Greetings from the Chair
CAROLINA LITHGOW-BERTELLONI

We hope you enjoy reading this annual newsletter for the Department of Earth, Planetary, and Space Sciences. In this issue we highlight the 2022-2023 academic year, my first as chair.

Last year as I said hello to our wider EPSS family, I mentioned starting my tenure as chair with trepidation. Indeed, it has been an eventful and somewhat turbulent first year. We have had significant staff changes and we say arrivederci (not goodbye, but till we see you again) to long serving and valued staff and distinguished faculty and researchers. You will see several pieces throughout the newsletter honoring our departing EPSS citizens and describing our farewell events.

Given recent departures, it was important to succeed in attracting new faculty as well as weather staff changes to maintain our research, educational and outreach missions. Since the beginning of 2022, we have successfully hired several rising stars, two of whom have already joined us. You can read about them on page 24. We have also been able to share our financial office to assist our indigent fund managers and will soon announce two new crucial staff hires.

In keeping with the goals of maintaining our long-term strengths and forging new connections with the wider community, you will find another theme running through the newsletter highlighting and celebrating our outreach efforts, from the first in-person EVU since the pandemic (p. 2), hosting the Saturday Science Academy of Charles Drew University, the only HBCU in California (p. 18), to the SETI Citizen Science platform launch (p. 6). Our students continue to be central to departmental life and you will find their reflections and efforts in this newsletter (p. 5 A Day in the Museum, p. 7 Growing My Own Roots, p. 17 Solar Wednesdays). We also celebrated the restart of our Distinguished Alumni Lecture series and welcomed Hilary Patrizio (p. 8), who gave a fantastic lecture inspiring student scholarship and our field mission, both near and dear to his heart. Links to all the above can be found using the QR code on the right.

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In Memoriam

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MACKENZIE DAY
2022 AGU Ronald Greeley Early Career Award in Planetary Sciences

Mackenzie Day is a leader at interpreting modern and ancient planetary surface systems affected by windblown sediment. Her scientific advances are built on a deep understanding of aeolian processes that are creatively applied to estimate environmental properties encoded in landforms and sedimentary deposits. Mackenzie’s careful work has demonstrated that the structure of simple dune fields and their constituent dunes are truly reflections of their formative wind regimes and sediment supplies. This has provided foundational support for Earth analogue studies and confirmed that surface conditions on planetary bodies can be accurately estimated using appropriate morphodynamic frameworks. Mackenzie’s expertise in modern aeolian systems has also benefited mission operations, including how different types of windblown deposits affect rover trafficability and identification of sites of active bedrock erosion that likely make optimal sampling locations for ancient Martian biosignatures.

In addition, Mackenzie has made significant contributions to our understanding of the early Martian environment via innovative stratigraphic analyses, helping define ancient wind fields and more. Working across scales, Mackenzie has contributed to a better definition of subthreshold grain saltation at particle dimensions, and a better definition of erosive, rim-generated vortices at the crater scale. Sediment transported by these processes is commonly worked into dunes that interact with each other as they migrate and grow. Mackenzie has made fundamental contributions to understanding these dune interactions, as well as the sedimentary structures they generate.

Following Ronald Greeley, Mackenzie’s considerable scientific contributions are matched by her professional services that include the training and mentoring of junior planetary scientists. Mackenzie Day has earned the Ronald Greeley Early Career Award for “innovative application of theory, field and remotely sensed data to the erosion and deposition of planetary landforms by windblown sediment.”

— DAVID MOHRIG, UNIVERSITY OF TEXAS AT AUSTIN, adapted from AGU Citation

KEVIN MCKEEGAN
2022 Leonard Medal of the Meteoritical Society

Distinguished Professor Kevin McKeeegan was awarded the Leonard Medal of the Meteoritical Society in a ceremony at Glasgow, in August 2022. The Medal, the Society’s highest and oldest award, is given to individuals who have made outstanding original contributions to the science of meteoritics or closely allied fields. It is named for Frederick C. Leonard who was a founder of the science community. It is with all of the above achievements that I present to you this year’s recipient of the AGU Luna B. Leopold Early Career Award.

— AN YIN, UNIVERSITY OF CALIFORNIA, LOS ANGELES, AGU Citation

AN YIN
2022 GSA Penrose Medal

Professor An Yin has made profound contributions to understanding how planetary landscapes form and deform by relating his tectonic and geophysical observations with rigorous mechanical models. His tectonic reconstruction of the Indo-Asian collision has been the starting point of geological research there for over 25 years and the vast range of studies he conducted there established him as arguably the greatest authority on this key region. He used diffusion-induced pressure-wave theory to relate for the first-time slow earthquakes to tectonic tremor propagation and, over the past decade, investigated extra-terrestrial tectonic processes leading to provocative proposals that Mars experienced localized plate tectonics and a new kinematic model for the formation of tiger-stripe fractures on Saturn’s moon Enceladus. I am honored to introduce Professor An Yin as the 2022 recipient of the Penrose Medal for his outstanding original scientific contributions which collectively represent a major advance in the science of geology.

— MARK HARRISON, UNIVERSITY OF CALIFORNIA, LOS ANGELES, GSA Citation

SEULGI MOON
2022 AGU Luna B. Leopold Early Career Award from & Robert Sharp Lecture

It is my great pleasure to introduce Prof. Seulgi Moon as the recipient of the 2022 Luna B. Leopold Early Career Award. In her short career, Prof. Moon has already made several seminal contributions to the current understanding of landscape evolution and surface processes on Earth and other solar system bodies. These contributions reflect her innovative integration of fundamental physics and chemistry, numerical modeling, and state-of-the-art laboratory techniques.

First, she has elucidated local, regional, and global budgets of silica weathering. Second, she assessed the interactive and coupled effects of tectonics, climate, topography, and lithology on fluvial and glacial erosion and transport in active orogenic systems. Third, she quantified the impact of topography-induced stresses on physical weathering processes. The latter research subject is specifically relevant regarding current efforts to determine the nature and evolution of the critical zone that supports surface and near-surface biological activity on our planet. In addition to her work on the Earth, Prof. Moon has also made significant contributions to planetary studies including the formation of cold traps on (her namesake body) the Moon and fluvial fans on the Saturnian icy-satellite Titan. Her research also provides, for the first time, a quantitative linkage between engineering-based site parameters and attributes of morphological features. Finally, Prof. Moon and her colleagues developed a new Quaternary dating method using optically stimulated luminescence (OSL) methods.

Her exceptional mentoring record and her contribution to broadening the participation of students from underrepresented social groups illustrate her full dimension as a leader in the Earth and planetary science community. It is with all of the above achievements that I present to you this year’s recipient of the AGU Luna B. Leopold Early Career Award.

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2022 Leonard Medal of the Meteoritical Society

MARCO VELLI
2022 Sloan Research Fellow

Study of the young Moon offers unique insights into the early stages of the formation of the terrestrial planets. Marco Velli has been a leader in using observations of the young Moon to study its volcanic, tectonic and impacts activity, and its spin and gravitational fields. As a core member of NASA’s Lunar Reconnaissance Orbiter and OSIRIS-REx missions, Marco has made a wide range of discoveries about the Moon, including the discovery of a large volcanic impact crater that may have influenced the early lunar environment, the discovery of the Moon’s second gravitational harmonic, and the identification of an ancient impact basin that could have been involved in the formation of the Moon’s basin of origin. Marco’s work has provided a unique window into the early lunar environment and has helped us better understand how the early Moon formed and evolved.

— PETER CHI, RESEARCHER, DOMAIN FACULTY, LEAD OF THE 2022 FUSION DEVELOPMENT LAB (FDL) TEAM "GEOMAGNETIC AND TERRESTRIAL DATA" THAT RECEIVED THE FDL 2022 "MOST DRAMATIC PIVOT" INNOVATION AWARD

PAUL DAVIS
2022-23 FACULTY | RESEARCHERS | EMERITI

AGU Citation

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AN YIN
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— MARK HARRISON, UNIVERSITY OF CALIFORNIA, LOS ANGELES, GSA Citation
A Day at the Museum: Dinos, Gems, and Rare Specimens

KYLE WEBSTER

last Spring Quarter, the EPSS Student Organization (EPSSSO) and Family Mentorship Program (EFMP) joined together for a day trip to the Natural History Museum of Los Angeles. Our group consisted of both EPSS undergraduate and graduate students. Upon arrival at the museum on a bright and sunny Saturday, we were greeted by our two museum experts: Emily Patellos, a graduate student working in the Dino Lab, and Aaron Celestian, the curator of the mineralogy exhibit.

"Don’t get that stuck; it’s the rarest gemstone in the world!" Ashley quickly took it off and snapped a picture (Photo 2: PC Ashley Schoenfeld).

After splitting into groups, Aaron led the first group on a tour of the world-class mineralogy exhibit. He then took us behind the scenes to a secure vault where we heard some shocking stories about minerals (Photo 1: PC Joseph Lewis-Merrill), with the rarest and most precious gems and minerals hanging overhead (Photo 3: PC Kyle Webster). The Natural History Museum not only imports specimens and showcases them, but also research on fossils found near Los Angeles and in the Western US. In a restricted top floor research area, Emily unveiled an amazing fossil — an entire Ichthyosaur (a prehistoric marine predator)! We all felt like gleeful kids when we were allowed to touch it with our hands.

We all felt like gleeful kids when we were allowed to touch it with our hands." During the Dino Lab tour, Emily led us around the seemingly endless displays of dinosaurs and other prehistoric life. Some of us couldn’t help but get distracted during the tour and took some selfies with the whales hanging overhead (Photo 3: PC Kyle Webster). The Natural History Museum not only imports specimens and showcases them, their skilled paleontologists also conduct research on fossils found near Los Angeles and in the Western US. In a restricted top floor research area, Emily unveiled an amazing fossil — an entire Ichthyosaur (a prehistoric marine predator)! We all felt like gleeful kids when we were allowed to touch it with our hands (Photo 4: PC Ashley Schoenfeld).

After the tour, we convened in the Rose Garden for a group photo (Photo 5: PC Vania Collarillo) and a surprise activity — a scavenger hunt! Teams of four students had to complete a long list of tasks in the museum. The participants only had 30 minutes, and some activities required multiple people. Some favorite activities included finding a Toucan (a colorful bird) in the museum’s extensive bird section, and locating Augustynolophus (Auggie) Morrisey, the California state dinosaur. One of the winning teams was Team Gneiss (Photo 6: PC Team Gneiss), who recreated a Spider-Man meme in the museum rotunda, where scenes from the original Tobey Maguire Spider-Man movie were filmed. The other winning team was Team Easily Distracted by Rocks, who recreated a white bear standing on its hind legs (Photo 7: PC Team Easily Distracted by Rocks). Both teams must not have been distracted because they achieved almost perfect scores, gneiss job!

Overall, everyone enjoyed exploring the museum and sharing the fun experience with old and new EPSS friends. We hope to do more fun events like this in the future!

Want to Get Involved? INSTAGRAM: @efmp_ucla WEB: sites.epss.ucla.edu/efmp/

KYLE WEBSTER

Are We Alone in the Universe? UCLA SETI Launches Citizen Science Collaboration

JEAN–LUC MARGOT

On February 14, 2023, UCLA SETI launched a citizen science collaboration to share the excitement of the search for life in the universe with the general public. The platform is designed for ages 9–99 and is accessible at arewealone.earth. After a quick tutorial, volunteers can classify UCLA SETI data and identify interesting signals; in the process, they are helping us train artificial intelligence tools that will accelerate our search. Nearly 20,000 volunteers have joined the collaboration so far. UCLA graduate student Megan Li, who leads the data analysis, said: “Humanity’s most profound discovery could be a few clicks away.”

The citizen science collaboration is built on the Zooniverse platform with funding from The Planetary Society, the NASA Citizen Science Seed Funding Program, and a generous gift from Robert Meadow and Carrie Menkel-Meadow.

SETI researchers must frequently overcome the “giggle factor” even though the search for technosignatures — evidence of technological activity — and the search for biosignatures — evidence of biological activity — are highly complimentary. Certain technosignatures, such as extraterrestrial radio emissions concentrated in a narrow range of frequencies, are advantageous because they have no false positives and can be detected throughout the Galaxy. In contrast, biosignatures are prone to false positives and can be detected only around the Sun and nearby stars, a volume that is a million times smaller. Do you think that the first unambiguous evidence for extraterrestrial life will be biological or technological in nature?

Learn more about UCLA SETI or join our collaboration at our website!
Growing My Own Roots MEGAN LI

T

his year, as part of UCLA SETI, I helped launch a first of its kind pro-
ject to search for extraterrestrial life in the galaxy. But although I’m a new PhD stu-
dent in Earth, Planetary, and Space Sciences (EPSS), this is not where my UCLA story be-
gan.

In 8th grade, my parents placed an order to the BearWear catalog and bought me a Hello Kitty UCLA hoodie— one of many BearWear items in my closet at the time. It was no secret that my family wanted me to become a Bruin. After all, that was kind of a family tradition of ours.

My grandparents immigrated from Taiwan to Los Angeles in the 1960s for my grand-
father to pursue a PhD in System Sciences at UCLA. While living in graduate student housing, they had my father and uncle, who feared his story might be lost and he shared his dream of coming to UCLA when I was 1. I only heard my grandfather’s stories of his time working on science problems together with my grandfather, which I did every night. Looking back, I think our nights working on science problems together was a way for him to stay connected to a pas-
sion he never got to pursue.

I only heard my grandfather’s stories of his struggles for the first time a few years ago. He feared his story might be lost and he shared those experiences in a large circle of our fam-
ily. Then he turned to me directly and said “Those times were hard for us because we didn’t have roots. That’s what makes you so lucky.”

From the ages of 1 to 7, I suffered from an illness that prevented me from leaving the house or making friends. One thing I could do was read astronomy books and solve math problems with my grandfather, which I did almost every night. Looking back, I think our nights working on science problems together was a way for him to stay connected to a pas-
sion he never got to pursue.

I never had a perfect GPA or the fastest running code, but when I look back at my academic journey that’s not what I focus on. I think about my grandparents’ struggle as they moved from Taiwan to Westwood. I think about my parents falling in love in the library on top of Boelter Hall. I think about my weekends at the Rose Bowl in Bruin Blue and gold, and I think about how much I love sharing SETI with everyone I know. Science is not just about numbers, it’s about passion.

One of the most important lessons I’ve learned as an academic in STEM is that the people you choose to do science with is what matters most. For me, these were people like Professor Karin Sandstrom at UCSID, Sofia Sheikh at the Berkeley SETI Research Cen-
ter, and Professor Jean-Luc Margot at UCLA. They all saw me first and foremost as a fellow scientist. It’s important to spend your energy with people who see you for who you are — and who you could one day be.

In May 25, 2023, the National Society of Black Engineers (NSBE) hosted an outreach event at UCLA, collabor-
ating with EPSS volunteers to provide a wonderful opportunity to introduce less well-
known fields of STEM to underrepresented youth in Los Angeles.

With geoscience being the theme of the outreach event, middle school students par-
ticipated in engaging activities that allowed them to explore the various career fields that geoscientists specialize in. These activities included a paleontology and geology expe-
rience, where students analyzed fossils from the Jurassic period, as well as the properties of sedimentary, metamorphic, and igneous rocks.

In addition to giving students a glimpse into Earth during the Jurassic period, we also toured them through UCLA’s Meteorite Gallery. Amidst these space rocks, we encour-
age them to consider science beyond Earth, such as the formation and evolution of planets, and the existence of planets similar to Earth outside of our solar system.

Students were also trained as environ-
mentals, developing team-work and problem-solving skills to find solutions to current environmental issues. Through two sandbox experiments, students learned about process-
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ers, as well as the environmental hazards that they pose and how to apply geomorphology to mitigate these disasters.

This memorable experience broadened the students’ horizons and introduced them to novel fields of science to consider as they continue their academic careers.

Cameron Brown is a UCLA EPSS graduate stu-
dent, and volunteer at the NSBE event.

I was fortunate enough to grow up with a biological family who could do just that. My ad-
vise to future students is to find your fam-
ily, whether given or chosen. And then grow your roots.

This story first appeared on the UCLA Division of Physical Sciences website, in both English and Mandarin.

Left: Megan Li and her family.
Above: Megan as a young child with her brother and parents at a UCLA basketball game.

Introducing the World of Geoscience NSBE Outreach Event Experience CAMERON BROWN

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Left: Megan Li and her family.
Above: Megan as a young child with her brother and parents at a UCLA basketball game.
In Memoriam: Emeritus Professor David Jackson

PAUL DAVIS, WITH CONTRIBUTIONS FROM PETER BIRD

Professor David Jackson passed away on 30 March 2023 at his home in Pacific Palisades, California. He is survived by his wife Kathy and children Kelly and Morgan. As a person Professor Jackson was a kind man with a wonderful sense of humor, and was ever ready to lend a helping hand to some whom others might pass by.

Professor Jackson graduated in Physics at Caltech in 1966, followed by a PhD in geophysics at MIT in 1969. He was appointed Professor in Residence/Researcher at UCLA physics at MIT in 1969. He was appointed Professor Jackson graduated in Physics at Caltech in 1966, followed by a PhD in geophysics at MIT in 1969. He was appointed Professor in Residence/Researcher at UCLA physics at MIT in 1969. He was appointed Professor in Residence/Researcher at UCLA physics at MIT in 1969. He was appointed Professor in Residence/Researcher at UCLA physics at MIT in 1969. He was appointed Professor in Residence/Researcher at UCLA physics at MIT in 1969. He was appointed Professor in Residence/Researcher at UCLA physics at MIT in 1969. He was appointed Professor in Residence/Researcher at UCLA physics at MIT in 1969. He was appointed Professor in Residence/Researcher at UCLA physics at MIT in 1969. He was appointed Professor in Residence/Researcher at UCLA physics at MIT in 1969. He was appointed Professor in Residence/Researcher at UCLA physics at MIT in 1969. He was appointed Professor in Residence/Researcher at UCLA physics at MIT in 1969. He was appointed Professor in Residence/Researcher at UCLA physics at MIT in 1969. He was appointed Professor in Residence/Researcher at UCLA physics at MIT in 1969. He was appointed Professor in Residence/Researcher at UCLA physics at MI...
In Memoriam: Professor Paul H. Roberts

JONATHAN AURNOU

Professor Paul H. Roberts passed away on the Isle of Wight, UK, on November 17, 2022. Paul worked at UCLA via a split appointment in IGPP and Math from 1986 until he retired in 2010. Although Paul worked on a number of topics, his greatest expertise was in developing the magneto-hydrodynamical theory that explains how planets and stars generate their self-sustaining magnetic fields. This work started in his first year of Ph.D. studies at Cambridge in 1952. His initial advisor, Herman Bondi, told Paul, essentially, to either show that dynamo action was fully impossible, as many (including Einstein) thought at the time, or develop a model for how dynamo action actually works.

That was a bit much to ask of anyone, and Paul switched advisors after a year. However, it helped to set his intellectual sights and over the arc of his career he provided the answers to Bondi’s original questions.

In 1965, working with Stan Scott, Paul formally showed that it is possible to use the differences in geomagnetic field maps made at different times to determine the large-scale motions of the molten metal in Earth’s core. In 1975, with Subodh Kumar, he showed that there exist spherical fluid motions which are indeed capable of generating dynamo action. In 1988, he worked with his UCLA colleague Stanislav Braginsky to build a detailed mathematical framework to describe the turbulent convection in Earth’s core. And in 1995, Gary Glatzmaier and Paul numerically solved the equations formulated with the aim to generate the first self-sustaining (supercomputer model) of Earth’s dynamo. Remarkably, the magnetic field in their model underwent a polarity reversal, similar to the behavior of Earth magnetic field.

Further, the solid inner core in their model rotated faster on average than the mantle, a novel finding that launched a plethora of following studies.

I feel lucky to have gotten to discuss and work on planetary core dynamics with Paul during our overlapping time at UCLA. But I believe my favorite interaction with him was just after Krista Soderlund’s Ph.D. defense in 2011. After the defense was completed, Paul graciously congratulated Krista on a job well done. Then, with a twinkle in his eye, he told us that he greatly appreciated that almost all the key terms used in Krista’s thesis were done. Then, with a twinkle in his eye, he told us that he greatly appreciated that almost all the key terms used in Krista’s thesis were coined by him. The Ekman number, the alpha-effect, the omega-effect, MAC balance—he’d named them all and was pleased as punch that these names had all stuck. It hit me then, and a bit forcefully at that, that almost everything my group studies is set within the broader theoretical framework, the intellectual landscape, that Paul Roberts crafted, quietly and humbly, but with great effort and focus, over his seventy amazing years in the field.

Did You Say Marsquakes?

CAROLINE BEGHEIN

What is the internal structure of Mars? What is it made of? Does it have seismic activity? These questions are key to understanding the formation and evolution of rocky planets, both within and beyond our Solar System.

The Best Seismic Station

NASA’s Mars InSight (Interior exploration using Seismic Investigations, Geodesy and Heat Transport) spacecraft, which just finished its four year run on the Martian surface in December 2022, was built to help seek the answers. Launched in May 2018, InSight’s mission was to peer into Mars’ deep interior using a suite of geophysical instruments, including a broad-band seismometer (SEIS) that can be used to “listen” to the red planet’s interior and the waves it produces. Launched in 2016, InSight’s SEIS was built at Caltech and lies beneath the landing site.

After landing successfully in November 2018 on Elysium Planitia, a flat and smooth plain near the Martian equator, InSight began sending back data to its science team, which included myself and Emeritus seismology Professor Paul Davis. SEIS recording began in February 2019, and the absence of human activity and ocean waves made for low environmental noise, allowing the detection of seismic events with a moment magnitude around 1.8 lower than on Earth. One could say it is the best seismic station in the solar system!

Why is this important? First, we can say it is the best seismic station in the solar system! Second, we can detect seismic activity not only on Earth, but on Mars.

Did you say Marsquakes? A seismic event with a moment magnitude of 4.7 occurred on Mars in December 2021, with an earthquake magnitude of 4.2 detected in 2021. These events were detected by the InSight lander’s seismometer, which recorded the seismic waves produced by the temblor. The data from InSight’s seismometer has revealed that the Martian mantle is capable of generating seismic waves, even though its interior is different from that of Earth’s mantle.

One of the most important discoveries made by InSight is that the Martian mantle is capable of generating seismic waves, even though its interior is different from that of Earth’s mantle. The data from InSight’s seismometer has revealed that the Martian mantle is capable of generating seismic waves, even though its interior is different from that of Earth’s mantle.

The Impact of Surface Waves

In May 2022, a massive, 4.7 magnitude temblor rocked the red planet. It was the largest ever detected on Mars, releasing five times more energy than any other marsquake in recorded history. This long-awaited occurrence also released seismic surface waves, sending them completely around the planet’s circumference.

Marsquakes? Did You Say

We are also saddened by the passing of beloved EPSS community members Vicki Jones and Jim Valentine. Their widespread impact will be remembered with warmth and gratitude.

Elders of the community like Dr. Margaret Kivelson and Joanne Knopoff lent the air of maturity and wisdom to our gatherings.

A sense of mystery persisted, and many were surprised by Dave’s quiet and sustained productivity. The department generously hosted a prior reception and videoed the event for the absent. Many of Dave’s close friends were able to come: Drs. Itaruaka and Matsu’ura from Japan, and others from Northern California and the East Coast.

The video is available at the QR code on the right, as is Kathy’s remembrance of her beloved partner of some 57 years.

“Sorrow is only a slice of the story.”

Ann Roijë, Epilogue

Core & Mantle Discoveries

After only a few months of recording, the InSight team was able to constrain the size of Mars’ core to around 1,100 miles, which is much larger than prior-mission estimates. The data also revealed the mantle structure and the presence of layers within the crust beneath the landing site.

The end of the mission, over 1,300 seismic events had been recorded. Most were close to the lander and quite small. One exception was the magnitude 4.2 quake that occurred in Valles Marineris, over 5,000 miles from the lander and coincidently a region where our late colleague Professor An Yin had argued for the presence of strike-slip and normal faults in 2012.

Marsquakes like the Valles Marineris one, with epicenters occurring far from the InSight lander measurement site, are classified as teleseismic. Seismic data from three teleseismic events helped our team detect a mantle discontinuity (attributed to the post-olivine phase transition) within the Martian crust. These observations were used to infer that the Martian mantle is more iron rich than Earth, and that both planets have a similar potential temperature.

Combined together, these discoveries imply a difference in internal structure between the red planet and ours: unlike Earth, Mars does not have a lower mantle. A later study using extrapolating waves was also able to determine that the composition of the core differs from that of Earth in that it has less light element content – such as sulfur, oxygen, carbon, and hydrogen – as much as twice as high.

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Recording and analyzing these surface waves marked another tremendous step forward in our understanding of the red planet. The data from this “monster” marsquake was combined with InSight’s data from a colossal meteor impact in December 2021 to investigate Mars’ crustal structure. Like the marsquake, this meteor impact was strong enough to produce surface waves, allowing my group to peer at Mars’ surface and history for the first time.

Though the InSight mission ended in December 2022 due to dust accumulation on the lander’s solar panels, its success in mapping the seismic activity, heat, and frequency of impacts on Mars is of the utmost importance for future research and missions to the planet. By helping reveal Mars’ interior and surface structure, it has not only provided more ground truth with which to understand the rocky planets of our universe, but also informed scientists and engineers on how to build structures to ensure the safety of future human explorers. (UCLA Newsroom) InSight’s insight has made an impact of its own, and the waves produced by its discoveries will continue to be felt in the scientific community for generations to come.

EPSS seismology Professor Caroline Beghein was one of the Participating Scientists selected to join the NASA InSight mission in 2018.
I was 9:00 am. Duffel bags, rolled-up tents, and packed coolers lined the walkway of the loading dock behind the Geology building. We were standing in a circle-like blob around a weathered map. Dr. Kevin Coffey (or just “Kevin” to most that know him) was explaining the rock formations and geologic units surrounding UCLA. EPS SCI 133 was about to embark on a field trip.

Soon, we would travel hundreds of miles over several hours and cross a transform plate boundary into a new geologic space - transporting ourselves hundreds of millions of years into the past. But for now, we were standing at the loading dock, trying to commit each other’s names to memory.

There are many ways to learn something. You can read about it, watch videos on it, do worksheets and attend lectures about it, and so on and so forth. However, nothing compares to actually experiencing it — going out into the world and seeing things in action. This was the basis for the journey we were about to take.

To say that the following days would be unforgettable would be an understatement. Our first day of camp was spent in Valley of Fire State Park, Nevada. As morning light poured across the landscape and set the sandstone aflame in hues of deep orange and red, we understood where the valley had earned its name. One breakfast and Bighorn sheep sighting later, we huddled under the shadow of an outcrop to escape the desert heat, listening to Kevin lecture over the low roar of the Virgin River. He showed us where rock had fallen away from the canyon walls, and where cross-bedding revealed how the rock had been formed. We learned how rocks wept, fresh water dribbling and streaming down the sides of the gulch. Birdsong and greenery filled the canyon, framing swaths of geologic time as we looked up. As we separated for individual ventures, some of us took the time to experience the showers of the Emerald Pool, waterfalls soothing us. For others, close encounters with wildlife were had. We all assembled by the end of the day, partaking in campfire storytelling and delicious vegan chili.

Later that day, we arrived at Zion National Park, just in time to see the sun drench the walls of the canyon with copper and gold. Zion, I can safely say after this trip, is one of my favorite places on the planet. The canyon itself tells a deep geologic story, opening up about 100 million years of Earth’s history. We hiked inside the canyon as a class, listening to Kevin lecture over the low roar of the Virgin River. He showed us where rock had fallen away from the canyon walls, and where cross-bedding revealed how the rock had been formed. We learned how rocks wept, fresh water dribbling and streaming down the sides of the gulch. Birdsong and greenery filled the canyon, framing swaths of geologic time as we looked up. As we separated for individual ventures, some of us took the time to experience the showers of the Emerald Pool, waterfalls soothing us. For others, close encounters with wildlife were had. We all assembled by the end of the day, partaking in campfire storytelling and delicious vegan chili.

The glorious climax of it all came as a red-colored sunset. Much like the first day at the Valley of Fire, we sat together, as a class. Sunlight peeked through the clouds in the distance, gently draping the canyon, inch by inch, in the warm purple hues of twilight. I have the scene baked into my memory, etched into my field notes. What was learned there, what we experienced, would not easily be forgotten.

Prior to the trip, I had a vague, technical understanding of the ways in which our corner of the universe formed itself. I understood how and when the continents formed, the ways in which mountains formed and landscapes smashed together and separated, I could recite the ways in which country rock buckled and stretched under pressure. But when talking on timescales of hundreds of millions of years, there is only so much that the brain can account for. We are simply not built to understand such grand periods of time. But to be immersed in the geology is different. There is a vastness to it, a grandiosity that draws a deep sense of scientific respect and awe.

"No matter how well you understand the theory and mechanisms of the Earth and the processes inside and on it, it will always be different seeing it."

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Our final leg of the trip was spent on the South Rim of the Grand Canyon. We drove across the Colorado Plateau, through desert thunderstorms and multiple time zones, to get there. Every second of waiting, every mile we traversed to get there was absolutely worth it.

I had never been to the Grand Canyon before, and I don’t think I will ever truly leave now. We leaned over the railings, staring down over a billion years of Earth’s history.

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Celebrating Prof. Christopher Russell’s 80th Birthday

PETER CHI

Photo Screenshot of Zoom party attendees.

Close to 60 EPSS colleagues, students, alumni, and friends across North America and around the world were united on the internet on May 10, 2023, to celebrate Prof. Christopher “Chris” Russell’s 80th birthday. Organized by several of his former students who are also EPSS alumni, the event began with an in-person presentation by current students and group members at Chris’ office, followed by an hour-long Zoom party with oral presentations and stories told by former colleagues and students, including the Russell family (Chris and Arlene, and daughters Jennifer and Danielle).

These were followed by Prof. Margy Kivoliovich, who highlighted several of his key academic achievements. She also thanked Chris for their research collaboration (90 co-authored papers) and noted that “we would not have been awarded the Galileo magnetometer without Chris’ guidance and support, and my career would have been very different.”

Prof. Hao Cao added their congratulatory remarks to Chris’ milestone birthday. Former EPSS scientist Janet Luhmann (now at UC Berkeley) presented an analysis of solar activity at the time of Chris’ birth and his 80th birthday. Deputy PI of NASA’s Dawn mission Carol Raymond (JPL) reflected how Chris changed her career trajectory in a profound way, and Julie Castillo (JPL) praised Chris for leading the amazing Dawn mission. International scholars who visited Chris’ group (Xochitl Blanco-Cano, Michael Gedalin, Tomoyuki Higuchi, and Hideaki Kawano) also joined this special Zoom party even though the event was held in the wee hours for some of them.

Many former students shared valuable lessons and experiences in their graduate study from Chris Rick Elphic (PhD ‘92). Chris’ first student and current head of the neutronspectrometer experiment on NASA’s VAPOR rover to the Moon, reflected on the development of the flux transfer event concept when he worked with Chris at UCLA. Roberta Johnson Killeen (PhD ‘87). First Lady of the University of Illinois System, cherished her fond memories at UCLA and passed the experience to her children. Former NASA astronaut John Phillips (PhD ‘87) recalled how his graduate training from Chris at UCLA changed his career trajectory in an important way. Britney Schmidt (PhD ‘10) applauded Chris’ long-time and undergraduate support to female scientists, using the records of the Dawn mission for promoting women scientists in leadership roles as an example. The presentations were followed by a “social hour” led by Steve Petrosian (PhD ‘93) and Tamitha Skov (PhD ‘92). The Zoom party was also attended by former students Qian Le (PhD ‘91), Tielong Zhang (PhD ‘92), Franci Chun (PhD ‘92), Linda Spiller (PhD ’92), Tom Morell (MS ’96), Peter Chi (PhD ’97), Andy Yu (PhD ’04), Galen Fowler (PhD ’04), Liz Jensen (PhD ’05), Miaa Cowser (PhD ’07), Lun Jian (PhD ’08), Jared Leinzer (PhD ’09), Youlong Ge (PhD ’09), Hanying Wei (PhD ’10), Hairong Lai (PhD ’14), Jennifer Suely (PhD ’15), Mickey Villareal (PhD ’18), Kynan Hughson (PhD ’19), Yi Qi (PhD ’19), and Ricky Hart (PhD ’22), as well as by current students Mark Hubbert, Kyle Webster, Nathan Miles, and Wenyi Sun.

Representatives from several groups joined this special event and announced their appreciation for Chris’ contributions. Dean of UCLA Physical Sciences Miguel Garcia-Garibay and Faculty Director of the UCLA SPACE Institute Jacob Bortnik bestowed on Chris a Lifetime Achievement Award. The Ultra Large Terrestrial International Magnetometer Array (ULTIMA) consortium presented to Chris a Global Impact Award (presented by Peter Chi). The Geospace Environment Modeling (GEM) group thanked Chris for his substantial contributions to the program (presented by Adam Kellerman, the GEM Chair). The NASA Magnetospheric Multiscale (MMS) mission conferred on Chris a Certificate of Appreciation (presented by Qian Le).

A symposium in honor of Chris’ extraordinary academic career is being planned for 2024. Organizers of the “Russell @ 80” Event: Rick Elphic (NASA ASC), Liz Jensen (PhD), Qian Le (NASA GSC), Steve Petrosian (Lick Observatory), Britney Schmidt-Cornell, Tamitha Skov (Millerian U.), Paul Sung (J/MASS Lowell, Haning Wei, and Peter Chi (UCLA).
Solar Wednesdays
ABE AMIRI

I am a new graduate student in EPSS pursuing a master’s degree in Planetary Science with Professor David Jewitt, and am gratefully supported by a special award from the Kavli Foundation.

I recently came from Afghanistan, where I led a nonprofit organization called the “Afghan Astronomy Association.” Our objective – the first effort of its kind in the country’s history – was to provide access to science through looking at the sky, for people who had never before had that opportunity.

In pursuit of our accessibility goal, we published the first astronomy textbooks in local Afghan languages, printing and distributing tens of thousands of copies to students in various corners of the country. Additionally, we set up over 180 astronomy clubs across Afghanistan, each equipped with a Newtonian telescope. We organized planetarium shows and observing events, created exciting online animations geared towards young children, and ran an astronomy essay contest that garnered entries from thousands of students. Through these events and activities, we were able to inspire young people to engage more with science.

I have found that, even at UCLA, most people have never looked through a telescope! I love giving people their very first telescopic experience, and I have already done this activity a couple of times during Spring Quarter 2023. Every week, dozens of people stop by to observe and ask questions. If 50 people experience the sun per week, that is about 500 people per quarter, bigger than any science OR class. While they are hanging out near the scope, I usually give them quick facts about the celestial sphere and introduce some basic features. Most people are unaware of the science of the sky and how it, along with the Sun and Moon, affects our planet and everyday lives; however, that only motivates me to do more. I intend to introduce new ideas for EPSS outreach efforts as we move forward in time and would love to talk to anyone about ways to proceed.

“Anyone is welcome to have a look at the changing face of our star!”

I am keen to continue my outreach efforts in EPSS. I have already launched a small activity called “Solar Wednesdays,” where every Wednesday around noon, I set up one or two of the department’s solar telescopes (with filters showing different details) in the Court of Sciences, right in front of the west entrance to our building. Anyone is welcome to have a look at the changing face of our star (but only if the sky is sunny at noon!)

This was the first year that the CDU Saturday Science Academy presented curriculum outside their traditional areas of biology and life sciences, instead focusing on Earth and physical sciences. The organizers were looking for a unique field trip or experience to culminate their program, and were thrilled at the invitation to bring over 150 students to the EPSS department. Ranging in ages from 4-18, it was a unique challenge to keep the curriculum exciting and relevant for all students, basically structured like a “miniature Saturday Science Academy.”

By empowering students to investigate their surroundings, we can foster their curiosity about exciting real-world applications and encourage them to develop the skills necessary to thrive in any STEM field. “These kinds of formative experiences are so motivating for young kids that aren’t otherwise exposed to meteorites, fossils, and other cool demonstrations.” It really leaves an impression on them, and can inspire them to pursue their passions,” said Jasper Laca, one of the staff booth coordinators.

The event featured a variety of fun hands-on activities across several disciplines. One booth displayed rare minerals and examples of different rock types, along with unique fossils and meteorites that could be examined up close through microscopes. The next booth had demonstrations of earthquakes using fault models, and examples of geomorphology using the augmented reality sandbox, discussing erosion and topographic maps. At the space weather booth, kids and parents alike played with magnetic field toys, colorful plasmas, and held the student-built ELFIN satellite. The planetary science booth, one of the crown favorites, allowed each of the kids to help in making a comet and then photograph it and themselves with an infrared thermal camera, just like a real satellite instrument would. Last, the kids enjoyed playing with different foods as analog models of theology, the deformation and fluid-like flow of solids like the Earth’s mantle.

Beyond science topics, EPSS Chair Carola Litipov-Bertelli led a presentation with Q&A on preparing for college, and how to pursue career opportunities in Earth and space sciences. Additionally, several undergrads shared their personal journey and how they found the department.

All in all the event was a huge success, thanks to all the volunteers and labs who came in on a Saturday to make this a memorable experience for our CDU guests. With the arrival of a new Diversity, Equity, and Inclusion Outreach Coordinator, EPSS will continue to build stronger partnerships with local schools and expand the mobile EYU concept, so we can share our exciting science with the community and expand access to STEM for all.

Above: Students learning about the forces behind landslides. | Credit: Kira Fish
2023 GRADUATES

MINORS
Esther Sarina Cabello
Israel Carrillo
Miranda Samantha Chang
Cassandra Camille Chawke
Raj Ajay Ajit Kumar Hamlai
Lingxi Liu
Charlotte Elizabeth Six

MAJORS | BACHELOR OF ARTS
Tam Anh Thi Luong
Serenity Rothery
Erin Lin Slagerman
Kaleb J. Tuliau

MAJORS | BACHELOR OF SCIENCE
Grace Marie Elias
Breemah Michelle Gethman
Maya Kavi Gross
Tessa Anneke Beate Holzmann
Nada Mareechi Jacinto
Clare Bonnie Madera
Eduardo Jacques Martinez
Jennifer Estrella Martinez
Heaarth Kaa Yager O’Hara
Caleb Joshua Paul
Marcelo Alejandro Perdomo
Shawronna Sengupta
Gwyneth Rose Stolo

MASTER OF SCIENCE
Hayley Lauren Bricker
David Abraham James
Elisha Lakme Jhoti
Emily F. Kleni
Jade Lauren Nicole Knighton
Joseph Charles Merrill-Lewis
Nada Mareechi Jacinto
Clare Bonnie Madera
Eduardo Jacques Martinez
Jennifer Estrella Martinez
Heaarth Kaa Yager O’Hara
Caleb Joshua Paul
Marcelo Alejandro Perdomo
Shawronna Sengupta
Gwyneth Rose Stolo

DOCTOR OF PHILOSOPHY
Han Bao
Kiyun Bao
Taylor Christopher Dorn
Akash Gupta
Justin Takeshi Higa
Yang Li
Dave Gerald Milewski
Nathan Daniel Myles
Tyler Powell
Lisatarus Rusattis
Kevin Shaw
Ashley Marie Schoenfeld
Yufan Xu

VALEDICTORIAN
Gwyneth Rose Stolo | Eugene B. Waggoner Scholarship

ACADEMIC MERIT – MAJORS
Maya Kavi Gross | Deane Oberste-Lehn Scholarship
Tessa Anneke Beate Holzmann | Deane Oberste-Lehn Scholarship
Eduardo Jacques Martinez | Harold & Mayla Sullwold Scholarship
Caleb Joshua Paul | Donald Carlisle Endowment
Erin Lin Slagerman | Deane Oberste-Lehn Scholarship

ACADEMIC MERIT – MINORS
Miranda Samantha Chang | Deane Oberste-Lehn Scholarship
Esther Sarina Cabello | Deane Oberste-Lehn Scholarship
Israel Carrillo | John & Frances Hanen Scholarship
Cassandra Camille Chawke | Deane Oberste-Lehn Scholarship
Raj Ajay Ajit Kumar Hamlai | John & Frances Hanen Scholarship

QUEEN’S ROAD UNDERGRADUATE RESEARCH FELLOWSHIP
Shawronna Sengupta

SUMMER FIELD SCHOLARSHIPS
Breameh Michelle Gethman | Walter S. Harris Award
Tessa Anneke Beate Holzmann | Robert Joseph Horodyski Award
Duyen Ngoc Le | Deane Oberste-Lehn Award
Max Toake Liu | Donald Carlisle Endowment
Jennifer Estrella Martinez | Deane Oberste-Lehn Award
Shawronna Sengupta | Deane Oberste-Lehn Award
Sophia Alexandra White | Deane Oberste-Lehn Award
Mengmeng Zhang | Deane Oberste-Lehn Award

UNDERGRADUATE RESEARCH AWARDS
Israel Carrillo | Donald Carlisle Endowment
Ian Paul Fu | Joe & Andrea Straus Endowment
Raj Ajay Ajit Kumar Hamlai | John W. West Fund
Massooma Saiyeda Hasnain | Deane Oberste-Lehn Scholarship
Tessa Anneke Beate Holzmann | Deane Oberste-Lehn Scholarship
Adrian L. Ng Hei Lam | Joe & Andrea Straus Endowment
Max Toake Liu | John W. West Fund
George Vetushko | John W. West Fund
Sophia Alexandra White | Deane Oberste-Lehn Scholarship

All Photo Credit: Nika Eskandari
2023 Retirement Celebration

CARLENE BROWN

The Earth, Planetary, and Space Sciences department hosted a special farewell celebration on June 27, 2023 for eight longtime members of the department who recently retired from UCLA. The event was held on campus in the Hershey Salon of the historic Miriam Hershey Hall. Altogether comprising more than 300 years of service, the departing group included four faculty, one academic researcher and three administrative staff members:

- Distinguished Professor Christopher Russell (57 years; actual retirement date was July 1, 2022);
- Distinguished Professor J. William (Bill) Schopf (55 years);
- Distinguished Professor T. Mark Harrison (34 years);
- Dr. Robert Strangway, Researcher (39 years);
- Lauri Holbrook, Student Affairs Officer (34 years);
- James Nakatsuka, Administrative Officer (32 years); and
- Carlene Brown, Chief Administrative Officer (22 years).

With such a large group of honorees, department chair Carolina Lithgow-Bertelloni kept the mood light and the jam-packed program moving quickly. There were short introductions for each retiree, offered by a close colleague and filled with a collection of personal anecdotes, comical reminiscences, impressive accomplishments, and noteworthy contributions to science and/or EPSS. These were followed by brief, touching speeches from the retirees themselves to express highlights of their long, illustrious career and express gratitude to all the members of the department, family, and friends who provided support over the years. Afterwards, everyone enjoyed a lovely outdoor reception on the adjacent patio complete with cake, and a champagne toast, along with many informal stories and remarks provided by various members of the department.

Our retiring colleagues will be sorely missed in the department but we wish them well in this new chapter of their life.

To see the event slideshow with fun photos and memories from the retirees, scan the QR code to the right.

CARLENE BROWN
22 Years | CAO

JIM NAKATSUKA
32 Years | Senior Fund Manager

LAURI HOLBROOK
34 Years | Student Affairs Officer

LAURI HOLBROOK RETIRED AS Department Advisor of EPSS after 23 years, with almost 35 years of service at UCLA. From the first moment entering the Geology Building in Fall Quarter 1979 as a UCLA freshman, Lauri felt at home. Her famous and infamous professors included Nelson, Dollase, Schopf, Watson, Christie, Bird, Hall, Ernst, Reed, Jackson, DePaolo, Roetider, and a new guy named Ingersoll. With a B.S. in Geology in 1984, Lauri worked as a Geologist at Getty Oil in Bakersfield, CA, until her move back to Los Angeles. UCLA experiences included IGPP/EPSS and look forward to this next leg of my journey; spending more time with my family, caring for our elderly relatives, gardening, fixing up our home, and traveling.

MANY THANKS TO ALL who have been a part of my journey: my dedicated coworkers and teammates whose expertise made my job easier; my managers whose guidance and mentorship have been instrumental in growing and shaping me professionally and personally; the distinguished faculty, researchers and staff whom I'm proud to know and had the honor to support—I look forward to hearing about the many new projects they continue to accomplish. Thanks to my family who have listened to me incessantly talk work over family dinners and know all the researchers by name as well as I do. I am grateful for my years at IGPP/EPSS and look forward to this next leg of my journey; spending more time with my family, caring for our elderly relatives, gardening, fixing up our home, and traveling.

To see the event slideshow with fun photos and memories from the retirees, scan the QR code to the right.

VIEW THE EVENT SLIDESHOW HERE!
I FIRST JOINED UCLA in 1983 as Assistant Research Geophysicist in Prof. Maha Ashour-Abdalla’s Space Physics theory group, where I was privileged to work with Dr. Phil Pritchett on a theory on the source of aurora-related radio emissions. These emissions have counterparts on Jupiter and Saturn, and, in general, make planets bright radio-astronomical objects. A few years later the late Dr. Fred Scarf took a position at UCLA, and I became involved in analyzing plasma wave data acquired by the Pioneer Venus Orbiter. This in turn increased my interactions with Prof. Chris Russell, and he invited me to join his research group. I enjoyed my time over the past half dozen years or so and believe I have at least acquired in my normal faculty role the necessary level of expertise to allow me to continue to do those parts of the job that bring me joy and ease doing the others. Our many hires over the past half dozen years or so are superb and I leave the faculty secure in knowing they’re poised to lead the department to a bright future. We’re all deeply saddened by An’s sudden loss but grateful for the simple model he left us of the ideal Bruin scholar; there’s no substitute for hard work and clear thinking in science!

I have retired. Over this period the department has evolved, not only in its name (from “Geology,” to “Geophysics”), but also in terms of the breadth of its scholarly pursuits. Coupled with this, the department has increased in size, in the number of students served, and in its gender and racial diversity. In short, the department has evolved in tandem with the science, the university, and the society. My “take-away” from this wondrous experience is simple: For me, every single day at UCLA has been “Yet another day in Paradise!” Hooray for EPSS! The future is bright!

THANKS UCLA FOR PROVIDING me with extraordinary resources and opportunities over the past 34 years, the epitome of which was giving me playmates like An Yin and Kevin McKegan. For me, retirement means I’ll be able to continue to do those parts of the job that bring me joy and ease doing the others. Our many hires over the past half dozen years or so are superb and I leave the faculty secure in knowing they’re poised to lead the department to a bright future. We’re all deeply saddened by An’s sudden loss but grateful for the simple model he left us of the ideal Bruin scholar; there’s no substitute for hard work and clear thinking in science!

55 Years | Professor

KEVIN MCKEEGAN

33 Years | Professor

CHRISTOPHER RUSSELL

57 Years | Professor

CHRISTOPHER RUSSELL recently celebrated his 80th birthday with almost 60 EPSS friends, students, alumni, and colleagues. During his time with EPSS, he has made extraordinary contributions to various topics within space science, a symposium honoring his academic career and achievements is being planned for 2024. In the meantime, he is continuing to conduct his research and write papers. To read more about his birthday celebration and awards, see page 15!

54 Years, Retired 2019 | Professor

PAUL DAVIS

40 Years, Retired 2019 | Professor

IN 1968, AS A freshly-minted PhD, I joined the department. Now, after 55 years — more than half a century! — I have retired. Over this period the department has evolved, not only in its name (from “Geology,” to “Geology and Geophysics”), and on and on to its current moniker, “Earth, Planetary, and Space Sciences”) but in the breadth of its scholarly pursuits. Coupled with this, the department has increased in size, in the number of students served, and in its gender and racial diversity. In short, the department has evolved in tandem with the science, the university, and the society. My “take-away” from this wondrous experience is simple: For me, every single day at UCLA has been “Yet another day in Paradise!” Hooray for EPSS! The future is bright!

55 Years | Professor

J. WILLIAM (BILL) SCHOPF

39 Years | Researcher

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53 Years | Researcher

MARK HARRISON

44 Years | Professor

ROBERT J. STRANGEWAY

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DONOR RECOGNITION

Thank you for your generous gifts and for your commitment to our mission. Donors who made gifts to the Department of Earth, Planetary, and Space Sciences between July 1, 2022 and June 30, 2023 are listed on the opposite page. Gifts made after June 30 will be acknowledged in the 2022-2023 newsletter.

We want to express our sincere gratitude to donors who have created endowments in the department (listed below). Endowments are impactful gifts that provide permanent, ongoing support for our faculty, students and programs, helping to ensure that the department has the resources to meet future needs. As we experience reduced state support and fluctuating grant support, endowments ensure that we can continue to improve the quality of EPSS research and teaching, and elevate the Department’s worldwide reputation.

UCLA Physical Sciences Dean Miguel Garcia-Garibay is dedicating resources to inspire a broader pool of talent fosters greater scientific accomplishments and empowers underrepresented communities that significantly benefit our society. As a commitment to these efforts, gifts in support of diversity, equity, and inclusion will be considered at a more significant match.

As a commitment to these efforts, gifts in support of diversity, equity, and inclusion will be considered at a more significant match.

DIVERSITY, EQUITY AND INCLUSION

Qualifying gifts of $50,000 to $1 million to any Physical Sciences endowment aimed at increasing diversity, equity, and inclusion will be matched at 100%.

To learn how you can establish your legacy through an endowment, or make a donation to support the Department of Earth, Planetary, and Space Sciences, please contact Lois De Leon at ideleon@epscogroup.ucla.edu or (310) 405-3043.

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DONATE TOWARDS NEW FIELD VEHICLES

Field trips like the one shown on the left are a vital part of our EPSS curriculum, providing students with hands-on learning experiences, field training, and memories to last a lifetime. However, these experiences would not be possible without the assistance of our trusty EPSS field vehicles, many of which are nearing retirement age. To continue running our field programs smoothly for future EPSSers, we need your help!

To donate towards the purchase of new field vehicles, please visit the EPSS STUDENT FIELDWORK FUND at the QR code to the right. No amount is too small, and each and every cent is deeply appreciated. Thank you!

Photo: Students hike across millions of years of geological history at Valley of Fire State Park, for an EPS 513 field trip.

[Credit: Nikki Eshkanderi]