

360

The Magazine of San Diego State University (ISSN 1543-7116) is published by SDSU Marketing & Communications and distributed to members of the SDSU Alumni Association, faculty, staff and friends.

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Periodical postage paid at San Diego, CA Volume 23, No. 2, copyright 2016 San Diego State University Circulation: 60,000

Postmaster

Send address changes to: San Diego State University 5500 Campanile Drive San Diego CA 92182-8035 alumnidata@sdsu.edu

Opinions expressed in 360 Magazine are those of the individual authors and do not necessarily represent the views of the university administration nor those of The California State University Board of Trustees.

Gold medal winner, Council for Advancement and Support of Education (CASE)



FROM THE PRESIDENT



Universities have a timeless and enduring character. At the same time, they are engines of change that move our society forward. The summer issue of *360* demonstrates how these qualities work together to make today's university a wellspring for the ideas and innovations that improve everyday life and solve our most pressing challenges.

Universities are not only places for learning but also repositories of knowledge — preserving our culture and discoveries across the generations and across the centuries of human history. As you will find in this issue's story on the lore of books, acquired knowledge provides the building blocks we need to reimagine, innovate and move into the future with new approaches such as digital literature.

360 also highlights bioarchaeologist Arion Mayes' research into a society that lived some 2,000 years ago near Oaxaca, Mexico. Her work is an invaluable field lab for our

next generation of researchers and may also give us insights into human health today. In addition, we take a look at efforts in Forest Rohwer's lab to understand viruses—one of Earth's oldest organisms. This research is providing tantalizing clues that may help us solve some of today's health and environmental problems.

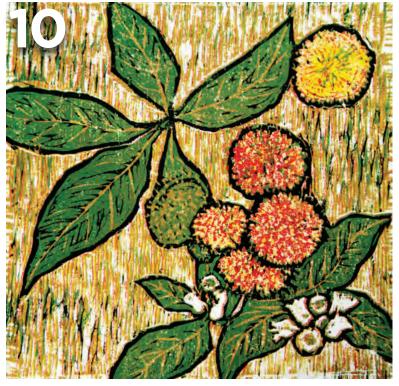
You will also read in 360 Magazine about the National Institutes of Health's investment in SDSU's efforts to create innovative health care—granting a \$10 million endowment that will enhance our research focused on improving health in underserved communities.

I hope you enjoy this edition of 360: The Magazine of San Diego State University.

Elliot Hirshman

Elliot Hh

FEATURES









360

Everything old is new again: Trends come back into fashion, wisdom resurfaces, and new technology lets us look at old knowledge anew. The summer issue of *360* explores how the familiar can astonish us by assuming new forms and revealing timeless truths.

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Digital literature has increased our fascination with the book in all its varied forms.

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Dental remains reveal the lifestyle and culture of an ancient people who lived in coastal Oaxaca.

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There's no question too big or bizarre for the Viral Information Institute's motley crew.

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SDSC's Groovy Experimental College

Compass

Headed to Rio

San Diego State University alumni Whitney Ashley and Shanieka Thomas will compete in the 2016 Olympic Games in Rio de Janeiro this summer.

Ashley won the discus throw competition at the U.S. Olympic Trials in Eugene, Oregon, to clinch a spot on the U.S. track and field team. Thomas qualified to represent Jamaica in the triple jump by taking second at the Jamaican Senior National Championship.

Ashley and Thomas are the 13th and 14th Olympians in SDSU women's track and field history. At press time, current students Ashley Henderson (200-meter dash) and Kristen Thomas (pole vault) were also scheduled to compete in Olympic trials for the U.S. team.

A flying start

Each year, an estimated 1.7 million people in the United States sustain traumatic brain injuries (TBIs), according to the U.S. Centers for Disease Control and Prevention. Physicians and researchers have become increasingly concerned that even mild cases of repetitive brain trauma could have long-term, unanticipated consequences.

A new study led by SDSU scientists and recently published in the journal *Nature Scientific Reports* suggests that using fruit flies as a TBI model may hold the key to identifying important genes and pathways that promote the repair of and minimize damage to the nervous system.

Author Kim Finley noted that because fruit flies grow old quickly, observing them allows researchers to rapidly study the long-term consequences of traumatic brain injury. "Traits that might take 40 years to develop in people can occur in flies within two weeks," she said.

Early results of the research suggest that studying traumatic injury in fruit flies may indeed reveal genetic and cellular factors that can improve the brain's resilience to injuries.



Point of Entry

Adventurer Thor Heyerdahl said of borders: "I've never seen one but I've heard they exist in the minds of some people."

How we see and interpret borders is the subject of an ambitious exhibition at San Diego International Airport. Curated by San Diego State University professor Norma Iglesias-Prieto, "Point of Entry" includes the work of 14 artists and organizations inspired by the geographic, cultural and social intricacies of borders—both real and perceived. At Gate 28, Terminal 2, Oscar Romo's three sculptural reliefs depict the Tijuana River's passage from Mexico into the United States. In one of them, Romo uses discarded bicycle chains to represent the flow of the river, a nod to the pollution and debris that both countries have failed to address.

"San Diegans tend to ignore their border with Mexico," said Iglesias-Prieto, "but the only way to solve serious issues like water is with a transborder approach."





The petite, energetic Costanza was President Jimmy Carter's adviser on social issues, his "window on America," said Mattingly, associate professor of women's studies at San Diego State University. She was also a champion of gay and women's rights.

White House and afterward, including memos, letters,

photos, interviews. Costanza's unfinished memoir and scripts for a film based on her life. Costanza died in 2010 at the age of 77.

Sock it to me

Beneath every great athlete is a great pair of socks. At least, that's the philosophy behind alumnus John David Wilson's ('93) apparel company, Stance, which recently inked a deal with Major League Baseball to become the league's official sock provider. That follows a 2015 agreement making Stance products the official on-court sock of the NBA.

Wilson co-founded Stance in 2009. He returned to campus this past April as part of the Lavin Entrepreneurship Center's L. Robert Payne Speaker Series. Wilson, who majored in marketing, discussed how culture is vital to a company's success, and described how incorporating art and self-expression into his company's products has attracted athletes and performers.

Spirit of innovation

A highlight of this year's San Diego State University Commencement was the presentation of the inaugural Zahn Spirit of Innovation Award to Austin Owens, a mechanical engineering graduate. Owens founded the Mechatronics Club and led it to a first-place finish in the 2015 international RoboSub competition. He now works at SpaceX, the exploration company founded by Elon Musk.

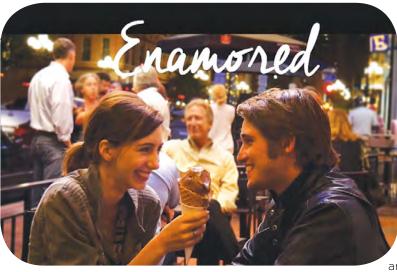
The newly created Zahn Spirit of Innovation Award, which will be given annually to a graduating senior who demonstrates exceptional entrepreneurship, includes a substantial cash prize funded by seed money from SDSU supporter Irwin Zahn. He is well known on campus for endowing the Zahn Innovation Platform (ZIP) Launchpad and for his unflagging efforts to foster student innovation and interdisciplinary collaboration.

A trip to **Cannes**

Novice filmmakers dream about being invited to show their work at prestigious festivals like Cannes and Sundance. This year, the dream came true for two San Diego

Illustration: Lynette Cook

State University students. Short films by Chelsea Best ("Enamored") and Maxwell Renner ("Showdown") won awards at Campus MovieFest, a nationwide



competition in which university students have one week to write, shoot and edit a five-minute film.

Several of the winners are then invited to show at the Cannes Film Festival's Short Film Corner. Best said she had an unexpected opportunity to

network with industry professionals while waiting in line to see the Korean thriller "Train to Busan," which she proclaimed her favorite festival film.

Planet hunters

If you cast your eyes toward the constellation Cygnus, you'll be looking in the direction of the largest planet yet discovered that orbits a double-star system—also known as a circumbinary planet. It's too faint to see with the naked eye, but a team led by SDSU astronomers William Welsh and Jerome Orosz used NASA's Kepler Space Telescope to identify the new planet, called Kepler-1647 b.

The planet is 3,700 light-years away and approximately 4.4 billion years old, roughly the same age as the Earth. It's about

Kepler-1647 b is within the habitable zone of its stars.

the same size as Jupiter, and like that planet, it's a gas giant. It is both the most massive circumbinary planet found to date, and also has the longest orbital period, at 1,107 days.

"Kepler-1647 b is important because it is the tip of the iceberg of a theoretically predicted population of large, long-period circumbinary planets," Welsh said.

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Horizons

Big Data, Better Health Endowing ambitions for SDSU health research.

By Michael Price

What factors influence whether a person is healthy? Individual habits and hygiene play a role, certainly, but demographics also significantly shape a person's health. Minorities and people from disadvantaged groups suffer disproportionately from certain types of cancer, obesity, sexually transmitted disease, asthma and heart disease.

San Diego State University scientists who work under the umbrella term "health disparities" are investigating what's behind health inequality and what can be done to reverse it. A recent \$10 million endowment from the National Institutes on Minority Health and Health Disparities (NIMHD) will help bring needed new technology to these researchers and allow them to better collaborate across diverse disciplines.

The scientist largely responsible for this endowment is Guadalupe X. "Suchi" Ayala, professor of health promotion and behavioral science in SDSU's Graduate School of Public Health. She is a fixture in the San Diego health research community, with several ongoing research programs looking at nutrition among Latino residents.

Last year, Ayala noticed a request for applications from the NIMHD, part of the National Institutes of Health (NIH), for a unique funding mechanism: Rather than a traditional grant for specific research goals or training, the agency was offering an endowment that would continually provide funding for infrastructure improvements over a 20-year period. Knowing that she and her fellow investigators were still using pencils and paper to record data in an iPad world, Ayala jumped at the opportunity.

"We already had a good cohort of faculty studying population health and health disparities," said Ayala, who is an SDSU alumna and joined the faculty in 2005, "but we really lacked the infrastructure, the IT support, the newer technology to take us to the next level."





BIG DATA NEEDS BIG COLLABORATION

She also realized the future of the discipline will be far more collaborative than it has been traditionally. We live in a world of Big Data, with mobile technology, social media and electronic health records feeding a rich vein of health data for those who are poised to tap into it. Infrastructural improvements would make it possible for health researchers to reach out to their peers in psychology, geography, engineering and other fields, share their data and mine it for useful, lifesaving information.

So Ayala and SDSU colleagues Kee Moon, a professor in the College of Engineering, and Jose Castillo, director of the Computational Science Research Center, applied for the endowment—and got it.

"This is a long-term commitment of the federal government to our university," said SDSU psychology professor Kristin Wells, who works with cancer-related disparities and cancer communication. "It's exciting that they really believe in the research we do and our potential to move forward."

The endowment will contribute \$2 million per year over the next 5 years to SDSU's philanthropic auxiliary, the Campanile Foundation. This money will be invested and the returns it generates will be used for research infrastructure improvement. At its peak, the endowment should generate roughly \$479,000 per year.

BETTER, STRONGER, FASTER

The money can be spent in a variety of ways that boost the ability of SDSU researchers to carry out their research and better collaborate across disciplines. Ayala listed just a few examples: iPads to collect data in the field and immediately transmit it back to the lab; wireless sensors to track vital signs or tobacco use; smartphone apps that record eating habits; enhanced data storage capacity; and hiring IT support and computer programmers to sort through and make sense of all this new and improved data.

"Technology changes so quickly that you don't want to get locked into funding for certain, specific technologies that will quickly become outdated," Ayala said. "The most exciting aspect of this endowment is that it will allow us to build an infrastructure to support research well into the future."

The endowment's funding mechanism is relatively unique among grants awarded by NIH. SDSU must maintain this investment for 20 years, after which the funds will release fully to the Campanile Foundation. At that point, the endowment will have generated about \$20 million in total funding.

Ayala hopes that investing in infrastructure will pay dividends in terms of more traditional grants, as well. Fruitful interdisciplinary collaborations and new avenues of research will make SDSU investigators even more competitive for future funding she said, supporting the university's commitment to health disparities and population health research.

FINE

FAR FROM PRECIPITATING THE

BOOK'S DEMISE, DIGITAL LITERATURE

HRS INCREASED OUR FRSCINATION

WITH THE BOOK IN ALL ITS VARIED FORMS.

he scent of books is all the rage in today's fashion fragrance world. Perfumers create products to simulate the ambiance of a library or "the unique olfactory pleasures of the freshly printed book." (This latter fragrance, a joint venture with Karl Lagerfeld, goes

Humans have fetishized books long before Johannes Gutenberg introduced movable type printing to Europe in 1439. For centuries, the great houses of the wealthy contained substantial libraries representing the owners' education and breeding. "What a miracle it is," said

by the name "Paper

Passion Perfume.")

By Coleen L. Geraghty

writer Anne Lamott, "that out of these small, flat, rigid squares of paper unfolds world after world after world after worlds that sing to you, comfort and quiet or excite you."

A comeback

The growing popularity of e-books unsettled many print loyalists, particularly in the 21st century as sales of e-readers skyrocketed. But books have staged a comeback. Retail sales at bookstores rose 11 of 12 months in year-to-year comparisons between April 2015 and April 2016, according to the American Booksellers Association.

Apparently, public fascination with books has only intensified with the advent of digital literature and the encroachment of a paperless society. Artist Brian Dettmer gained fame by carving, molding and shaping old books into elaborate sculpture. He contends in a 2015 TED Talk

the digitization of information and reference material has allowed the book "to quit its day job...and become

that

something new," in the same way that photography freed the painting to be more than a faithful chronicler of people and events.

Book arts

among

The art of making books—not refashioning them as Dettmer does, but actually creating them by hand—has found a new and appreciative audience

WAS FIRST USED TO DECORATE TEXTILES

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Alumna Betel Renau's illuminated manuscript

students majoring in art and English. San Diego State University English professor Jessica Pressman sees book arts taking its place within the humanities as a scholarly process.

limited edition books. They work with three printing presses manufactured by 20th century industry leader Vandercook & Sons, the oldest a manually operated period piece dating

"A filmmaker makes film," she said. "Why wouldn't a literature major make a book or at

least understand how to make a book? This scholarly act of making demands an appreciation of the book's historical context."

Students in Michele Burgess' Book Arts classes write, illustrate, print and bind their original ideas into

OF THE POETICS." to 1935. Burgess has taught on campus for 16 years while also operating San Diego-

"THE COMPUTATIONAL

PROCESSES ARE PART

"The book has a kind of tangible, visceral beauty that surprises

us sometimes,"

based Brighton Press

with her husband,

Bill Kelly.

Burgess said. "I see that in my students, how constructing something with their hands becomes such a revelation. They take responsibility for every single decision, from the size and shape of the pages, to the weight of the paper, to the type of font to the spacing between letters and words."

Most of Burgess' students choose to work in a traditional format, but others push the boundaries of book-making.

> 'The House on Acama Street," by Mario Saldaña II,

> > (pictured at left) substitutes a handmade wooden box for the traditional

book binding and a three-dimensional snake figure for pages. His story of domestic violence is printed on the snake.

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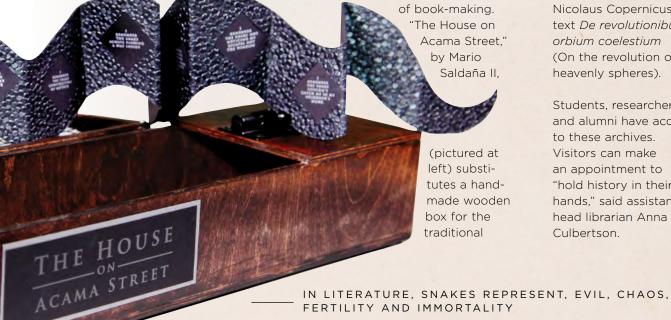
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Each book created by Burgess' students becomes part of an anthology in SDSU's Department of Special Collections and University Archives, which preserves 70,000 printed volumes and more than 500 manuscripts, including a 1543 first edition of astronomer Nicolaus Copernicus' text De revolutionibus orbium coelestium (On the revolution of heavenly spheres).

Students, researchers and alumni have access to these archives. Visitors can make an appointment to "hold history in their hands," said assistant head librarian Anna Culbertson.





Born digital

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Pooling their passion for all things literary, Pressman, Burgess and Culbertson have collaborated on "Bookish," an exhibition of work from SDSU book arts students, currently on display in the library's Donor Hall.

It provides a taste of what's to come when the Year of the Book debuts at SDSU this fall with lectures, panel discussions and workshops—all centered on the enduring appeal of books in this digital age.

Pressman, who previously taught at Yale University, is the author of "Digital Modernism," published in 2014 by Oxford University Press, and is at work on "Bookishness, The Afterlife of Books in 21st Century Literary Culture." She also heads up SDSU's Digital Humanities Initiative, a campuswide collaboration to study digital technologies, employ them in research and teaching, and examine the impact of the digital in society.

A central theme of Pressman's work is the notion that literature takes many forms, depending upon its media. She studies how these forms—from print to digital—employ and exploit particularities of media format for



aesthetic purposes.





literature—
hypertext
fiction, kinetic poetry
presented in Flash,
novels in the form of
emails or blogs, and
collaborative writing
projects (like Netprov)
that allow readers
to contribute to an
unfolding story.

Browse the Electronic

born-digital anthology

org/3/ to find all

@ collection.eliterature.

kinds of inventively

formatted

Literature Organization's

"The computational processes are part of the poetics."

New stories

Pressman's goal is to make SDSU "a beacon" for the creation and study of digital literature in higher education. She and Adam Hammond, also an assistant professor of English and comparative literature, teach classes in which undergraduate students create literature and



Woodcut illustrations adorn Hannah Murdoch's "Edible Flora: SDSU's edible gardens," a book created for Michele Burgess' Advanced Book Arts class and housed in Special Collections and University Archives.

The term "born digital," which Pressman references frequently, describes literature created exclusively on and for digital reading devices.

"Writers are thinking about new and experimental formats and forcing us to look at literature differently," Pressman said. literary criticism on digital devices. Hammond encourages students to use Twine, an open source tool that allows users to

THE FIRST INKS WERE FRUIT AND VEGETABLE JUICES

construct digital narratives with minimal coding knowledge.

"Engines like Twine allow us to tell stories in ways that were not possible before," said

Hammond. author of "Literature in the Digital Age." "There was a lot of excitement about electronic

literature in the '80s and '90s, but it was hard to produce. With these new engines, electronic literature has become a powerful tool for self-expression with a huge audience."

As an example. Hammond mentioned "Depression Quest," one of the first interactive stories created on Twine. As readers click through the tale of a young woman exploring her childhood home, they are faced with choices about what to eat and which activities to take part in.

Confronting reality

Ultimately, the reader realizes that certain choices, though presented on screen. cannot be clicked on because they are "healthy" choices. The takeaway from "Depression Quest"

is that severely depressed people don't make healthy choices. In a printed book the reader would observe that behavior, but an interactive story

"DIGITAL TECHNOLOGY FORCES US TO SEE THE BOOK ANEW."

> forces readers to confront the reality of depression.

SDSU junior Riley Wilson used Twine to create her final project in Hammond's Literary Programming class. Titled "Driving Alone at Night," the story includes visual references to San Diego landmarks, including Balboa Park and the SDSU campus. Images appear at the top of the screen with text below. Readers must interact with certain parts of the text before the program allows them to proceed.

"I knew I wanted to tell a story about a recent graduate searching for what to do next, and driving alone at night was a metaphor for that," said Wilson, who carefully crafted the

text before choosing the moving images. Her work won the inaugural award at SDSU for the best work of student-made electronic literature.

A rich environment

The increasing popularity of digital storytelling with images, hypertext and flashing type doesn't signal the death of the printed manuscript. Those who fear the book is an endangered species can take heart in the words of book historian and Harvard University librarian Robert Darnton. Writing in the Chronicle of Higher Education, Darnton argued that new forms of communication do not necessarily displace old ones.

"Radio didn't destroy the newspaper; television did not kill radio;

the Internet did

he said. "In each

richer and more

complex."

not make TV extinct."

case, the information

environment became

It's this rich environment, this splendid array of opportunities for communication and storytelling that SDSU will celebrate during the Year of the Book. Lectures by Pressman and University of California, San Diego, professor Seth Lerer are scheduled, as is a book-making workshop, a DIY publishing panel featuring experts in the field and an electronic literature competition for students.

Art and artifact

Central to the Year of the Book is the understanding of books as art and artifact. In the moment of the book's supposed obsolescence, Pressman said, there is a heightened creative urge to revere and fetishize it. At the same time, contemporary literary culture has embraced a shift to digital technology, forcing us to see

book anew as a talisman for humanity's hopes, dreams and best intentions.

the



VIDEO SDSU.EDU/BOOKISH

Dental and bone remains from Oaxaca's Río Verde Valley reveal the secrets of a lost culture.



Papyrus molders, stone etchings erode, memories wither and histories are rewritten. Teeth remain. Several thousand years from now, our teeth may document our lives more faithfully than any recording technology.

Teeth tell the story of Burial 97-Individual 107, as he's known academically, who lived some 1,400 years ago (600-800 A.D.) at the Río Viejo archaeological site in the Lower Río Verde Valley, approximately 10 kilometers from the Pacific Ocean in the modern state of Oaxaca, Mexico.

That B97-I107 was buried in a communal cemetery suggests he wasn't a member of his society's ruling elite. That he was entombed within a giant ceramic vessel in the central acropolis before the surrounding buildings were

constructed, and with teeth decoratively filed and inlaid with flashy, mirror-like hematite, suggests he was something more than a commoner.

Such elaborate dental modification can signify the literal embodiment of one's culture, explained San Diego State University bioarchaeologist Arion Mayes, who has spent more than a decade poring over the ancient bones left behind in the Lower Río Verde Valley. In this region of Mexico, cutting, shaping and putting inlays into teeth is a dramatic gesture that in life likely conferred special status, and in death provides a window into the symbolism vital to B97-I107's society.

"No matter who he was in life, he seems to have been given a special status in death," Mayes said. "Everything about him was symbolic. He's simply amazing."

Uncovering history

Mayes has studied everything from 18,000-year-old human remains in Africa to modern forensic anthropology cases. She has investigated population movement and peopling of the New World, as well as the forced migration of enslaved people through her work with the New York African Burial Ground. She first traveled to Oaxaca in 2003 while working at the Smithsonian Institution. She joined SDSU in 2005 and began taking students to help with excavation and cataloguing, data recording and skeletal analysis.

So far, she and her students have worked with five archaeological sites near or along the Pacific coast of Oaxaca. They collect demographic information such as sex and age at



death, and document skeletal evidence of nutrition, disease or trauma. Their goal is, ultimately, to reconstruct the biological history of the region.

Mayes and her colleagues consult with local villagers in these excavations. It's more than an academic interest for them, she said. As they work on and learn about the archaeological sites and remains around them, they become invested in the history of their area.

"We couldn't do the work we do if we didn't work with the local communities," Mayes said. "Some of the best archaeologists I know aren't formally trained."

Primarily, Mayes' research adds to a growing body of work on population health before and after societies' transition to agriculture, as well as other health variations due to cultural and environmental factors.

"There are trade-offs in that transition," she explained. "In the short-term, agriculture lets you feed more individuals. In the long-term, though, you see some health shakeups related to a diet with a heavy reliance on corn."

Dental diaries

Teeth, more so than any other human remains, are the keys to unlocking how this transition played out in any given society. Bones are good, too, but thousands of years of alternating rainy and dry seasons leave many skeletons too delicate and precarious to work with. Teeth, on the other hand, are hardy and can stand the test of time.

"Teeth have the greatest archaeological sturdiness," Mayes said. "Enamel is the strongest tissue in the human body."

Mayes' trained eye can tell a lot by a person's teeth. She knows several of the individuals uncovered in the Lower Río Verde Valley worked as weavers. They wove reed baskets, straw containers and cotton fishing nets, holding the strands in their teeth as they worked and leaving behind telltale tooth impressions.

She also knows syphilis existed in the New World before Europeans arrived

on the scene. Mayes was the first researcher to definitively identify the developmental hallmarks of congenital syphilis in teeth found in the Lower Río Verde Valley.

Telling the story

Mayes and her colleagues are still investigating whether there are trends in the population's age and season of death, and whether there's evidence of population movement due to sociopolitical and economic factors and changes to the environmental landscape, which in turn can be related to various diseases that have been identified.

And then there are the unsolved existential questions: Just who were these people in the Lower Río Verde Valley? Where did they come from? What is their relationship to the better-known highland peoples, the Zapotecs and Mixtecs? And what was their relationship with farther regions of Mexico?

Mayes and her colleagues' work is ongoing. This summer, she and her collaborators will be analyzing data accumulated over previous field seasons, assembling their strands of knowledge into a cohesive account. Yet many more questions lay buried, awaiting their return to the valley.

"ENAMEL IS THE STRONGEST TISSUE IN THE HUMAN BODY.

Fresh faces at SDSU's Viral Information Institute are bringing diverse backgrounds and fearless experimentation to the fast-moving world of microbial research.

By Michael Price

There's been a recent trend in superhero movies in which studios make films for individual heroes, and then team them up for a blockbuster extravaganza. San Diego State University's Viral Information Institute (VII) follows a similar formula. Over the past several years, the institute, led by virologist Forest Rohwer, has been assembling a super-team of diverse, highly skilled researchers to combat problems too big for any single scientist or discipline to solve.

Like their celluloid superhero counterparts, these new hires are sometimes oddballs—scientifically

speaking-with unique research interests that made it initially difficult for some to find the right fit within academia. Take Nicholas Shikuma. who joined the VII last year. He studies how bacteria play an essential role in the lifecycle of marine life like tubeworms, sea urchins and corals.

It turns out that these animals need a nudge from bacteria to undergo metamorphosis, turning from larvae into juveniles. Bacteria do this using a kind of modified. headless virus tail as a spear that prods the animals into a metamorphic state.

"Some bacteria form a flower-like matrix of interlinking virus tails," Shikuma explained. "It's really quite beautiful."

Interestingly, these virus-spears are also used to attack other bacteria in a sort of microbial jousting match. This process

raises several evolutionary questions: Did bacteria first modify viruses to use as weapons, which later became incorporated into tubeworms' lifecycles? Do bacteria get anything out of this arrangement?

Out-there ideas

Within the microbiology community, Shikuma is virtually alone in asking these questions. But at the VII, he's working alongside people who recognize his work's importance to larger questions about the poorly understood role microbes play in practically every facet of life.

"I study something pretty weird," Shikuma said. "I'm not mainstream, and neither is SDSU, so we kind of met at that level."

While Shikuma works with organisms that spend their whole lives in the water, fellow VII newbie Marina Kalyuzhnaya studies some who often don't see enough of it. The biologist who joined SDSU in 2015 specializes in microbes that consume methane. In addition to work exploring methane's potential as a biofuel or in biotech, she's also exploring a fairly radical application: using methane-eating microbes to reduce methane emissions and to produce water.

Water is a byproduct of certain kinds of methane consumption. Kalyuzhnaya wondered whether you could deprive a plant of external hydration but supply it with methane so that microbes within the system produce their own water. It's an admittedly crazy idea, but preliminary trials reveal plants thriving in a dry, methane-filled environment while their equally dry, methane-less peers shrivel. Scaled up, this process could help farmers understand how to adjust the organic carbon content of their soil to make their crops grow with less water.

"From the very moment I came here, everyone has been very open in such a way that if you have a crazy idea, they're excited to look into your crazy idea," said Kalyuzhnaya.

Illustrations: Ben Darby

Structured thinking

Sometimes looking into a crazy idea means being able to visualize what's normally invisible to the human eye. That calls for the expertise of chemist Manal Swairjo, hired in 2015. She harnesses the power of crystallography to explore the miniscule structures of microbes.

Within the world of viruses, Swairjo is interested in the biochemical pathways that bacteriophages (viruses that replicate within bacteria) use to defend their genetic matter when invading a bacterial host, as well as how phages change their protective coats in response to different environments. A better understanding of these processes could reveal new antiviral strategies, new techniques for using specialized viruses to deliver drugs to targets within the body, and the ability to use phages as environmental indicators. Bridging all of these disciplines and research focuses are the common languages of physics and math. That's where Antoni Luque

comes in. Trained as a biophysicist, he likes "to make abstract thoughts specific," as he puts it.

He applied to work at SDSU after seeing Rohwer deliver a research talk at the University of Barcelona, where Luque was a Ph.D. student. He was intrigued by Rohwer's deep knowledge of viruses combined with a commitment to incorporating unique viewpoints. Wanting to find a practical application for his biophysics background, he joined SDSU and the VII last year. He coordinates the math department's weekly biomath meetings, which frequently include VII collaborators who throw out ideas and discuss their mathematical underpinnings.

"In interdisciplinary science, you get to solve problems, not just use the most advanced mathematical techniques," Luque said.

Microbial mysteries

One of those problems he's working on is figuring out the molecular and biophysical properties of double-stranded bacteriophages, which account for about 95 percent of all known phages.

"If we get these guys down, we'll have gotten a pretty good chunk of the whole ecology," Luque said.

The opportunity to apply broad practical knowledge to really big, sometimes bizarre ideas is a big reason the VII is quickly gaining a reputation as a hotspot for up-and-coming researchers.

"The institute brings together a broad range of expertise to study one of the planet's most ubiquitous, yet most mysterious, life forms," Swairjo said.

But the chance to work alongside other brilliant, unconventional scientists might be the VII's biggest selling point.

"Forest is known for his visionary ideas," Shikuma said. "That he brought together such an interdisciplinary group is what attracted me here. There are so many interesting questions being asked that I could imagine fruitful collaborations with everyone in the group."

Aztecs in Motion

On the Fast Track.

Team captain Ellison Grove is racing toward more than an 800m record.

In the world of track and field, the 800-meter race event is an outlier. Too long to classify as a sprint and too short to fit snugly into the long-distance bracket, the race demands a finely calculated blend of speed and endurance.

The unique challenge of the 800m suits Ellison Grove. Recruited from Battlefield High School in rural Catharpin, Virginia, Grove has the mental and physical toughness necessary to compete in this middle-distance race. After two years at San Diego State University, she maintains a perfect 4.0 GPA and claims several spots in the Aztec record books for her feats on the track.

Grove was one of 14 Aztecs named to the 2016 All-Mountain West track and field team after finishing third in the Mountain West championships with a time of 2:07.81 in the 800m. Her personal best of 2:07.74, set earlier in May at Stanford University's Payton Jordan Invitational, established Grove as the sixth fastest 800m runner in SDSU history.

She also holds the Aztec record for the indoor 800m with a time of 2:09.67 and was part of the Aztec team that set a second-best school record (12:06.14) for the indoor distance medley relay at this year's UW Invitational in Seattle.

As a fitting end to a great season, Grove was named to the 2015-16 Women's Track & Field/Cross Country Academic All-District Team, which recognizes top student-athletes from the United States and Canada for their combined athletic and academic achievements

Top 1 percent

Grove's been a runner since age 12 and an 800m competitor since high school. Coach Shelia Burrell, who personally recruited her, said Grove can relate to all event areas and disciplines.

"Everybody respects Ellison's work ethic both on and off the track," Burrell said. "She is the first sophomore that I've named as team captain because her leadership skills are outstanding. "School is my absolute first priority."



Grove learned to ride a unicycle with a troupe of fellow students. "If all else fails," she quipped, "I can always join the circus."

> I know I can trust her to always do what's best for the team and for the university."

As a freshman at SDSU, Grove trained with the sprinters to develop speed. In her sophomore year, she switched it up, running with the cross country team to build endurance. She prepares for each race by running it mentally and imagining herself "closing in on 2:06."

That determination underscores Grove's scholastic track record as well. The scholarship offer from Burrell was enticing, Grove said, but SDSU's academic opportunities sealed the deal.

"School is my absolute first priority," she said.

Grove majors in International Security and Conflict Resolution (ISCOR) and minors in Russian with the goal of rising through the ranks of the U.S. Foreign Service. Hers is a challenging academic pursuit, said ISCOR coordinator and adviser Allen Greb, but she's among the program's top 1 percent of students.

Like many SDSU majors, ISCOR requires students to complete an internship, and Grove will have at least two under her belt by graduation. Last summer, she worked in the Washington, D.C. office of Rep. Mike Conaway, a Texas Republican who serves on the House Armed Services Committee and the Permanent Select Committee on Intelligence. What she learned during committee hearings informed a 20-plus-page paper Grove wrote for class about ISIS recruitment methods. Her current internship for a federal agency will also involve U.S. foreign relations.

Grove's 800m mentality reflects her professional goals. Middle distance runners rarely become media darlings like sprinters. Who can name Usain Bolt's 800m counterpart? But that's fine with Grove—she doesn't aspire to be a headline-maker.

"I just want to lay my head down on the pillow at night thinking that I've done something to help people whether they know it or not." she said.

-Coleen L. Geraghty

On her high school softball team, Grove earned a reputation as the fastest player around the bases.

THE Campaign For SOSU

SHORT TAKES

William McWilliams ('89) has funded endowments supporting the Guardian Scholars, study abroad scholarships and excellence awards for students in the Colleges of Arts and Letters and Professional Studies and Fine Arts.

A gift from Robert Beck ('66, '68) will support endowed scholaships for students in the College of Business Administration.

The Campaign for SDSU received new gifts from several staff, faculty and emeritus faculty members.

- William Tong created the William G. Tong Endowed Fellowship in the Department of Chemistry and Biochemistry.
- Lawrence Baron and his wife,
 Bonnie, are supporting the Nasatir
 Endowed Chair and the Jewish
 Historical Society Archives Fund.
- Nora Dawson and her husband, Mark, created the Nora and Mark Dawson Sports Medicine Bequest.
- Arline Fisch is supporting the Arline Fisch MFA Jewelry and Metalsmithing Endowed Scholarship for students pursuing master of fine arts degrees in those areas.
- Clarence "Dude" Stephenson and his wife, Catherine, are funding an endowment to support master of fine arts students in the musical theatre program.

Building the Aztec Metwork

In Francie and Guy Louie's East Bay San Francisco neighborhood, they are known as "the SDSU family."

The couple met as students at San Diego State University and graduated, he in '84, a public administration major;

and she in '83, with a degree in communication. Their son, Max, is a 2015 alumnus and their daughter, Lauren, will begin her freshman year this fall.

But it's not strength in numbers that marks the Louies as "the SDSU family" in the neighborhood. Instead, it's their commitment to extending the Aztec network in and around San Francisco.

The Louies became members of the Aztec Parents Association and have encouraged other parents to join. This association runs the Aztec Parents Fund, which ensures that students have access to programs such as a public safety escort service—for times when they need safe passage back to vehicles or residence halls—and the Aztec Mentor Program—which provides valuable career guidance including networking, interviewing and job shadowing.

"It's all about creating relationships with parents who are just getting to know SDSU," explained Guy, a criminal defense attorney. "We talk about our experiences and our investment in the success of SDSU's students and graduates."

Francie, a professional recruiter, also got the couple involved in the Bay Area Regional Council, a group of professionals who mentor students and recent alumni, promote fundraising efforts and assist in building a strong Aztec presence in the Bay Area.



"We've helped create a powerful network of Aztecs who realize that SDSU was a huge factor in their success," she said. "It's a rewarding experience to give back in this way."

The Louies also give back financially, supporting their children's majors (international business for Max, hospitality and tourism management for Lauren) as well as the new Engineering and Interdisciplinary Sciences Complex because they believe it's important for SDSU to continue building its resources as a top public research university.

"When alumni come back to campus, they see a new and thriving SDSU," Guy said. Added Francie, "We're proud not only of its physical beauty, but also of its legacy."

A Night with the Aztecs

Aztec legends, head coaches and crowd favorites mingled with San Diego sports fans in May for A Night with the Aztecs at Rancho Valencia Resort & Spa. The fundraising event netted more than \$100,000 in support of scholarships for San Diego State University student-athletes.

"The athletics program not

only elevates SDSU's visibility; it's also become a magnet for people who want to support the university and contribute to our successful fundraising campaign," said Mary Ruth Carleton, vice president for University Relations and Development.

Donor generosity has funded major renovations at the Aztec Performance Center, including new flooring and equipment and Aztec branding, Pending \$1.8 million in additional support, an outdoor speed



ABOVE: front. Aaeel Quinn. Rob & Lisa O'Carroll; back, Matt Shrigley, Jeremy Hemsley, JJ O'Brien.

LEFT: Coach Steve Fisher with Aztec fans.

with their remarkable accomplishments on the field and in the classroom."

said Athletic Director Jim Sterk. "The contributions of Aztec fans who support our student-athletes with their donations are a critical reason our programs continue to make tremendous strides forward."

and agility area will be

"Once again this season

our student-athletes and

coaches made us proud

added on campus.

SDSU Athletics has raised over \$85 million for The Campaign for SDSU, with more than \$21 million pledged to the Coryell Legacy to ensure the future of athletic programs at

> SDSU. Named for legendary Aztec football coach Don Coryell, the giving society recognizes donors naming SDSU Athletics in their estate plans and donors endowing student-athlete scholarships, which total nearly \$9 million annually.



RIGHT: Jim & Marilyn Brown, Coach Rocky Long & Debby Long **BELOW L to R:**

Carlota & Jason Campbell, Ali & Jack Pariseau, Bill & Sherry Dietz, LaVonne & Paul Cashman.









Photos: Ernie Anderson



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A Gift to Nurture Pride

The Pride Center at San Diego State University has received a \$100,000 gift from San Diego donor David Gubser.

Gubser committed another \$100,000 to the university's LGBT Studies Program, the second of its kind in North America and the first in the California State University system. A staunch supporter of LGBT centers and organizations in Southern California, Gubser recently decided to extend his advocacy to college campuses.

"Given the terrible events in Orlando, people need to become more educated about the LGBT community," Gubser said. "I couldn't think of a better way to accomplish that goal than through a gift to SDSU."

Gubser's gift will create an endowed scholarship for LGBT majors and will expand the Pride Center's programming to include academic mentoring, guest speakers, health and safety training and, eventually, queer leadership conferences.

The Campaign for SDSU has raised \$705 million to support students, faculty and academic programming and to build an endowment that will strengthen the university in future decades.

SDSU created its interdisciplinary LGBT Studies Program in 2012 in the College of Arts and Letters. The





A remarkable 50 percent of 2016 graduates from San Diego State University's Imperial Valley Campus elected to support the Leave Your Legacy campaign by donating \$10 or more to a fund for scholarships.

The giving initiative was set up by SDSU's Office of Alumni Engagement to underscore the importance of giving back—even on a small scale—to support current and future Aztec students.

Gerardo Izaduirre received financial aid as a student and knows first-hand the difference a little extra support can make. "It got me to this point where I am actually going to graduate with a bachelor's degree," he said, "so I think it's pretty important."

Donors received red and white braided cords to wear at Commencement 2016 and were recognized during the graduation ceremony for their philanthropic commitment.

university also offers a minor and a graduate-level certificate in LGBT studies.

"The Pride Center is a vital resource for many students, and since its opening has become a vibrant and inclusive community center on campus," said Eric Rivera, vice president for Student Affairs. "When students feel a sense of belonging, they have the capacity to grow academically and personally. The center serves as source of real connection, creating

an affinity to the university long after graduation."

San Diego State has ranked among the top 25 LGBT-friendly universities in the nation for six consecutive years. The ranking is based on the Campus Pride Index, a tool that compares LGBT-friendly policies, programs and practices on college campuses.

Christopher Lujan, Pride Center coordinator, said students need a place on campus to connect to the community.



The Leave Your Legacy initiative was introduced at IVC this year after its successful run at the main campus in 2015. Last year, graduates contributed about \$16,000 and the SDSU Bookstore added \$10,000 to the total.

In 2016—with both campuses contributing—the campaign raised more than \$45,000, including the SDSU Bookstore's \$10,000 gift. More than 3,400 graduates participated this year.

"The Pride Center provides a space for all students to build a support system among the LGBTQ+ community at SDSU, he said. "Our services range from weekly support groups to utilization of our LGBTQ+ resources on and off campus."

The Pride Center is also raising funds for events and programming through Strive (sdsu.edu/strive), a crowdfunding platform operated entirely by SDSU Alumni Engagement.

Lessons for Entrepreneurs

Karen Castles Gray's connection to San Diego State University dates to her son Alexander's enrollment in the College of Business Administration two years ago. The New York-based business owner was impressed with SDSU's entrepreneurship curriculum and the closely aligned programs created and run by the Lavin Entrepreneurship Center.

She became a member of the college's advisory board of directors, and this year, she pledged \$250,000 to endow the Karen Castles Gray Women in Entrepreneurship Lecture. Organized through the Lavin Center, this annual event will bring leading entrepreneurs to campus.

Invited speakers for the inaugural lecture series include Nancy Brinker, founder of Susan G. Komen, and Lonnie Ali, wife of Muhammed Ali and manager of his business enterprises.

Castles Gray is president and creative director of Authentic Lifestyle Products, which designs and manufactures apparel, footwear and accessories. It was a career she dreamed of as a young girl in North Carolina. Her father

owned a shoe store, but Castles Gray was more interested in clothing.

She relocated to New York, sought out one of the largest collegiate apparel manufacturers, and became a designer for them by refusing to take "no" for an answer. Eventually, she secured collegiate licenses for all universities in the SEC and ACC conferences, becoming a pioneer in the trendy Ath Leisure Wear segment of the clothing industry.

"To be successful, you have to believe in yourself," she said. "Despite all the doors shutting and all the people who say you won't make it, you persevere."

Castles Gray is also making a gift of \$210,000 to SDSU's Guardian Scholars, a program for students exiting the foster care system. Those who meet SDSU's academic requirements are eligible for personal, financial and academic support to help them earn college degrees.

"The Guardian Scholars program touches my heart because these students have chosen to see rejection as a challenge rather than as a defeat," said Castles Gray.



Alumni Angles



ALUMNI ENGAGEMENT

2016 - 2017 ALUMNI BOARD of ADVISORS

EXECUTIVE COMMITTEE

President: Alan Dulgeroff '92

Liaison to the Campanile Foundation: Elsa Romero '84 Vice President of Mentoring and Career Advancement:

Katie Hansen '03

Vice President of Development: Deanna Encarnacion '90

Vice President, Finance: Aron Getty, '95

Vice President of Aztec for Life: Sean Kilkenny '10 Vice President of Innovation: Jason Farran '00 Vice President of University Partnerships: Channell

McNutt '13

Vice President of Regional and Affinity Groups:

Angie Robert '04

Administrator: Christy Andrade

OTHER ELECTED ADVISORS:

Brad Adams '99; Risa Baron '91; Kelly Batten '98; Chiloh Baty '08; Mike Cully '11; Lindsey Dixon '02; Sean Durkin '08; Ileana Ovalle Engel '94; Aimee Faucett '96; Allyson Frasure '97, '99, '03; Daniel Gomes, '01; Ryane Hughes '02, '05; Rudy Johnson '00; Mark Mays '69; Channelle McNutt '13; James Newland '88; Chris Parks '92; Angie Robert, '04; Allen Sliwa, '04; Todd Vitale '86; Stacey Wolfson '10

PAST PRESIDENTS:

Liaison to Past Presidents: Perette Godwin '86 First President: 1931 Vesta Muehleisen For a full listing of past presidents, visit: sdsualumni.org/pastpresidents

NON-ELECTED ADVISORS:

President: Elliot Hirshman; Vice President, University Relations and Development: Mary Ruth Carleton; University Senate Chair: Marcie Bober-Michel; Associated Students President: Jamie Miller; Aztec Athletics: Morgan McSweeney

ALUMNI ENGAGEMENT STAFF

Interim Executive Director: Ryan DeLong '05
Alumni Engagement Coordinator: Christy Andrade
Alumni Engagement Coordinator: Lacey Lavigne
Assistant Director, Affinity Groups: Dion Akers '08
Assistant Director, Annual Fund: Natasha Bliss
Annual Fund Supervisor: Caitlin Kuhn

Assistant Director, Annual Fund, Stewardship &

Membership: Cheryl Lemox

Career Development Liaison: Diane Barragan Marin
Communications Specialist: Tobin Vaughn
Data Control Technician: Robin Breen Rust
Director Development Technology:

Tammy Blackburn '94, '01

Electronic Solicitation Assistant: Vanessa Horne Electronic Solicitation Manager: Dan Majors '03 Parma Payne Goodall Alumni Center Coordinator:

Lauren Duran, Mariano Rayon **Program Coordinator:** Jen Ranallo

1970s

'70 **Lonnie Rowell** (social science; '83 MS counseling) is lead editor of the Palgrave International Handbook of Action Research (Palgrave Macmillan 2016).

'77 Barry Michaels (psychology; '85 MBA) retired as chief financial officer of Organovo Holdings.

'78 Janice Kassebaum Patterson (management) is senior director, commercial banking, for Banc of California.

'79 **John Monroe** (biology) is senior vice president of operations for Mesa Biotech Inc., a privately held molecular diagnostic company.

19805

'80 **Raymond Weamer** (real estate) was appointed by Union Bank as vice president for Small Business Association lending in the San Diego region; **John Wicker** (recreation administration) is director of the Los Angeles County Department of Parks and Recreation.

'82 **Patrick Flynn** (business administration) joined Aventura, a Denver-based technology provider for the healthcare industry, as chief operating officer; **Mark Odom** (social work)

is vice president of programs and education for Alzheimer's Orange County.

'86 **Rose K. Lee** (marketing) is chief customer officer for Determine Inc.; **Stephen Walsh** (economics) is vice president of global sales for Guardian Analytics.

'89 **Susan Salka** (MBA; '16 LHD) was named most admired CEO of 2016 by the San Diego Business Journal; **Michael Lima** (finance) is managing director of the whole loan trading division at Mid America Mortgage.



Susan Salka '89, '16

1990s

'90 **Stephen Keane** (English) is vice president, corporate development for Leading BioSciences.

'91 **Jennifer Cohen** (physical education) was named athletic director at the University of Washington, becoming one of about three dozen women to currently hold that position at an NCAA Division I college.

'92 **Samuel Mascareno** (accounting) is a managing partner for RSM LLP's west region; **Zane Rowe** (MBA) joined VMware as chief financial officer.

'93 **Bradley Feldmann** (finance), president and CEO of Cubic Corporation was named in the recent publication "100 CEO Leaders in STEM"; **David Salazar** (criminal justice) is area port director for the Calexico ports of entry.

'94 **Ronnie Campbell** (accounting) is chief financial officer for Metrolink; **Anthony Roner** (mechanical engineering) is vice president of Southland Energy with responsibility for the strategic implementation of energy services.

'96 **Erika Beck** (psychology) is the new president of California State University, Channel Islands; **Hillary Haldane** (anthropology), associate professor at Quinnipiac University, will travel to Australia on a Fulbright scholarship to study domestic violence; **Diana Hart** (MS radiological health physics), senior vice president at GE Hitachi Nuclear Energy, was named to the North Carolina Radiation Protection Commission; **Cindy Jenson-Elliott** (MA teacher education) published the children's book Dig In (Simon & Schuster); **Michelle Grimes-Hillman** (MPH) is dean of academic services at Long Beach City College.

1990s

'97 Amy Devers (applied design) has launched "Clever," a podcast about design and designers; **Kt Duong** (financial services) joined bank of Southern California as vice president, business relationships.

20005

'00 **Aaron Criswell** (advertising) is director of sales for Adams Radio in Las Cruces. New Mexico.

'02 David Cromwell (communication; '09 MBA) is park president of Busch Gardens Williamsburg.

'04 **Gulsum Rustemoglu** (MA city planning), founder and president of GEPermit, was named Woman of the Year by the San Diego chapter of the Small Business Association.

'05 Jennifer Shydler (financial services) is a wealth management adviser for Bank of America Merrill Lynch. She was recognized in the Las Vegas Business Press for logging more than 1,000 volunteer hours with various organizations.

'06 **Susan Castaneda** (Chicana/Chicano studies), assistant vice president for The Hartford, was nominated by the White House to the board of directors of the National Association of Registered Agents and Brokers.

'07 **Brad Chisum** (entrepreneurship) sold his startup, Lumedyne, to Google earlier this year.

'08 Anastasia Farber Osbrink (ISCOR) joined the law firm of Klinedinst PC as an associate; Judy Mui-Sam Phung (marketing) is global channels partner manager for employment brand at Facebook.

'09 Andrew Alfonso (economics) joined the law firm of Klinedinst PC as a first-year associate.

2010s

'10 **Beck Flanagan** (recreation administration), women's basketball coach at Loyola University, was named NAIA Assistant Coach of the Year.

'12 Tylyn Fields (criminal justice) earned a master's degree in social work from Cal State Long Beach.

'15 Jacqueline Reed (executive MBA) is CEO of TS Restaurants of California and Hawaii; Ventura Olvera (public relations) is an account coordinator for Nuffer, Smith, Tucker.

A Champion for **Alumni Engagement**

Alan Dulgeroff ('92) is a busy guy, especially with regard to his involvement at San Diego State University. He is a member of the university's Career Services Advisory Board, sits on the College of Engineering's Electrical Engineering Curriculum Advisory Board, and for the next year will serve as president of SDSU Alumni.

In a June 15 ceremony at the SDSU Alumni Advisory Board meeting, Dulgeroff was symbolically handed the president's gavel by Perette Godwin ('86), the board's immediate past president. He officially assumed his new position July 1, and intends to make alumni engagement a top priority.

"We need to tailor [involvement] to the kinds of things our alumni are passionate about," he said. "It's usually around time, talent and treasure; whether they want to be a mentor, for example, use a particular skill to help the university or its students, or donate to scholarships or other programs.

"The nature of the engagement must be personalized so that they own it and ultimately stay more engaged."

Currently director of strategic planning for San Diego Gas and Electric (SDG&E), the 47-year-old Dulgeroff is a lifetime member of the SDSU Alumni Association. He has served on its board the past four years, during which time he strengthened the link between SDG&E and the Aztec Mentor Program.

He also helps his company recruit on campus. Dulgeroff estimates approximately 10 percent of SDG&E's 4,000 or so employees are Aztec alumni.

"That's a large number of Aztecs we've hired and continue to hire every year," he said. "We're back on campus every semester recruiting and that has not stopped since I got involved with recruiting about 15 years ago."

The father of a 22-month-old son with another baby boy on the way, Dulgeroff places a lot of

"They are my top priority," he said. "It starts with my family. I view my fellow board members, the university and even the broader

> alumni group like extended family my service to SDSU."

> > —Tobin Vaughn

Common Chords

CHAPTERS FROM AZTEC HISTORY

D.J. Nystrom ('66) never set out to reshape San Diego State College's curriculum. In 1967, the political science graduate had returned to SDSC as a master's student, and he just wanted to teach an informal class on eviction law to his friends and their buddies. His friend, Ann Monkerud, had an idea: Start a whole new college. In the late 1950s, San Francisco State College had pioneered a free, volunteer-taught Experimental College. Monkerud wanted to bring something similar to SDSC.

So Nystrom put his political science background to use securing classroom space from the administration. Monkerud handled the academics and put together a course catalog. Officially, the Experimental College became a student organization. Political science professor Henry Janssen served as its requisite faculty advisor.

Two courses were offered initially: "History of Vietnam" and "Underground Newspaper Reporting."
Twenty-eight students signed up.

Nystrom recalls SDSC's administration being generally supportive of their efforts. "We had nobody breathing down our necks," he said. "Not too much oversight or interference."

By the 1968 fall semester, the catalog had grown to 22 classes. By spring, there were 38. By 1970, there were 54 classes and approximately 1,200 students attending them. Some courses were, well, quirky: "UFOs: Yesterday, Today and Tomorrow;" "Natal Astrology;" "Through the Portals of Anubis." Others like "Candlemaking" and "Auto Mechanics for Women" offered practical skills. Naturally, given the era, there were countless guitar classes.

"In terms of academic seriousness, we had real teachers and real classes," Nystrom said. "It wasn't just groovy-man guitar instructors playing in the quad—though we had those, too."

Another subset of courses had a more lasting impact on SDSC. The Experimental College was the first campus organization to offer courses like "Black Literature," "The Homosexual in Society" and "Vanishing Wildlife." It also hosted some meetings and classes of the nascent (though independently organized) Women's Studies Center. Student interest and engagement with these courses helped spur the creation of formal academic programs dedicated to these areas.

"It was never intended to be a curriculum reform movement," he said. "But that was one of its unintended consequences."

Nystrom never did get to teach his eviction law class. After the Experimental College's first year, he left it to join SDSC Associated Students. He lives in the College Area, remains active in SDSU through the College Area Community Council and is a lifelong member of the SDSU Alumni Association.

Lonnie Rowell ('70, '83), now a professor in the School of Leadership and Education Sciences at the University of San Diego, took over the Experimental College and shepherded it through the mid-1970s, at which point it folded. Over the Experimental College's lifetime, some 7,000 students participated.

-Michael Price



2016 SAN DIEGO STATE FOOTBALL HOME SCHEDULE

SEPT. 3

SEPT. 10 VS. CALIFORNIA @ 7:30 PM

OCT. 8 VS. UNLV @ TBD

VS. SAN JOSE STATE @ 7:30 PM **OCT. 21**

VS. HAWAI'I @ 4:00 PM **NOV. 5**

NOV. 26 VS. COLORADO STATE @ 6:00 PM

Cheer On 2015 Mountain West Offensive Player Of The Year And Heisman Candidate Donnel Pumphrey, Defensive Player Of The Year Damontae Kazee, Special Teams Player Of The Year Rashaad Penny, And Many More Of The 2015 Mountain West/Hawaii Bowl Champions!

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Our vibrant community of international students adds diversity and strength to the San Diego State University community. Each year, approximately 2,400 international students come to study on campus and 2,500 SDSU students study abroad in more than 50 different countries. At SDSU, we've found that transnational experiences are the first step toward a better world.



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