and I believe I have the set of skills to address them, I honor my parents by doing what they said.”

• PHYSICAL SCIENCES

Samantha Mensah



LAST YEAR, A VIDEO of bird watcher Christian Cooper went viral on Twitter. Christian, a Black man, was in Central Park watching birds when a white woman, Amy Cooper (no relation), walked by with her unleashed dog. Christian asked Amy to leash her dog, per the park rules, and Amy got upset and called the police. Amy can be heard speaking frantically on the phone, claiming she was being threatened. Meanwhile in the video, Christian is silent.

As UCLA Ph.D. student Samantha Mensah watched this video on loop, she kept asking herself where her work fit in.

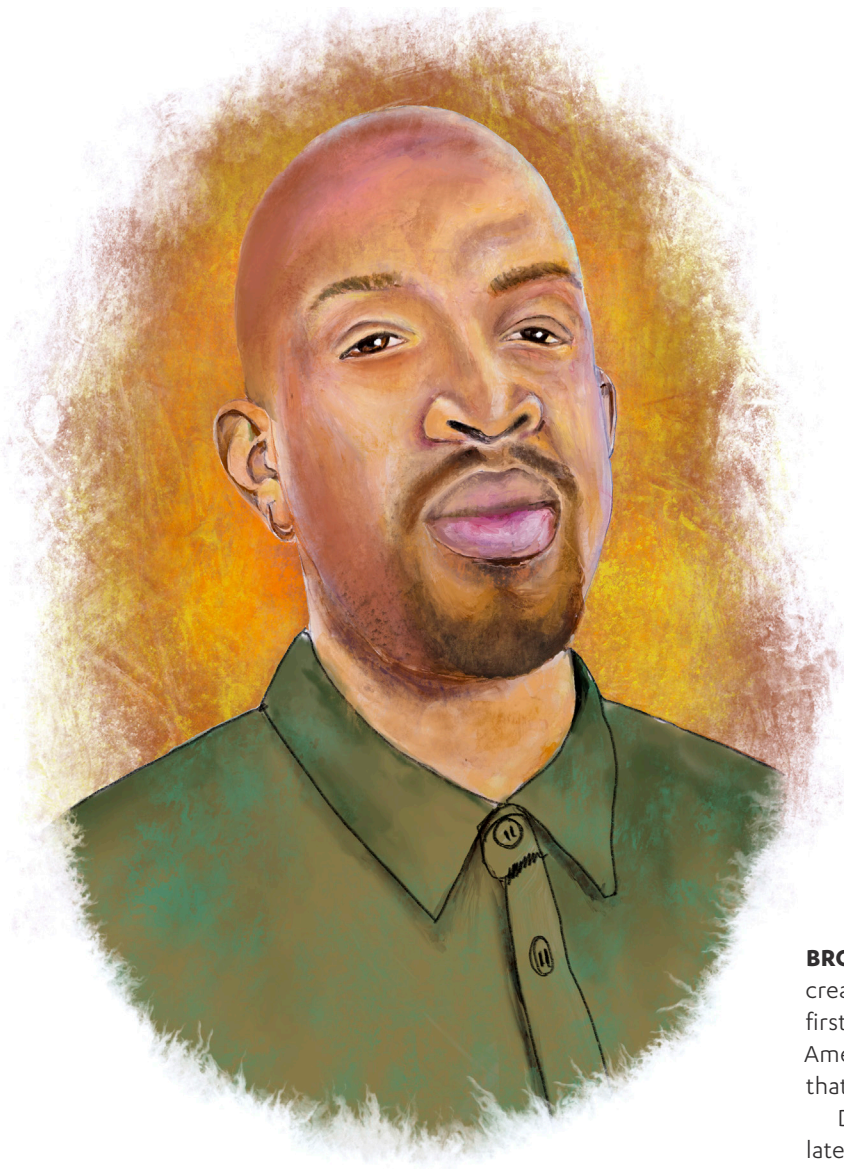
While studying chemistry, she's accustomed to being one of the few Black women in a room. She wants to change that for future Black students entering STEM.

That's why she founded #BlackinChem with five other Black chemists across the country. The goals: to amplify the Black voices in chemistry, provide a community for one another and show those who aren't in the field that chemists aren't just white and male.

"Some people might say, 'It doesn't matter what a person's race or gender is, just that they're a good scientist,' but really this thought is oppressive," Mensah said. "Having these different identities is what makes a person a scientist. It affects the way they approach their science, the way they look at and experience the world. Having a diverse body of people doing science improves it and improves the world. It starts with Black people in chemistry seeing people who look like them getting Ph.D.s."

Mensah says launching the movement has been rewarding. The group has made connections that have landed chemists professional opportunities. It hosts regular chats where Black chemists are invited to talk about their journey through their career, including how their identity intersects with the work they do.

"Having a diverse body of people doing science improves it and improves the world. It starts with Black people in chemistry seeing people who look like them getting Ph.D.s."



• SOCIAL SCIENCES

Broderick Dunlap

"The oppression Black folks have experienced over the last 400 years has impacted every aspect of our lives. Therefore, our approach to reparations needs to be holistic in nature and address the political, economic, cultural and social issues that stem from slavery and keep us subjugated."

BRODERICK DUNLAP BELIEVES in finding solutions that were created by the Black community, for the Black community. As a first-year graduate student working toward a masters in African American Studies, he's focused on the issue of reparations, a topic that has gained political momentum in the last few years.

Dunlap's academic work centers the reparations model articulated by the New Afrikan People's Organization, which reimagines what reparations could look like beyond regular payments made to Black Americans.

"The current discourse on reparations is favoring a more individualistic approach, and while individual paychecks would be great, ultimately that would only stimulate the American economy and wouldn't necessarily uplift the Black community as a whole," he explains. "The oppression Black folks have experienced over the last 400 years has impacted every aspect of our lives. Therefore, our approach to reparations needs to be holistic in nature and address the political, economic, cultural and social issues that stem from slavery and keep us subjugated."

Although much of the work Dunlap does now is for school, he considers himself an activist first. He's worked with a handful of organizations that support the Black community and other communities of color in eradicating systemic racism, including Black Power Collective, Fight for \$15 and the Boys & Girls Club of Riverside.

Even now as he pursues his degree, the community is his focus. He's already thinking about how what he's learning can support the movement for Black lives and Black youth in the city.

"I'm pursuing a career in academia to gain the skills and knowledge necessary to contribute to the liberation of my community in a meaningful and substantial way," he says. "I want to take these skills back to the community that got me here."

• UNDERGRADUATE EDUCATION

D'Artagnan Scorza

D'ARTAGNAN SCORZA '07, PH.D. '13 has played many roles throughout his career. He served in the U.S. Navy, developed curricula for Black male youth, founded a nonprofit, served on the Inglewood school board, recently accepted a position as Los Angeles County's first ever executive director of racial equity, and was UCLA's 2021 Commencement speaker.

Regardless of his title, he's always had the same goals – to serve his community and provide all Black youth, especially males, with the same opportunities and better than he was afforded.

“When I returned from the military, I realized that my dad was incarcerated, my brother was incarcerated, my cousin was shot and killed in the neighborhood I grew up in, and I thought, ‘We’ve got to do something to change these conditions.’ I really wanted to focus on addressing issues that affect Black males,” he said. “I wanted to help interrupt negative cycles of social reproduction and return to my community to improve conditions in the community I grew up in.”

Originally from Inglewood, Scorza went back to his neighborhood and founded the Social Justice Learning Institute, an organization dedicated to improving the “education, health and well-being of youth and communities of color by empowering them to enact social change.”

Not only did Scorza want to support the young people in his neighborhood, he wanted them to know much of what they're facing is due to issues of structural racism.

“Our choices are only as good as our opportunities – it's really difficult to live a healthy, fruitful life if you don't have access to the resources needed to thrive,” Scorza says.

His current role for L.A. County addresses that very thing. He's working to help communities understand what systemic racism and anti-Blackness look like on a daily basis, and building solutions that will not only address microaggressions, but the deep structural problems facing these communities in the county.

Scorza acknowledges that so much of what he's done in his career thus far is less about who he is, and more about how he's been supported, from his high school counselor to UCLA's Academic Advancement Program.

“UCLA incubated my ideas and supported me when I was building my nonprofit and working to serve my community. This support was critical because it says to others, and those who grew up in communities like mine, that we are welcome at UCLA,” he said. “My journey is not about exceptionalism; it's about people in my community who circled around me to provide support and my teachers who made sure I could navigate around systems that were in place. My story is not about someone who is special. Instead it's about someone who, because of the community I came from and the people who nurtured me, was provided with opportunities and the resources needed to make it through.”



“My journey is not about exceptionalism; it's about people in my community who circled around me to provide support and my teachers who made sure I could navigate around systems that were in place.”

Justice, Equity, Diversity and Inclusion at UCLA College

Over the past year, the College has stepped up efforts to center justice, diversity, equity and inclusion in research and teaching. Read on for a few examples of programs in the College — some long established and some brand new — which are attempting to address systemic inequities.



Innovative Teaching

The Center for Education Innovation & Learning in the Sciences is enhancing student learning in the sciences at UCLA through instructor training focused on STEM teaching excellence, assessment, diversity and scholarship.

UCLA is introducing a **new social justice curriculum** using a publicly engaged, data-driven approach and positioning more UCLA graduates to become leaders in social change. Read more on p. 24.

EPIC (Excellence in Pedagogy and Innovative Classrooms), funded by the Mellon Foundation, is a resource hub for humanities teaching that is home to several initiatives on inclusive and equitable teaching, from workshops to teaching innovation grants.

Applied Research

In the social sciences, the **California Policy Lab, Institute for Research on Labor and Employment, Luskin Center for History and Policy** and **Million Dollar Hoods** project have long studied issues related to equity, including studying labor and employment trends and factors behind disproportional incarceration rates and homelessness among people of color.

The Dean's Fund for the Study of Diversity and Racial Equity provides support to social sciences graduate students pursuing social justice-related research.

In psychology, 20 faculty with the **Diversity Science Initiative** are training their behavioral science lens on disparities and differences among understudied and underrepresented groups.

Student Programs

Pathways to Success—Life Sciences

Scholars Program is a highly selective four-year scholarship program for talented incoming freshmen interested in majoring in the biosciences, focusing on students from groups that are historically underrepresented in the sciences.

Program for Excellence in Education and Research in the Sciences

involves incoming students in research and increases the persistence of underrepresented students in STEM fields. It is the largest academic support program of its kind at UCLA and a national model for science higher education.

Physical Sciences Diversity Fellowships

include awards and mentorship for BIPOC students (Black, Indigenous, and people of color) who might otherwise find it difficult or impossible to pursue graduate study in the sciences.

Academic Advancement Program

celebrates its 50th anniversary this year as the nation's largest university-based student diversity program. Read more on p. 3.

The Diversity Project is a 10-week, research-intensive educational program designed to increase participation of students from underrepresented groups in marine and evolutionary biology. The experience combines fieldwork on the coral reefs of the Indo-Pacific with cutting edge molecular genetic research and is funded by the UC-HBCU Initiative and the National Science Foundation.

COMPASS (Center for Opportunities to Maximize Participation, Access and Success in the Sciences)

is tailored to students from groups that are historically underrepresented in the sciences, first-generation college students and those with socioeconomic hardships or a history of significant life challenges. Students receive partial scholarships for summer or part-time research positions, mentoring, academic advising and internship opportunities.





Shedding Light

An interview with professor Maite Zubiaurre about her powerful new documentary film *Águilas*, which took honors at this year's SXSW and Big Sky film festivals.

By Alison Hewitt

A member of the humanitarian search-and-rescue group Águilas del Desierto (Desert Eagles) in the Arizona desert.

When UCLA professor Maite Zubiaurre decided to make a documentary about volunteers who search for the remains of migrants in the desert spanning the U.S.–Mexico border, she wanted people to see what she believes has become invisible: not just the deaths, but how ignoring them enables policies that lead to even more deaths.

Now she's helped bring that hidden reality to light. Her 14-minute film *Águilas*,

co-directed with Kristy Guevara-Flanagan, a professor at the UCLA School of Theater, Film and Television, won the SXSW Documentary Short Jury Award and the Best Mini-Doc award at the Big Sky Documentary Film Festival.

The film garnering all this interest took shape when Zubiaurre, a professor of European languages and transcultural studies, and of Spanish and Portuguese, approached Guevara-Flanagan with the

idea of highlighting the work of Águilas del Desierto (Desert Eagles), a humanitarian search-and-rescue group that scours the Arizona desert on weekends, looking for those reported missing. The documentary follows the volunteers on one of their searches.

Zubiaurre, who also co-leads the College's Urban Humanities Initiative, spoke with *UCLA College Magazine* about the film and her concept of "forensic empathy," which centers on consciousness-raising activism and compassion-triggering artistic practices around migrant suffering and death. Some responses have been edited for brevity and clarity.

Q *It's clear that you are very moved and inspired by the work of Águilas del Desierto. Who are they?*

A They're a group of volunteers from San Diego. At least once a month, they search for missing migrants to bring families some sort of closure. The weekend that we filmed the documentary, we found six bodies, all skeletal remains.

Most of the volunteers are migrants themselves, and they're all workers — construction workers, domestic workers, gardeners, laborers, you name it. They finish work around 7 on Friday night, drive their trucks seven hours to Arizona, sleep for maybe three hours and then walk for hours through that harsh and harrowing landscape. I have volunteered with them since 2016, and it's truly very hard. They sleep in a tent on Saturday night and search on Sunday until they have to drive home. Then they get up early Monday morning and go back to work.

Needless to say, they don't have any steady funding. They have a website and a Facebook page, and they set up stands in swap meets, where they talk about their work and collect donations. Those are also ways they hear about the missing.

What the Águilas do, their heroic efforts and altruism, deserves recognition. Their work needs to be made visible. This short documentary isn't looking at all the pieces of the issue, but it looks at one

specific piece to raise awareness about what is happening at the border and hopefully help change it.

Q *You've said this documentary is a humanitarian plea. What action do you hope it will inspire?*

A People don't want to deal with the fact that migration is creating this humanitarian crisis. In 2020, Arizona's Pima County morgue recovered 227 migrants' bodies. In the 1990s, they would find 10 or 20 bodies. The numbers have skyrocketed because of "Prevention Through Deterrence," a set of U.S. government policies that militarily fortify urban crossing points, forcing migrants to cross through unforgiving desert terrain. The loose estimate is that for each body they find, there are five that the desert never gives back.

This has become invisible, despite its radical visibility: The bones are literally laying exposed in the sun. I want to raise awareness, and most importantly, effect policy change.

This documentary, and a feature documentary in the making, are part of a larger, three-pronged interdisciplinary and collaborative endeavor called forensic empathy that I initiated and lead. The other participants are the Tijuana-based filmic and artistic collective Dignicraft — José Luis Figueroa, Ana Paola Rodríguez and Omar Foglio — and Jonathan Crisman, an assistant professor at the University of Arizona.

We are also writing a scholarly monograph and leading the creation of a digital map of the border. There's the imaginary border you see on most maps — a criminally simplified version that our map wants to complicate. It's not all bad guys trying to get into a perfect country. We're complicating the map with prisons, migrant assistance groups, artist studios. We're thickening the map so students can learn about the complexity of the border.

If you teach students complexity, they will pause and reflect. If you oversimplify, they will not reflect, and they will believe in fallacies.

Q *How does forensic empathy shine a light on this topic in a new way?*

A We have to look at this grim reality through the eyes of empathy, not just through the cold statistics. Forensic empathy is a direct response to the tragedy of the horrifyingly high number of undocumented immigrants who perish year after year while crossing the U.S.–Mexico border. It studies the forensic efforts, archival practices and art interventions that take place around border casualties and looks at the personal belongings found on the deceased immigrants through the eyes of chief examiners, consular agencies, policymakers, nonprofit organizations and artist-activists.

The personal belongings recovered in the desert tell a story. Belongings like camouflaged clothes, carpet-soled shoes and matte water bottles are all designed to help the migrants truly disappear into the landscape. But hundreds of bodies are found, not just by the Águilas, but by day-trippers, hunters, even dog walkers. The migrants die of dehydration, hypothermia, hyperthermia. Yet because we don't want to look at our failure as a society, the bodies become invisible and so does the apparatus around it that increases the deaths.

This is a key role of the humanities, to apply critical thinking in dealing with the crucial issues of our times and to spearhead initiatives that connect with the community and fully invest in social justice.

LEARN MORE

Watch the documentary, available for a year through *The New Yorker's* website:

www.newyorker.com/video/watch/the-new-yorker-documentary-searching-for-the-bones-by-the-southern-border

Visit the Águilas del Desierto website:

www.aguilasdeldesierto.org

New research highlights the importance of doing more for moms' health and well-being.

STUDYING MATERNAL STRESS

By Stuart Wolpert

Through their research with women and children, UCLA scientists are homing in on some of the great mysteries of life and some of society's most pressing concerns.

One example: the question of why some people age faster than others.

A potential answer, a recent study indicates, is that a mother's stress prior to giving birth may accelerate her child's biological aging.

Researchers found evidence that maternal stress adversely affects the length of a baby's telomeres — the small pieces of DNA at the ends of chromosomes that act as protective caps, like the plastic tips on shoelaces. Shortened telomeres have been linked to a higher risk of cancers, cardiovascular and other diseases, and earlier death. The findings are reported in the journal *Psychoneuroendocrinology*.

"Research on aging is beginning to identify some factors that might put a person on an accelerated aging path, potentially leading to diseases of aging such as metabolic disorder and cardiovascular disease much earlier in life than would be expected," said the study's lead author, Judith Carroll, an associate professor of psychiatry and biobehavioral sciences at the Cousins Center for Psychoneuroimmunology.

While several studies have reported that telomere length is shorter in newborns whose mothers reported high stress during pregnancy, this study also measured maternal stress prior to conception and then, once women were pregnant, the researchers followed up in the second and third trimesters. Their analyses identified the third trimester as an especially important period — but not earlier — during which children are at higher risk for shortened telomeres.

Christine Dunkel Schetter, a distinguished professor of psychology and psychiatry and senior author of the study, said the findings support the case for devoting more resources to screening and treatment programs for preconception health and well-being.

The research team followed 111 mothers living in North Carolina, Illinois and

Washington, D.C., from preconception until their children reached early childhood. Between the ages of 3 and 5, the children provided cell samples from inside their cheeks, from which the researchers extracted DNA that was used to measure telomeres. They were then able to test for associations of childhood telomere length with the mothers' stress levels when the children were in utero.

Carroll said, "We see evidence into childhood that telomere length continues to be shorter in those children exposed in utero to maternal stress."

How does maternal stress alter cellular aging?

"We know that stress can activate inflammation and metabolic activity, both of which, in high amounts, can damage DNA," Carroll said. "Telomeres are vulnerable to damage and, if unrepaired before cell division, they can become shortened by this damage. During in utero development, we know there is rapid cell replication, and we suspect there is increased vulnerability to damage during this time."

High maternal stress often leads to preterm births

A second UCLA-led study from the same research group found that women suffering from high stress — defined as feeling overwhelmed and unable to cope — during the months and even years before conception had shorter pregnancies than other women. Women who experienced the highest levels of stress gave birth to infants whose time in utero was shorter by one week or more.

"Every day in the womb is important to fetal growth and development," said Dunkel Schetter. "Premature infants have higher risk of adverse outcomes at birth and later in life than babies born later, including developmental disabilities and physical health problems."

Dunkel Schetter, who heads the Stress Processes and Pregnancy Lab, which conducted the studies, noted premature birth rates are unusually high in the U.S., compared with other nations with similar resources, and low-income and African American women have higher rates of preterm birth.

"Preventing preterm birth, with its adverse consequences for mothers and children worldwide and in the U.S., is a top priority," she said.

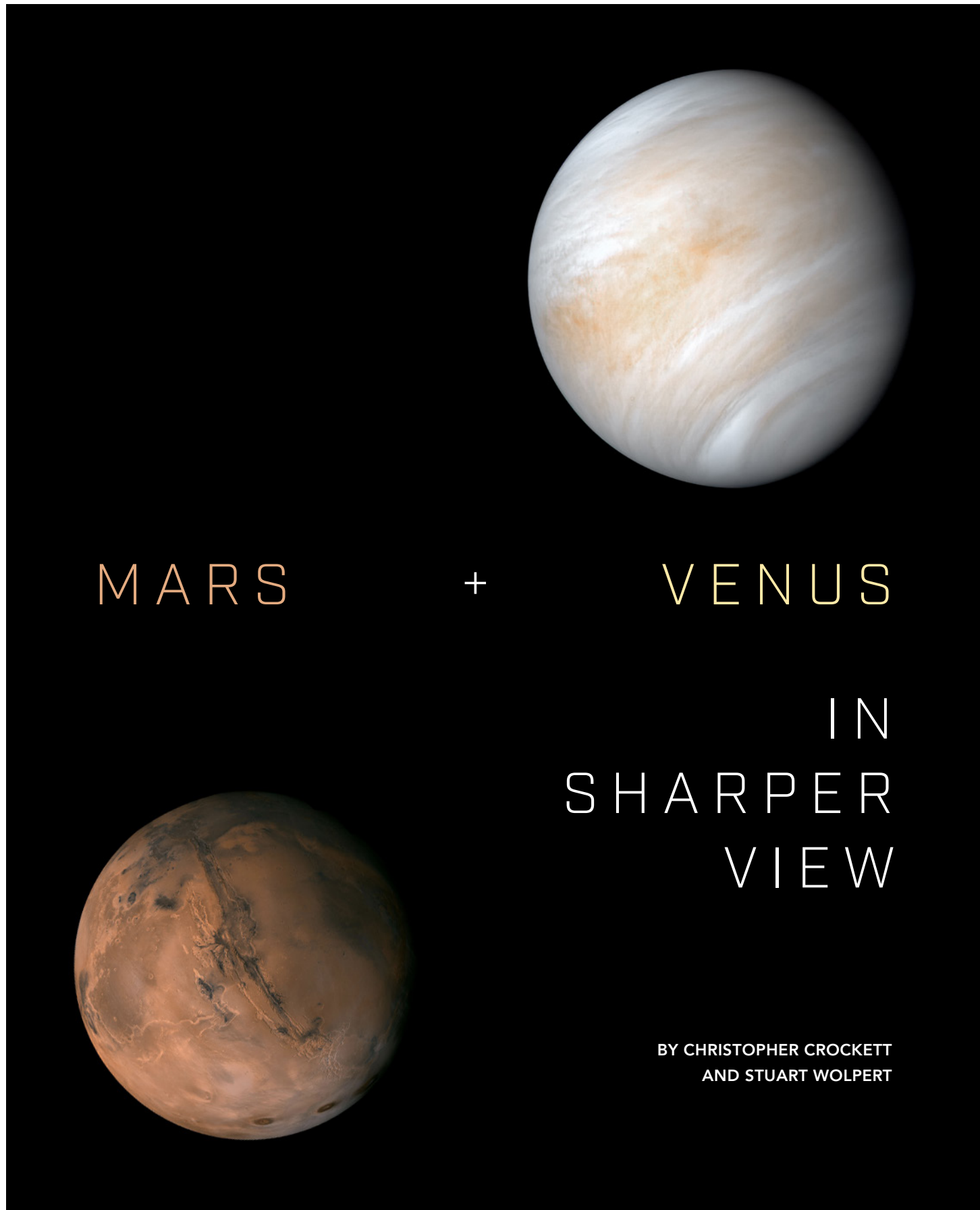
These results, published in the journal *Annals of Behavioral Medicine*, are based on extensive in-home interviews with 360 mothers, many of whom live near or below the poverty level. In addition to collecting data on these women's general stress levels, the interviewers obtained information about various types of environmental stress, including financial worries, job loss, a lack of food, chronic relationship troubles, parenting challenges, interpersonal violence and discrimination.

The researchers found that women who were exposed to the lowest or highest amounts of stress in their environment had the shortest pregnancies, while women who had a moderate level of environmental stress before conception had the longest pregnancies.

"Women exposed to moderate stressors in their environment may have developed coping strategies that serve them well both before and during pregnancy, while exposure to more severe stress challenges even women who normally cope very effectively," said lead author Nicole Mahrer, who conducted the research as a UCLA postdoctoral scholar in health psychology and is now an assistant professor of psychology at the University of La Verne. She is also a co-author of the other study.

A moderate amount of stress prior to the pregnancy may also help prepare the developing fetus for the environment to come, Mahrer said.

"What we have not known until now," Dunkel Schetter said, "is whether a mother's psychosocial health before conception matters for her birth outcomes. This study is among the first to point out that, yes, it does matter. It may even be more influential than prenatal health because some of what is put in motion before conception may be hard to stop during pregnancy. For example, a mother with dysregulated immune function due to stress may be at risk when she becomes pregnant."



MARS

+

VENUS

IN
SHARPER
VIEW

BY CHRISTOPHER CROCKETT
AND STUART WOLPERT

PHOTO: NASA/JPL-CALTECH

Professors in the Department of Earth, Planetary, and Space Sciences — David Paige and Jean-Luc Margot — are gaining important new insights about Mars and Venus.

David Paige is deputy principal investigator of Radar Imager for Mars' Subsurface Experiment, or RIMFAX, one of seven instruments on NASA's Perseverance rover.

About the size of a car, the Perseverance rover landed on Mars on Feb. 18. Over the next two years it will explore Jezero Crater in Mars' northern hemisphere for signs of ancient life and new clues about the planet's climate and geology.

Among other tasks, Perseverance will collect rock and soil samples in tubes that a later spacecraft will bring back to Earth. The experiments will lay the groundwork for future human and robotic exploration of Mars. RIMFAX will probe beneath the planet's surface to study its geology in detail.

"Jezero Crater is a very interesting location on Mars because it looks like there was once a lake inside the crater, and that a river flowed into the lake and deposited sediments in a delta," Paige said. "We plan to explore the delta to learn more about Mars' climate history, and maybe something about ancient Martian life. What we'll be able to see once we start roving and what we will actually learn is anybody's guess."

RIMFAX will provide a highly detailed view of subsurface structures and help find clues to past environments on Mars, including those that may have provided the conditions necessary for supporting life, he said.

Paige emphasized that RIMFAX is an experiment. "We've never tried using a ground-penetrating radar on Mars before, so we can't really predict what types of subsurface structures we might be able to see. But we have done some fairly extensive field testing of RIMFAX on Earth to learn how to use it and how to interpret the data. Here, ground-penetrating radars can be very useful for clarifying subsurface geology."

Is he hopeful of finding water, or evidence of water, beneath the planet's surface?

"There are all kinds of evidence for past liquid water all over Mars," Paige said. "At Jezero, there must have been a lot of water at some point, but we don't expect that the ground beneath the rover will still be wet. Mars today is a very cold place, and any water in the shallow subsurface should be frozen at Jezero. What we're interested in finding are geologic features that wouldn't be expected to form under present climatic conditions, as those would be especially interesting targets to search for signs of past life."

UCLA College graduate students Max Parks and Tyler Powell in Earth, Planetary, and Space Sciences are part of the science team, and Mark Nasielski, a UCLA graduate student in electrical engineering, is part of the operations team.

VENUS IS AN ENIGMA

Venus is the planet next door yet reveals little about itself. An opaque blanket of clouds smothers a harsh landscape pelted by acid rain and baked at temperatures that can liquify lead.

Now, new observations from the safety of Earth are lifting the veil on some of Venus' most basic properties. By repeatedly bouncing radar off the planet's surface over the last 15 years, a UCLA-led team has pinned down the precise length of a day on Venus, the tilt of its axis and the size of its core — findings published in the journal *Nature Astronomy*.

"Venus is our sister planet, and yet these fundamental properties have remained unknown," said professor Jean-Luc Margot, who led the research.

Earth and Venus have a lot in common: Both are rocky planets and have nearly the same size, mass and density. And yet they evolved along wildly different paths. Fundamentals such as how many hours are in a Venusian day provide critical data for understanding the divergent histories of these neighboring worlds.

Changes in Venus' spin and orientation reveal how mass is spread out within. Knowledge of its internal structure, in turn, fuels insight into the planet's formation, its volcanic history and how time has altered the surface. Plus, without precise data on how the planet spins, any future landing attempts could be off by as much as 30 kilometers.

The new radar measurements show that an average day on Venus lasts 243.0226 Earth days — roughly two-thirds of an Earth year. What's more, the rotation rate of Venus is always changing: A value measured at one time will be a bit larger or smaller than a previous value. The team estimated the length of a day from each of the individual measurements, and they observed differences of at least 20 minutes.

Venus' heavy atmosphere is likely to blame for the variation.

The UCLA-led team also reports that Venus tips to one side by precisely 2.6392 degrees (Earth is tilted by about 23 degrees), an improvement on the precision of previous estimates by a factor of 10. The repeated radar measurements further revealed the glacial rate at which the orientation of Venus' spin axis changes, much like a spinning top. On Earth, this "precession" takes about 26,000 years to cycle around once. Venus needs a little longer: about 29,000 years.

The team has turned its sights on Jupiter's moons Europa and Ganymede. Many researchers strongly suspect that Europa hides a liquid water ocean beneath a thick shell of ice. Ground-based radar measurements could fortify the case for an ocean and reveal the thickness of the ice shell.

And the team will continue bouncing radar off Venus. With each radio echo, the veil over Venus lifts a little bit more, bringing our sister planet into ever sharper view.

This research was supported by NASA, the Jet Propulsion Laboratory and the National Science Foundation.

DATA: ALL THAT IS

Seen & Unseen

Professor Desi Small-Rodriguez has studied Indigenous tribes around the world. Her research on data collection efforts can help build better government.



By Elizabeth Kivowitz

A proud Northern Cheyenne Indian and Chicana, Desi Small-Rodriguez says that she’s a relative first, then a researcher and teacher, and thus considers herself a bit of an anomaly in academia.

“I need to remain accountable to my community,” said Small-Rodriguez, an assistant professor of sociology and American Indian studies in the UCLA College and the first Indigenous woman to be jointly hired by the sociology department and the American Indian studies program. “That’s how many Indigenous faculty feel. Academia can take you far away from the communities, lands and waters that ground you. I’m consistently reminded by mentors, ‘Always lift as you climb,’ because this is such a lonely path.”

In her research Small-Rodriguez examines those on the periphery of mainstream data collection efforts like government surveys and the U.S. Census, to understand the ways people in these groups are or are not being counted. She says these efforts often do a poor job of collecting data on Indigenous peoples, undocumented migrants, those experiencing homelessness, the LGBTQ community and other marginalized groups, which causes harm and perpetuates inequality.

“The U.S. is the most unequal country of any of the developed countries in the world,” said Small-Rodriguez, who joined the UCLA faculty last fall. “I’m interested in how systems amplify suffering and why suffering is being disproportionately experienced by certain populations, and also systems of erasure and how erasure perpetuates inequality. If your literal presence is completely erased, that is a unique form of inequality and injustice.”

MAKING DATA WORK TO BUILD EQUITY

Small-Rodriguez sees wide-ranging applications for her work that could drive systemic change in how data collection efforts are organized and operated – leading to better government decision-making and policy.

“Ultimately, I’m an optimist. I believe that just as structures of inequality were built and maintained, so too can they be dismantled and replaced,” Small-Rodriguez said. “And like most Indigenous scholars, I am called upon to work, advocate and serve in different directions. Being a professor is simply one of my dream jobs. I have many paths that will sustain me, and I believe that eventually all roads lead home.

“This means that part of my work in academia includes making myself literally obsolete. I want to train enough young scholars to take over this work, so that one day I can be back full-time on my homelands living the Cheyenne way of life in good relation with all that is seen and unseen.”

With her move to Los Angeles delayed due to the pandemic, Small-Rodriguez resides on the Northern Cheyenne reservation in Montana where she grew up. Over the past few months, she has been encouraging people in her community to get vaccinated against COVID-19, especially given the disproportionate impact of the virus on Indigenous peoples early in the pandemic.

“I’m thankful for all the brave and amazing frontline medical workers and our tribal leaders who continue to exercise tribal

sovereignty so that we can get all of our people vaccinated regardless of age or health status,” she said.

Small-Rodriguez also co-hosts “All My Relations,” the most popular podcast in the Indigenous world with more than 1 million downloads.

A LEAP OF FAITH INTO DEMOGRAPHY

As a student, Small-Rodriguez became interested in demography and social science because her sociology professor, one of the only Indigenous sociologists and demographers in the world, noticed her abilities in the field. He offered her a job with a Māori doctoral student he was advising who was doing research in New Zealand. She learned how to be a researcher and demographer working for tribes in New Zealand for many years, and then conducting the same type of work for tribes in the U.S.

“My time in New Zealand was life changing,” she said. While there, Small-Rodriguez worked on tribal census projects, community surveys, and social determinants of health and policy research. “It’s where I learned how to do research and build data by Indigenous Peoples for Indigenous Peoples. I also learned about the boundaries of indigeneity and tribal belonging in ways that are far different than for Indigenous Peoples in North America. In New Zealand, Māori kinship is affirmed in very inclusive ways as compared to minimum blood quantum policies that we use here. That led to another area of my research understanding the boundaries of belonging for Indigenous Peoples.”

Small-Rodriguez points out that the word data comes from the Latin “datum,” meaning something given. For Indigenous Peoples, the term more often means “something taken” – and that data has been used as another method by which others extract something from the Indigenous, leaving behind very broken systems to rebuild and repair. She references everything from Indigenous bodies, to language, to knowledge of the important connections with lands, water and animals as having become disrupted. She calls that “data erasure” an ongoing effort of genocide.

Amid all the loss, the recent vaccination effort illustrates an area of hope.

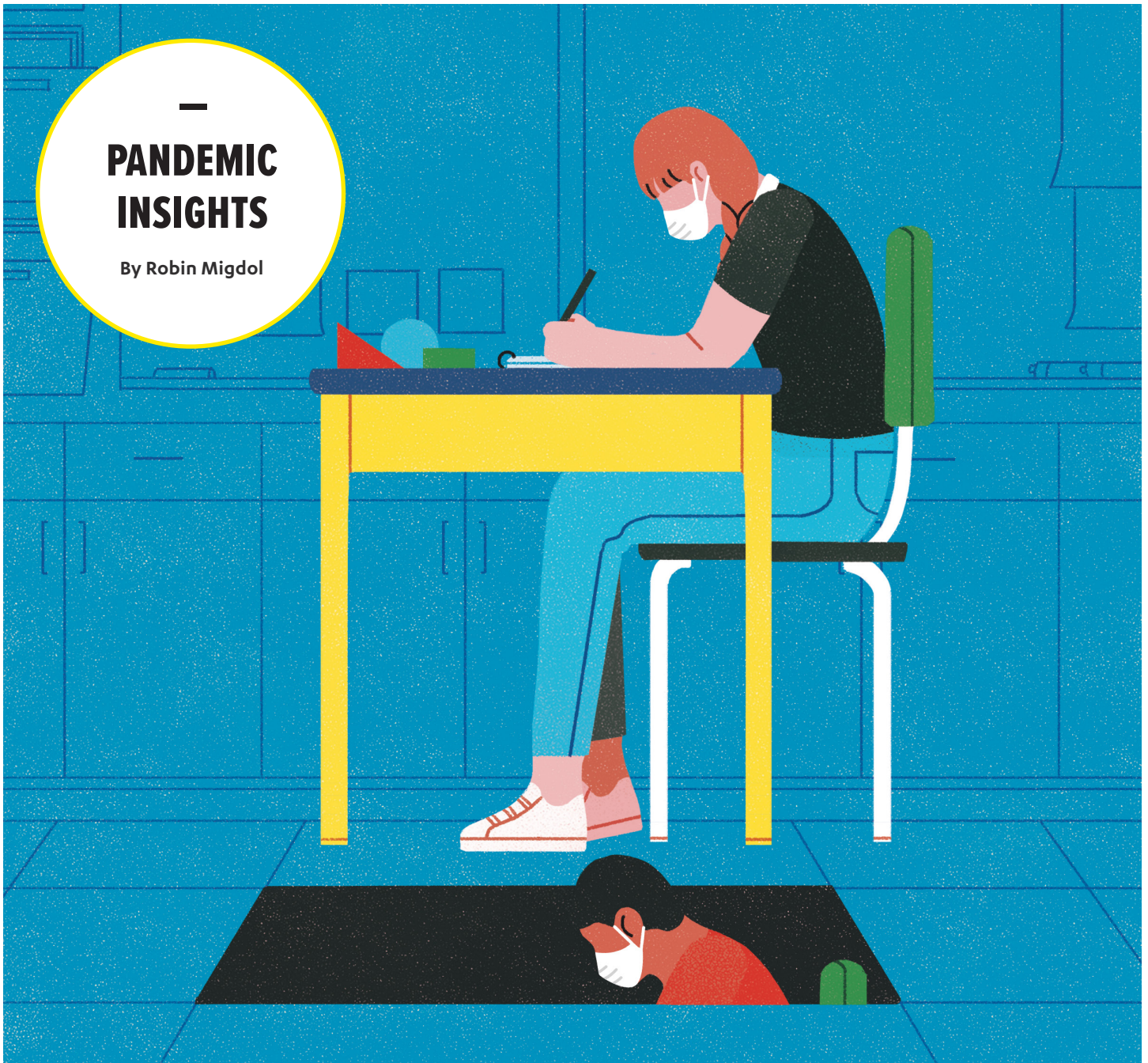
“The only reason that Indigenous Peoples now have some of the highest rates of vaccination uptake is because of tribal sovereignty,” Small-Rodriguez said. “Tribes exercised sovereignty and have been able to protect their people in ways federal, state and local governments have not. Tribal sovereigns know how to get their people onboard because of their deep commitment to collective survival. In Indigenous communities, we are born and raised with a collective survival strategy, and we’ve been doing this since we were invaded 500 years ago. This is something that we have seen shine through in the middle of this pandemic — something positive amidst so much negative.”

LEARN MORE

Listen to the “All My Relations” podcast co-hosted by professor Small-Rodriguez at www.allmyrelationspodcast.com.

— PANDEMIC INSIGHTS

By Robin Migdol



UNDERGRADUATE RESEARCHERS PUBLISH PAPER ABOUT REMOTE LEARNING DISPARITIES

Among the classes in UCLA's vast course catalog, "Health Disparities and the Environment" might not stand out, but undergraduates who enroll in it have a remarkable opportunity: They get to do research under the guidance of senior faculty in the ecology and evolutionary biology department.

A yearlong research course series with biology professor Paul Barber, the class is geared toward sophomore pre-med students from underrepresented groups to support their success in STEM (science, technology, engineering and math) majors and maintain their path to medical school.

When UCLA transitioned to remote learning at the start of the COVID-19 pandemic in March 2020, Barber and his students were

faced with a question: How do we continue the research component of the class?

They had been preparing to research food-insecure communities of color in Los Angeles by interviewing people fishing at local piers and testing fish samples for chemical and microbial contaminants. But with the rise of COVID-19 and UCLA's switch to remote learning, interviewing people in the community became impossible.

The students could easily have put all their research projects on hold until they could return to campus. Instead, they embarked on a new project to research disparities in how they and their peers were adjusting to remote learning.

RESEARCH IN REAL TIME

"The students decided they wanted to develop a survey to understand the experiences of UCLA students during remote instruction and try to understand whether the challenges that they were facing were unique to them," Barber said.

Soon after UCLA had transitioned to remote learning, the campus launched several initiatives to help students. The Bruin Tech Grant provided laptops, Wi-Fi hot spots and tablets to students who needed them. The Administrative Vice Chancellor, UCLA Student Affairs and UCLA Library also published guides to help students stay organized, access digital resources, and manage their health and wellness.

Yet despite UCLA's efforts to support students as they began learning remotely, the students in Barber's class knew there were gaps in how they and their peers were managing.

"Our students realized that the experience they were having with remote learning was not necessarily the same experience that other students were having," said Barber, who also directs the Undergraduate Research Center's Program for Excellence in Education and Research in the Sciences (PEERS).

With the support of the Center for the Advancement of Teaching, Center for Educational Assessment, the Academic Advancement Program, the registrar's office, and then-Dean and Vice Provost of Undergraduate Education Patricia Turner, the students created a survey that was distributed to a random sampling of 20% of the undergraduate student body.

The survey included questions about student satisfaction with remote learning, technological barriers, ability to focus, student time demands, living situation, added responsibilities, financial issues, food insecurity and other COVID-19 related obstacles.

The results showed that first-generation students and students from underrepresented communities, as well as STEM students, found the transition to remote learning more difficult than other students.

"One staggering statistic found was that technology limited the ability to engage in remote instruction for 42% of first-

generation and 36.6% of underrepresented minority students," said Jennifer Navarez, one of the student researchers who is now a senior majoring in human biology and society. "In addition, STEM students were less satisfied than non-STEM students with remote instruction."

Student researcher and junior psychobiology major Alison Menjivar said, "All three groups experienced technological challenges such as Wi-Fi problems because they didn't really have any access to a computer at home; they always relied on the technology at school. And then, this probably interfered with their participation in the classroom. So some people might not have been able to participate in discussions or attend lectures."

INSIGHTS INFLUENCING CHANGE

Barber and the students organized their data in a report that was shared with Turner and others in the UCLA administration, including the Center for the Advancement of Teaching (CAT) and the COVID-19 continuity task force. Barber said there was "tremendous" interest in the survey's findings, and while the campus had already enacted initiatives to support students during the pandemic, simply raising awareness of students' experiences made a difference.

"Just by understanding the challenges students are facing, it increases faculty empathy for what students are going through," Barber said. "Having that data and seeing the results is quite sobering. It's made me think a lot more about the welfare of my students, and I checked in with them more to see how they're doing."

Marc Levis-Fitzgerald, director of CAT's Center for Educational Assessment, said for him the report's most important takeaway is that challenges faced by underrepresented and first-generation students are the result of disparities that existed long before remote learning began.

"Given that feedback from quarterly surveys of our students during COVID remote learning was generally positive, minus

challenges with feeling a sense of community, this deeper look at different groups was enlightening," he said.

The resulting paper was accepted for publication in the *Journal of Microbiology & Biology Education*. Levis-Fitzgerald pointed out that completing and publishing a research paper in less than a year is a rare achievement, especially for undergraduates.

Doing research about their own challenges, then presenting that research to campus leaders who have the power to positively influence the students themselves, was a significant opportunity, Barber and the students said.

"I think the most significant outcome of this paper is that it will be used to influence change at UCLA and help assist professors in making equity-minded decisions to support all UCLA students," Navarez said.

**"HAVING THAT
DATA AND SEEING
THE RESULTS IS
QUITE SOBERING."

- PROFESSOR PAUL BARBER**



A NEW SOCIAL JUSTICE CURRICULUM

NEW CURRICULUM TO LAUNCH WITH \$5 MILLION GRANT FROM MELLON FOUNDATION

By Margaret MacDonald

A \$5 million grant from The Andrew W. Mellon Foundation will enable UCLA to further its commitment to social change and public service by establishing the UCLA Mellon Social Justice Curriculum in the divisions of humanities and social sciences of the UCLA College.

The funding will lay the foundation for a publicly engaged, data-driven approach to teaching and research on social justice issues, positioning more UCLA graduates to become social change leaders in their chosen professions.

The new curriculum is expected to attract the rising numbers of UCLA students who are committed to social justice issues but have been underrepresented in courses and majors that provide

critical training in statistics, computation and quantitative research methods. These include students from low-income households, first-generation college students and those from historically underrepresented groups.

“We are deeply grateful to the Mellon Foundation for enabling us to create new opportunities for our students to grow intellectually while obtaining the skills required to succeed in a host of professional careers,” said David Schaberg, senior dean of the College and dean of humanities. “The social justice curriculum will empower our students to put their humanistic vision to work in the service of social change.”

The five-and-a-half-year grant will support wide-ranging curricular initiatives,

“With this generous grant, the Mellon Foundation has given UCLA the means to transform what and how we teach by centering social justice, community engagement, and the critical tools and methods for knowledge creation.”

new degree programs and community-engaged research. It will also allow UCLA to hire faculty whose research, teaching and service will strengthen diversity and equal opportunity on campus, in particular scholars with expertise in the field of experimental humanities, which includes digital, urban, environmental and health humanities.

Intertwined social justice issues

The curriculum will focus on four intertwined social justice issues at the core of the experimental humanities: racial and spatial justice, data justice, environmental and economic justice, and health justice.

“Addressing complex social problems requires the interpretative methods, critical knowledge, historical perspectives and values infrastructure informed by engagement with the humanities, culture, arts and society,” said Darnell Hunt, dean of social sciences. “With this generous grant, the Mellon Foundation has given UCLA the means to transform what and how we teach by centering social justice, community engagement, and the critical tools and methods for knowledge creation.”

UCLA’s strong community connections will be leveraged, in partnership with the UCLA Center for Community Engagement, through academic courses that mutually benefit students and community partners, student internships, and summer institutes and workshops. Courses tailored to the curriculum will offer instruction in data literacy, statistics and computational research methods, linked with the study of narrative and media-making.

New course to focus on Los Angeles

An introductory course for freshmen titled “Data, Society, and Social Justice” — co-taught by interdisciplinary faculty teams with expertise on the environment, cities, health and racial disparities in Los Angeles — will focus on frameworks for understanding social inequalities and train students to assess the practical and ethical implications of data-driven approaches to social change.

This latest Mellon grant to the College follows a five-year grant awarded in 2015 that supported innovative and more inclusive methods of humanities teaching and brings the foundation’s total support for UCLA to approximately \$60 million.

Schaberg and Hunt are co-principal investigators on this project. The faculty leads are Todd Presner, chair of UCLA’s digital humanities program and the Ross Professor of Germanic Languages and Comparative Literature, and Juliet Williams, professor of gender studies and chair of the UCLA social science interdepartmental program. Co-chairs of the faculty advisory committee are Safiya Noble, associate professor of information studies and African American studies, and Sarah Roberts, associate professor of information studies with affiliate appointments in labor studies and gender studies. Roberts and Noble also co-direct the UCLA Center for Critical Internet Inquiry, which will play a key role in programming.

Keck Telescopes

ON A **COSMIC** SCALE

**GIFT FROM ASTRID AND HOWARD PRESTON
WILL FUND RENOVATION OF UCLA'S REMOTE
OBSERVING FACILITY AT THE HEART OF CAMPUS**

By Margaret MacDonald

The UCLA College's Division of Physical Sciences has received a gift of \$500,000 from alumni Astrid and Howard Preston to renovate and expand the facility that enables prominent UCLA astronomers and research scientists to observe distant galaxies and stars without leaving campus.

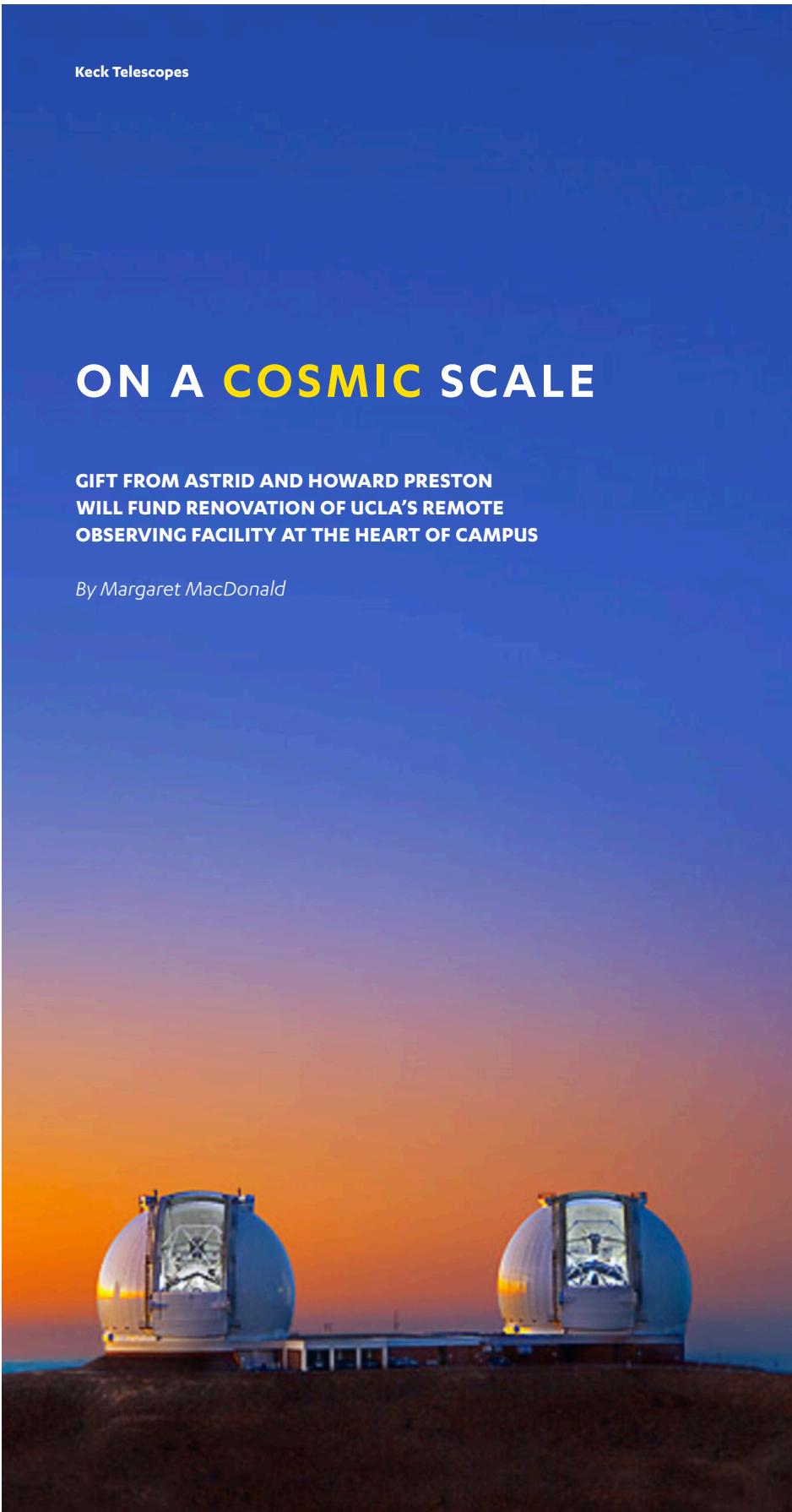
Renamed in honor of the couple, the Astrid and Howard Preston Remote Observing Facility in Knudsen Hall provides remote access to the Keck telescopes in Hawaii and the Lick telescope in Northern California. It will also link to the Thirty Meter Telescope in Hawaii once construction on that telescope is complete.

The division matched the Prestons' gift at 50%, bringing the total investment to \$750,000.

"We are incredibly grateful for this generous gift, which will enhance remote observing capabilities for world-renowned research groups in our division for decades to come," Dean of Physical Sciences Miguel García-Garibay said. "It's yet another high impact example of the Prestons' long record of leadership and philanthropy in support of the Department of Physics & Astronomy."

When completed, the facility will include remote observing areas equipped with state-of-the-science technology, as well as areas for food preparation and sleeping, since most observing takes place during the night and early morning hours.

"I can't emphasize enough how critical the remote observing facility is to our work. It allows us convenient real-time access to precious telescope time so that we can collect the observational data that advances our research," Andrea Ghez, the Lauren B. Leichtman and Arthur E. Levine Chair in Astrophysics, said. "The renova-



PHOTOS: (LEFT TO RIGHT) COURTESY OF LAURIE HATCH; REED HUTCHINSON/UCLA COLLEGE



Howard and Astrid Preston

tion made possible by the Prestons' gift will not only make a huge difference to all of us who use the facility but also will facilitate the technical development of the Thirty Meter Telescope, the Keck telescopes and the Lick telescope."

Longtime commitment

The Prestons have supported the Department of Physics & Astronomy for more than 20 years. They previously established the Howard and Astrid Preston Term Chair in Astrophysics and the Preston Family Graduate Fellowship in Astrophysics. Howard serves on UCLA's Galactic Center Group Board of Advisors and Physical Sciences Entrepreneurship and Innovation Fund. Astrid is on the board of Women & Philanthropy at UCLA and the Department of English board of visitors.

The couple met as UCLA undergrads in 1963. After earning a doctorate in physics, Howard founded Preston Cinema Systems, maker of high-tech camera and lens control systems for film and television. Astrid, who graduated with a B.A. in English, is an acclaimed painter.

"Astrid and I have followed the exciting progress of UCLA's astronomy research groups for some time, and we know how important this facility is to their work," Howard Preston said. "We are absolutely delighted that we can support this much-needed renovation and expansion, and we are eager to see what discoveries are around the corner."

LEADING UCLA RESEARCH GROUPS

The Preston Remote Observing Facility is used by four leading astronomy UCLA research groups:



THE GALACTIC CENTER GROUP

Led by 2020 Physics Nobel Laureate Andrea Ghez, this research group studies the formation and evolution of galaxies and their central supermassive black holes.



COSMOLOGY, GALAXIES AND GALAXY EVOLUTION

Faculty study the nature of galactic nuclei and quasars, the first generation of galaxies and the structure of the early universe.



THE INFRARED LABORATORY

Experts develop techniques and applications of infrared imaging devices for astrophysics, including infrared cameras and spectrometers for Lick Observatory, Keck Observatory, Gemini Observatory, the Thirty Meter Telescope (TMT) Observatory, and NASA's Stratospheric Observatory for Infrared Astronomy.



EXTRASOLAR PLANETS AND PLANETARY SCIENCE FACULTY

Scientists study the dynamics and physical properties of the interiors, surfaces and atmospheres of Earth, planets, moons and other solar system objects.

SWEET SERENDIPITY

DON SHEPHERD AND THE SHEPHERD SCHOLARS

By Margaret MacDonald

Dozens of Bruins — 72 and counting — have received scholarships from the Donald R. Shepherd Scholarship Fund, set up in 2007 by philanthropist Donald Shepherd to support high-achieving, low-income students from San Diego County.

In October 2020, Shepherd committed nearly \$1 million more to his scholarship fund, an exceptional gift that will open the doors to a UCLA education for even more students in the years to come.

Shepherd grew up in the small farming community of Rose Corners, Michigan, and was educated in a one-room schoolhouse through the eighth grade. As a high school student, he juggled team sports with a part-time job and helping out at his parents' gas station and store. He attended the University of Michigan on a Regents' Scholarship and earned a degree in business administration in 1958.

One frigid morning in 1961, as he scraped the ice off his windshield, Shepherd decided he'd had enough of Michigan winters. He resigned that very morning from his job at Detroit Bank and Trust. Soon after, he packed his car and drove to sunny Los Angeles via Florida, not knowing a soul.

"Sometimes it's important to follow your instincts and take a risk, because things have a way of working out," he said. "I'm a big believer in serendipity."

Shepard met success in L.A. He got a job at Title Insurance & Trust Company and 11 years later joined Loomis, Sayles and Company, where he rose to the position of CEO. He retired in 1995, served on several corporate boards, and until recently worked in a voluntary capacity with the San Diego Zoo, Scripps Research Institute and the Rancho Coastal Humane Society.



Don Shepherd, front row left, with Shepherd Scholars in 2019. Also pictured is then-Dean of Undergraduate Education Patricia Turner, second row left, and Annelise Gazale, front row right.

Shepherd enjoys his time with Shepherd Scholars at annual luncheons in San Diego, and he stays in contact with many of them long after they graduate.

"Without exception, these students are smart, articulate and engaging, and they aim high," Shepherd said. "Even with full academic workloads, they find time to do volunteer work and community service. It's so gratifying to see them go on to succeed after graduation, whether it's in graduate school or straight into working life."

Shepherd Scholar Annelise Gazale is a junior majoring in psychobiology with a minor in the study of religion.

"I'm a first-generation college student, so the entire college application process was new, confusing and exciting to me," Gazale said. "This generous and life-changing scholarship has helped me and my family tremendously. I'm beyond grateful."

As well as maintaining a 4.0 GPA, Gazale is president of Bruin Blood Initiative and plans to go to medical school.

Angela Deaver-Campbell, who oversees and administers the Shepherd Scholarships as director of UCLA's Scholarship Resource Center, said, "The Shepherd Scholarships make a huge difference to these students. The support allows them to focus on their studies, pursue opportunities outside the classroom and graduate with little to no debt."

SEEDS OF THE UCLA CONNECTION

A long-standing supporter of the University of Michigan's athletics department and marching band, Shepherd began giving to UCLA in the 1990s.

An avid gymnastics fan, he met then-UCLA women's gymnastics coach Valorie Kondos Field through a mutual friend. His respect for her led him to fund the refurbishment of the gymnastics training facility and establish scholarships.

Kondos Field introduced Shepherd to legendary Bruin basketball coach John Wooden, who shared his love of gymnastics, and they sat next to each other at many home meets at Pauley Pavilion.

Shepherd went on to establish merit-based awards for UCLA student-athletes to pursue postgraduate study anywhere in the world.

LEARN MORE

www.scholarshipcenter.ucla.edu



Alysa Kataoka (left); Ryan Vuong (far left, back row) with friends at the Sci | Art Lab Summer Institute.

JOURNEYS IN PRECOLLEGE SUMMER INSTITUTES

By Robin Migdol

The summer before their senior year in high school, Ryan Vuong and Alysa Kataoka each spent a week on campus participating in UCLA's Precollege Summer Institutes, but that was only the beginning of their Bruin journeys. Both went on to attend UCLA as undergraduates.

Precollege Summer Institutes are residential and commuter programs for high school students taught by UCLA instructors. Students can earn academic credit and take part in field trips and laboratory research. With nearly two dozen subjects as diverse as Game Lab and Mock Trial, Precollege Institutes offer students the opportunity to delve deeply into an area they're passionate about.

Engineering a path forward

Kataoka participated in the Nanoscience Lab Summer Institute, offered by UCLA College's California Nanosystems Institute (CNSI), in 2016. Already planning to apply to UCLA, she chose nanoscience to gain hands-on experience in engineering and applied science.

During the program Kataoka explored a variety of topics in nanoscience and gained a mentor in program coordinator Elaine Morita, who advised Kataoka on internship and other opportunities after her acceptance to UCLA.

Kataoka graduated with a degree in mechanical engineering in 2021 and will begin a master's in mechanical engineering at UCLA in the fall. She said the Nano-

science Summer Institute taught her skills that she still uses today.

"The most important skill I learned was to be able to explain science or scientific concepts to people who aren't familiar with chemistry or engineering," she said. "I also learned to be comfortable with public speaking. People have this idea that engineers kind of keep to themselves and they don't have to interact that much with other people, but I realized that that couldn't be further from the truth."

A head start on life skills

In 2018, Vuong participated in the Sci | Art Lab Summer Institute, which bridges science and art to encourage creative thinking and innovation. Apart from enjoying the coursework, he caught an early glimpse of life on campus.

"What I enjoyed most was the ability to interact and connect with other students my age, especially in such a close-knit setting with everyone living in the same dorm," said Vuong, now a UCLA Regents Scholar entering his junior year as a computer science major. "It helped me get a sense of living on my own, doing my own laundry, keeping track of meals, and not having a parent with me at all times."

Both Vuong and Kataoka were also recipients of UCLA Summer Sessions' Summer Scholars Support, a need- and merit-based scholarship for California high school students.

FAST FACTS



Precollege Summer Institutes are administered by UCLA Summer Sessions, which serves all UCLA undergraduates and is part of the UCLA College's Division of Undergraduate Education.



Thousands of students from around the world attend UCLA Summer Sessions.



Nearly 75% of Bruins take courses in Summer Sessions during their undergraduate career.



Open enrollment means high school students and college students from outside UCLA are able to attend and earn UC credit from more than 800 courses and Summer Institutes each summer.

LEARN MORE

www.summer.ucla.edu

RESILIENT, BRILLIANT BRUINS

FROM VIRTUAL COMMENCEMENT CEREMONIES TO SMALL, SOCIALLY DISTANCED IN-PERSON CELEBRATIONS ON CAMPUS, COMMENCEMENT LOOKED A LITTLE DIFFERENT THIS YEAR, BUT THE ENTHUSIASM OF THE CLASS OF 2021 WAS STILL PALPABLE.





PHOTO: (SCORZA) MIKE BAKER/UCLA



Watch the virtual ceremony at <http://ow.ly/sM6p50FncG>

D'ARTAGNAN SCORZA '07, PH.D. '13

Civic leader and social justice campaigner D'Artagnan Scorza delivered an inspiring keynote address on June 11 as part of the UCLA College's virtual commencement in a program that also featured UCLA Chancellor Gene Block, Nobel laureate Andrea Ghez and student speakers.

"D'Artagnan Scorza has given back to his fellow Bruins and his fellow Americans in myriad ways since his graduation," said David Schaberg, senior dean and dean of the humanities in the UCLA College. "His incredible life experiences and dedication to social change inspired our graduating seniors to aim high and make a difference in the world."

A decorated U.S. Navy veteran, Scorza's research, policy initiatives and grassroots organizing have had a significant impact on high-need communities throughout California. He is the inaugural executive director of racial equity for Los Angeles County and president of the UCLA Alumni Association. He is also a lecturer at the UCLA Fielding School of Public Health.

"This year's graduating class deserves so much credit for their achievement and resilience in the face of the pandemic," Scorza said. "It's an incredible honor to have been asked to give the commencement address to this remarkable group of Bruins."

Scorza founded and led the nonprofit Social Justice Learning Institute, focused on opening up academic and career opportunities for Black and Latino youth in his hometown of Inglewood, California. He also served as president of the Inglewood Unified School District Board of Education and chaired a campaign to secure \$350 million in school improvement bonds for the district's schools.

Following the Sept. 11 terrorist attacks, Scorza interrupted his UCLA undergraduate education to serve four and a half years in the Navy, including a deployment to Iraq. He returned to UCLA to complete his bachelor's degree and earn a doctorate in education. As a UC student regent from 2007 to 2009, he helped pass policies that established veterans' service centers and prioritized \$160 million for student services across UC campuses.

IN CONVERSATION WITH

BRADLEY BURNAM '01

By Bekah Wright

Brad Burnam '01, founding member of the recently formed UCLA Social Sciences Dean's Advisory Board, says that delivering UCLA's Department of Sociology's 2019 commencement address was "the most amazing day of my life." The theme: "Know Your Why."

One might assume to know Burnam's "why" from the story behind Turn Therapeutics, the biotechnology company he founded that specializes in advanced wound care and infection control. A severe skin and cartilage infection born of antibiotic resistant bacteria led to 19 surgeries on his scalp and ear. The technology he invented in his home-built laboratory ended up saving his own life and helping many others.

Q. What was your "why" when you headed to UCLA?

A. I really wasn't certain what I was interested in when I started. And with UCLA being a big place, it was hard to find that in the first couple of years. While there, I became entrenched in a program through which students got to teach seminars on public speaking, study skills and speed-reading. It made me realize I really love to teach. I also was extremely interested in how to teach people with learning differences. When I left UCLA, all I wanted to do was teach.

I got my master's in education at Stanford, and my thesis was on how to address ADHD without chemicals. After graduation, I worked with kids with learning disabilities. My life took several random turns after that, but my "why" never changed. Today, my company is my teaching platform and the subject is very personal, having been a victim of a recurring, antibiotic resistant infection.

Q. Who inspired your path?

A. My dad, who was a cardiologist, would go to the emergency room where someone was dying of a heart attack. An hour later, he'd be back home and that person would be alive. His having that kind of impact on people's lives blew me away. Because of him, I wanted to be a healer.

Q. You've since worked with cardiology patients?

A. I was a medical device rep for two big pacemaker companies, a job that let me experience a little of what I dreamt about growing up. I'd be in the operating room tuning up what was controlling patients' hearts and making sure they were beating properly. There were occasions where I'd notice the programming was wrong and could make a change that would allow that person to walk out an entirely different person.

**Q. What is success to you?**

A. When I see photos and studies of patients whose limbs my company has saved from amputation or whose severe eczema outbreaks we have halted, that keeps me going. It's a crazy thing to wake up and think, "My dad got to help a few people at a time. I get to help thousands at a time."

Q. What does your future look like?

A. My immediate future is decidedly Turn's future. I plan to grow this company as a major disruptor in the medtech and pharmaceutical space. Eventually, I want to go back and get my Ph.D. in social sciences with an emphasis in public health, then join the professor ranks while continuing to innovate in biotech.

Q. What advice would you give to others?

A. Figure out what you're amazing at and then perfect it, rather than trying to be good at everything. Even if you have to take smaller wins over time and reduce instant gratification, don't sacrifice the identity of your "why" over quick money. You'll never forgive yourself.

Early on, there were people who wanted to take my technology and apply it to minimally impactful, but highly profitable indications. While it probably would have made a ton of money, I wouldn't have received a single photo from a patient whose limb was saved thanks to this technology.

A scuba diver with dark hair in a bun, wearing a black wetsuit with yellow accents and a scuba tank, is underwater. She is making peace signs with both hands. The background is a clear blue ocean with some coral visible at the bottom.

CAMILLE GAYNUS

PH.D. '19 BIOLOGY
DEPARTMENT OF ECOLOGY
AND EVOLUTIONARY BIOLOGY

TOGETHER, WE CAN HEAL THE OCEANS.

A lifelong swimmer, Camille Gaynus Ph.D. '19 is in her element underwater. It's no surprise that her field research involved diving the coral reefs of French Polynesia. As well as healing the world's oceans, she is on a mission to open pathways to science careers to more people of color. As a grad student, she brought high schoolers to campus for tours and gave talks at local K-12 schools, scuba gear in tow. Currently transitioning from a postdoc at the University of Pennsylvania to a lecture position at Penn State, she co-founded the nonprofit Black in Marine Science and A WOC (pronounced A Woke) Space, through which women of color can support one another and enact change.

UCLA College
Life Sciences

TO READ MORE OF CAMILLE'S STORY VISIT
●●● [COLLEGE.UCLA.EDU/OURSTORIES](https://college.ucla.edu/ourstories)

UCLA College Magazine

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**OUR CHOICES ARE ONLY AS GOOD AS OUR OPPORTUNITIES.
IT'S REALLY DIFFICULT TO LIVE A HEALTHY, FRUITFUL LIFE IF YOU
DON'T HAVE ACCESS TO THE RESOURCES NEEDED TO THRIVE.**

**UCLA INCUBATED MY IDEAS AND SUPPORTED ME WHEN I WAS
BUILDING MY NONPROFIT AND WORKING TO SERVE MY COMMUNITY.
THIS SUPPORT WAS CRITICAL BECAUSE IT SAYS TO OTHERS,
AND THOSE WHO GREW UP IN COMMUNITIES LIKE MINE,
THAT WE ARE WELCOME AT UCLA.**

- D'ARTAGNAN SCORZA '07, PH.D. '13
Civic leader and 2021 commencement speaker
