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26 *Attorneys for Plaintiffs and the Certified Classes*

27 **UNITED STATES DISTRICT COURT**
28 **NORTHERN DISTRICT OF CALIFORNIA**

NEETA THAKUR, et al.,
Plaintiffs,

v.

DONALD J. TRUMP, et al.,
Defendants.

Case No. 3:25-cv-4737

**DECLARATION OF PROFESSOR
ARADHNA TRIPATI**

DECLARATION OF ARADHNA TRIPATI

I, Aradhna Tripathi, declare as follows:

1. I have personal knowledge of the facts contained in this declaration and, if called as a witness, could and would testify competently to those facts.

2. I am a Professor at the University of California, Los Angeles (“UCLA”) serving in multiple departments, including the Institute of the Environment and Sustainability (IoES), the Department of Atmospheric and Oceanic Sciences, the Department of Earth, Planetary, and Space Sciences, the Institute for Geophysics and Planetary Physics (IGPP), and the California Nanosystems Institute (CNSI).

3. I am the faculty director and founder of the UCLA Center for Developing Leadership in Science (CDLS), a nationally recognized program that fosters inclusive excellence in STEM. Since 2018, CDLS has supported more than 500 fellows, from high school students to postdocs, through hands-on research, leadership training, and community collaboration.

4. I have received numerous awards for my research, education, and outreach work, including a Presidential Early Career Award in Science and Engineering from President Obama and the White House Office for Science, Technology, and Policy; the NSF’s CAREER award, which is the most NSF prestigious award in support of early career faculty; the Bromery Award for Minorities from the Geological Society of America; the E.O. Wilson Award for Outstanding Science on climate change, and; a Chair International D’Excellence in Stable Isotopes from Institut Universitaire European De La Mer. I have also been named a Hellman Fellow and a National Academy of Sciences Kavli Fellow.

5. As a geoscientist and climate scientist, I am responsible for over 120 research papers and publications, 181 conference abstracts, 13 invited talks and three keynote lectures at international conferences, and 50 invited talks at universities and research institutes. There are approximately 3000 citations to my research.

6. From 2002-2009, I was a research fellow at the University of Cambridge, where I held the Thomas Nevile Fellowship in Natural Sciences, a Comer Abrupt Climate Change

1 Fellowship, a National Environmental Research Council Fellowship, and a Marshall Sherfield
2 Fellowship.

3 7. In 2002, I earned a Ph.D. in Earth Sciences at UC Santa Cruz where I was a Gates
4 Millennium Scholar, an Ocean Drilling Program Fellow, and a UC Regents' Fellow. As a Ph.D.
5 student, I received the Aaron Waters Award for Best Thesis Proposal.

6 8. In 1996, I earned my B.S. in Geological Sciences from California State University,
7 Los Angeles where I received the Aaron Waters Award for Outstanding Senior.

8 9. My research focuses on climate science, geochemistry, climate justice,
9 environmental justice, climate change impacts, climate resilience, geology, and clumped isotope
10 geochemistry.

11 10. I have been the recipient of grant funding for my work from a variety of
12 governmental and private sources, including federal grant funding from the NSF.

13 11. A true and correct copy of my curriculum vitae is attached as **Exhibit A**.

14 **RAISE Water Grant Award**

15 12. On September 16, 2019, the NSF issued a notice of award to me, Federal Award
16 Identification Number 1936715, for a project titled "RAISE: Bringing Together Diverse
17 Perspectives on Water" ("RAISE Water Grant").

18 13. The RAISE Water Grant seeks to bring together and share diverse perspectives on
19 water through convergence research (referred to as braiding knowledge), with aims to develop
20 solutions to environmental challenges in the Southwestern United States. The project represents a
21 model for convergence research on water that can serve as a model for other geographic regions.
22 Knowledge of deep history, obtained through geoscience, ethnography, and archaeology, can
23 inform science, support Indigenous sovereignty, and guide decision-making for tribal authorities,
24 and for other local, regional, and national policy-makers. Knowledge of community water values
25 and needs can and should inform water management and science. Braided, this knowledge can
26 support climate change adaptation.

27 14. The specific goals of the project are to: (1) use novel interdisciplinary approaches
28 to constrain how and why precipitation and evaporation rates respond to changing climate forcing

1 in different regions of the Southwest; (2) gather data on the water issues, past and present, facing
2 Indigenous communities whose waters are in, or are conveyed to, the Los Angeles basin, and
3 other regions; (3) Broaden participation through inclusive practices with the adaptation and
4 assessment of the CDLS inclusive science model to the geosciences and environmental science.

5 15. The initial NSF Award for the RAISE Water Grant was for three years (September
6 2019 – August 2022) for an amount of \$1,000,000. The statutory authority for the award was
7 “National Science Foundation Act of 1950, as amended (42 U.S.C. 1861-75).” A true and correct
8 copy of the September 2019 Notice of Award is attached as **Exhibit B**.

9 16. I am identified as the Principal Investigator for the RAISE Water Grant. The
10 proposal would fund salaries for myself and others on my research team, as well as research
11 costs, supplies, technical services, and travel.

12 17. The NSF issued supplemental awards for the RAISE Water Grant in July 2020 and
13 August 2021, for \$199,999 and \$99,999 respectively, bringing the total federal funding awarded
14 for the RAISE Water Grant to \$1,299,998. True and Correct copies of the July 2020 and August
15 2021 Notices of Award are attached as **Exhibits C and D**.

16 18. The NSF also issued a notice in August 2024 that extended the end date of the
17 RAISE Water Grant to August 31, 2025. A true and correct copy of that extension notice is
18 attached as **Exhibit E**.

19 **Suspension of RAISE Water Grant**

20 19. On August 1, 2025, I was notified over email by UCLA administrators that the
21 NSF had issued a “suspension notice” suspending the RAISE Water Grant Award. A true and
22 correct copy of the Grant Suspension Notice email is attached as **Exhibit F**.

23 20. The Grant Suspension Notice stated that “UCLA has received a suspension notice
24 from NATIONAL SCIENCE FOUNDATION (NSF)” for the RAISE Water Grant and to
25 “immediately stop incurring costs/expenditures ... effective July 31, 2025.”

26 **Veterans STEM Grant Award**

27 21. On June 5, 2023, the NSF issued a notice of award to me, Federal Award
28 Identification Number 2232606, for a project titled “Collaborative Research: Supporting

1 Leadership in Diversity, Professional Development, and Geoscience Capacity Building for
2 Veterans in STEM: The VRC-CDLS Veterans in STEM Program” (“Veterans STEM Grant”).

3 22. The primary goal of the Veterans STEM Grant was to build a robust, cross-
4 institutional network dedicated to enhancing veteran participation and leadership in STEM fields
5 through recruitment, convenings, role models, advising, and research engagement. The Veterans
6 STEM project establishes a cross-institutional geo/environmental science leadership program
7 between East Los Angeles College (ELAC) and The University of California, Los Angeles
8 (UCLA), and has expanded more recently to Santa Monica College, California State Dominguez
9 Hills, LA Mission College, and American University of Health Science. The project employs a
10 multi-dimensional approach to science training that simultaneously supports geoscience students
11 academically, socially, and personally. In addition to supporting science skill development, the
12 program emphasizes developing essential skills to become effective leaders in these fields. The
13 program creates a model that can be used to address veterans being included in spaces at the
14 intersection of science and leadership at various types of institutions across the country.

15 23. The NSF Award for the Veterans STEM Grant was for five years (June 2023–
16 August 2028) for an amount of \$1,871,753. The statutory authority for the award was “National
17 Science Foundation Act of 1950, as amended (42 U.S.C. 1861-75).” A true and correct copy of
18 the June 2023 Notice of Award is attached as **Exhibit G**.

19 24. I am identified as the Principal Investigator for the Veterans STEM Grant. The
20 proposal would fund salaries and stipends for veteran students and researchers, faculty, and staff,
21 as well as programming costs, supplies, and travel.

22 **Suspension of Veterans STEM Grant**

23 25. On August 1, 2025, I was notified over email by UCLA administrators that the
24 NSF had issued a “suspension notice” suspending the Veterans STEM Grant Award. A true and
25 correct copy of the Grant Suspension Notice email is attached as **Exhibit H**.

26 26. The Grant Suspension Notice stated that “UCLA has received a suspension notice
27 from NATIONAL SCIENCE FOUNDATION (NSF)” for the Veterans STEM Grant and to
28 “immediately stop incurring costs/expenditures ... effective July 31, 2025.”

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Harm Suffered from NSF Grant Suspensions

27. My research team, my students, and I have suffered immediate harm as a result of the suspension of the RAISE Water and Veterans STEM grants. Specifically:

- a) My research team and I are unable to (1) complete our convergence research on the environmental challenges in the Southwestern United States, or (2) continuing supporting STEM research performed by veteran students and researchers. This is after considerable work has already been executed to recruit researchers and students, conduct research, build community partnerships, and engage participants. Instead, I have had to spend significant time seeking alternate funding sources, and I may potentially need to lay off several members of my research team.
- b) I received financial assistance from these grants for my own salary and that of my research team. I thus need to find new funding sources to fill this unexpected and large gap in compensation.
- c) Grant termination has compromised the trust-building necessary for community engagement on supporting veteran STEM researchers and students. It has taken years for effort to develop relationships with the East Los Angeles College (ELAC), Santa Monica College, California State Dominguez Hills, LA Mission College, and American University of Health Science. All these institutional relationships and infrastructure created to support veteran STEM students have now been compromised.
- d) The above personal and financial harms are ongoing.
- e) These harms are in addition to the loss of value to the public from my research – specifically, insights gained and potential solutions for addressing environmental challenges in the Southwestern United States and creating opportunities for veterans in STEM research.

Role of Class Representative

28. As the above facts demonstrate, I am a member of the UC researchers classes previously granted provisional certification by this Court. I am willing to serve as an additional class representative, and am ready to assume the associated responsibilities. I understand that I must stay informed regarding developments in the lawsuit, communicate regularly with my attorneys, and act in the best interests of the class. I have no conflicts that would prevent me from assuming this responsibility.

29. I have been in communication with other UC researchers class members who have suffered the same general type of harm as I describe above, from the abrupt suspension of their

1 previously approached research grants. This harm is widespread and I believe it will only increase
2 in scope and impact if classwide relief is not granted.

3 I declare under penalty of perjury under the laws of the State of California and the United
4 States that the foregoing is true and correct.

5 Executed August 11, 2025.

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/s/ Aradhna Tripathi
Aradhna Tripathi

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EXHIBIT A

Professor Aradhna Tripati

Institute of Environment and Sustainability (IoES) - Department of Atmospheric and Oceanic Sciences (AOS) - Department of Earth, Planetary, & Space Sciences (EPSS) - American Indian Studies Center (AISC) - Institute of Geophysics and Planetary Physics (IGPP) - California Nanosystems Institute (CNSI)
University of California, Los Angeles - UCLA

1. Summary:

Aradhna Tripati is a climate scientist and higher education leader who is a professor at UCLA, a leading research university. She founded and directs the Center for Developing Leadership in Science, and. She is known as an innovative and experienced expert in climate science, geochemistry, climate justice, environmental justice, climate change impacts, climate resilience, geology, STEM education, critical frameworks, co-learning and knowledge co-production, social impact collaboration, public engagement, and cultural transformation, with >20 years of experience. She has worked as a faculty member at UCLA for 15 years, where she has developed the institutional profile in the emerging breakthrough area of clumped isotope geochemistry, while simultaneously contributing locally, nationally, and globally to the movement for diversity, equity, inclusion, justice, access, and belonging in STEM. Her work has led to the publication of >120 papers in journals as diverse as *Environmental Justice, Ethnicity and Disease, e-Life, Science, Nature, Proceedings of the National Academy of Sciences, Geochimica et Cosmochimica Acta, Paleoceanography and Paleoclimatology*, and raised >\$26 million for research. She received the Presidential Early Career Award in Science and Engineering under President Obama for her unique and impactful research and work and is Fellow of four scientific societies. Due to her expertise, she has been an invited speaker at the Science Philanthropic Alliance addressing over 100 individuals from foundations on “*Why diversity and inclusion need to be a pillar of US science in the 21st century*” and a Distinguished Lecturer at the National Science Foundation discussing the intellectual merit and broader impacts of her work and vision for future directions. She has been recognized

2. Personal information

Citizenship: Dual - US and UK

Race/Ethnicity: Indo-Fijian-American

DOB: 3/19/1979 (age 46)

Contact details:

595 Charles Young Drive, UCLA, Los Angeles, CA 90095

email: atripati@g.ucla.edu or aradhna.tripati@gmail.com

phone: 626-376-1308 - web: <https://tripati-lab.netlify.app/> and <http://atripati.bol.ucla.edu>

3. Education and career history

Education:

B.S. Geology, California State University, Los Angeles (1996)

Distinctions: Began college at age 12; Recipient of Aaron Waters Award for Outstanding Senior

Ph.D. Earth Sciences, University of California, Santa Cruz (2002)

Distinction: Recipient of Aaron Waters Award for Best Thesis Proposal

Career history:

Full Professor, UCLA (2021)

Founding Faculty Director, Center for Diverse Leadership in Science (2017-present)

Associate Professor with tenure, UCLA (2014-present)

Assistant Professor, UCLA (2010-2014; 2009-2010 – 0% appointment at UCLA)
Visiting Scientist, California Institute of Technology (2007-2012)
Research Fellow and PI, University of Cambridge (2002-2009)

Additional appointments:

Honorary Professor, University of Bristol (2022-2025)
Visiting Professor, University of Brest (2015-2019)
Visiting Professor, Natural History Museum, University of Copenhagen (2014-2016)
Field Research and Instructor, Antarctic paleoclimate, Students on Ice (2011)
Field Expedition Leader, Svalbard, Norway (2008)
Field Expedition Leader, Cauvery Basin, India (2008)
Sedimentologist, Ocean Drilling Program Expedition 199 (2001)
Undergraduate Research Fellow, Los Alamos National Laboratory (1995)

4. Honors

Awards:

Distinguished Graduate Alumni Award, UCSC (2025)
Distinguished Lectureship, AGU, Paleoceanography and Paleoclimatology (2024-2025)
Community Building Award, Esperanza Community Housing (2024)
Royal Society Wolfson Visiting Research Fellowship (2021-2024)
Elected to the California Academy of Sciences (2021)
Fellow, Geochemical Society, European Association of Geochemistry (2021)
Dansgaard Award, American Geophysical Union (2021)
Ambassador Award, American Geophysical Union (2021)
Fellow, American Geophysical Union (2021)
AGU Presidential Citation for *No Time for Silence* Contributing Authors led by Vernon Morris (2020)
UCLA Senate Faculty Award for Career Commitment to Diversity, Equity, and Inclusion (2020)
Climate Crisis Honoree, Washington DC (2019)
Fellow, Geological Society of America (2018)
Distinguished Lecturer, National Science Foundation (2018)
Presidential Early Career Award in Science and Engineering (PECASE) under President Obama (2017)
Bromery Award, Geological Society of America (2017)
Chair International D'Excellence, Stable isotopes and paleoceanography, Labex Mer, European Institute of Marine Sciences (2015-2017)
U.S. National Academy of Sciences Kavli Fellow (2015)
E. O. Wilson Award for Outstanding Science - on the role of carbon dioxide in climate change, Center for Biological Diversity (2014)
Hellman Fellowship (2012-2013)
UCLA Career Development Award (2012)
UK National Environmental Research Council (NERC) Fellowship (2006-2010)
Thomas Nevile Fellowship in Natural Sciences, Magdalene College, Univ. Cambridge (2006-2010)
NSF ADVANCE Award Lecture (Univ. Ariz., 2009)
Comer Abrupt Climate Change Fellowship (2003-2005)
Wolfson College Visiting Fellowship, Univ. Cambridge (2002-2004)
Marshall Sherfield Postdoctoral Fellowship (2002-2003)
Gates Millennium Scholar (2000-2002)
Schlanger Ocean Drilling Program Graduate Fellowship (2000)
Gretchen L. Blechschmidt Award from Geological Society of America (2000)
Graduate Assistance in Areas of National Need Fellowship (1999-2000)
National Science Foundation Graduate Fellowship Honorable Mention (1997)
UC Regents Fellowship (1996-1997)

Bahamian Field Course Scholarship (1996)
 Perry Ehlig Summer Field Scholarship (1996)
 CSU Statewide Research Competition Finalist (1995)
 CSULA General Honors Scholarship (1994)
 National Dean's List (1994)
 CSULA University Dean's List (1992-1996)
 University Early Entrance Program (1992-1994)

5. *Funding raised*

Awarded research grants (2011-present)

How Does the Water Cycle Respond to Warming? (2024-2026): \$600,000 (Heising Simons Foundation)

Coaching and Developing a Strategic Roadmap for the Center for Diverse Leadership in Science (2023-2025): \$115,000 (Packard Foundation and Leaders Trust)

Center for Diverse Leadership in Science: Community-led research and service learning in support of environmental justice (2023-2025): \$600,000 (JPB)

Center for Diverse Leadership in Science (2023-2025): \$75,000 (Dalio Philanthropies)

Climate Hubs Learning Partnership (2022-2024): \$1,998,080 (Waverley Street Foundation)

Center for Diverse Leadership in Science - Oceans (2022-2024): \$1,200,000 (with PI Robert Eagle) (Packard Foundation)

The Center for Diverse Leadership in Science Geoscience Learning and Research Ecosystem - Environmental Imagination, Justice, and the University (2022-2027): \$7,490,711 (with co-PIs Chairman Valentin Lopez, Monic Uriarte, and Nancy Ibrahim) (NSF)

Collaborative Proposal: The WinG Collective: An initiative to support women of color in the geosciences (2023-2025): \$128,127 (NSF; with UC Merced PI S. Kim and UC Davis PI I. Montanez)

Collaborative Research: Supporting Leadership in Diversity, Professional Development, and Geoscience Capacity Building for Veterans in STEM: The VRC-CDLS Veterans in STEM Program: \$1,837,882 (NSF) (2023-2028)

Center for Diverse Leadership in Science Oceans (2022-2023): \$200K (Oceankind)

Center for Diverse Leadership in Science Strategic Planning (2022-2023): \$45,000 (Packard Foundation)

Center for Diverse Leadership in Science (2022-2023): \$30,000 (Energy Foundation)

Center for Diverse Leadership in Science (2022-2023): \$50,000 (Dalio Philanthropies)

Climate and Sustainability Innovation Center for Social Transformation and the Center for Diverse Leadership in Science (2020-2023): \$1,390,000 (Packard Foundation)

Enabling Paleoclimate Innovation and Broadening Access to Carbonate Clumped Isotope Geochemistry (2022-2024): \$1,899,958 (Heising-Simons Foundation)

The Past, Present, and Future of Water: Clumped isotopes as a novel tool for studying hydroclimates in Western North America (2021-2023): \$500,000 (Heising-Simons Foundation)

How does the water cycle respond to warming? Novel constraints on regional hydroclimates from proxy data in concert with model analysis (2021-2023): £125,000 (Royal Society)

Center for Diverse Leadership in Science (2021-2022): \$250,000 (Sloan Foundation)

Center for Diverse Leadership in Science Strategic Planning (2021-2022): \$45,000 (Packard Foundation)

GIS for Community Health: A community-led research and service-learning project (2021-2022): \$30,000 (UCLA Racial and Social Justice Grant)

Center for Diverse Leadership in Science (2021-2022): \$17,000 (Ralph M. Parsons Foundation)

Marine science and sustainable coasts under changing conditions, within an inclusive science framework (2020-2022): \$600,000 (with PI Robert Eagle) (Packard Foundation)

Collaborative Research: A Cross-Institution Veterans in STEM Research Program (2020-2022): \$300,000 (with East LA College co-PI Djuradj Babic) (NSF)

Bringing Together Diverse Perspectives on Water (2019-2022): \$1,299,998 (with UCLA co-PIs Shannon Speed and Jessica Cattelino) (NSF)

Workshopping and relationship-building to promote pathways in STEM higher education: UCLA

and Navajo Technical University (2019-2021): \$49,580 (NSF)

Center for Diverse Leadership in Science (2018-2020), \$1,500,000 (Silicon Valley Community Foundation; mix of gift and grant)

Clumped Isotope Signatures in Carbonate Minerals (2017-2020), \$961,369 (DOE)

CAREER - CLUMPMAP – Glacial climate from clumped isotope thermometry with NSF REU award and NSF INCLUDES award (Using the fellows programs at the Center for Diverse Leadership in Science as an institutional change model) (2014-2019), \$848,081 (NSF)

Controls on Clumped Isotope Signatures in Carbonate Minerals (2016-2017), \$130,001 (DOE)

The effects of abrupt warming on climate and hydrology in subtropical Mexico (2016-2018), \$24,965 (UC-Mexus)

EAGER- Exploring the potential for the 1.1 Ga Copper Harbor Conglomerate to yield information on terrestrial environments during the rise of the eukaryotes (2016-2017), \$49,999 (NSF)

International Research Chair Award, Stable isotopes and paleoceanography, Labex Mer, European Institute of Marine Sciences (2015-2017), \$600,000 (Labex Mer/University of Western Brittany)

Aqueous speciation and clumped isotope thermometry (2014-2016), \$100,000 (NSF)

Disequilibrium Controls on ^{13}C - ^{18}O Bond Order in Carbonate Minerals (2014-2016), \$396,556 (DOE)

Shared Resources Consortium Award (2013-2014), \$150,000 (UCLA Vice Chancellor for Research)

Assessing the potential of clumped isotope thermometry to constrain temperatures in the Arctic during the Pliocene (2012-2014), \$235,903 (with UCLA co-PI Robert Eagle) (NSF)

Acquisition of a gas source mass spectrometer, technical support, and outreach for research (2011-2013), \$390,000 (NSF)

Determination of cold seep carbonate formation temperatures using carbonate ‘clumped isotope’ thermometry (2011-2013), \$112,000 (Agouron)

Hot and heavy or cool and fresh? Distinguishing between meteoric and burial diagenesis using clumped isotope thermometry (2011-2013), \$100,000 (American Chemical Society)

Faculty Research Grant (2011-2012), \$5,000 (UCLA Academic Senate)

Paleothermometry using ^{13}C - ^{18}O bond abundance in carbonates from the ANDRILL SMS Project (2011) \$31,630 (NSF)

Systematics and application of the ‘clumped isotope’ thermometer in foraminifera and coccoliths (2007-2010), £254,620 (NERC)

Constraints from new geochemical proxies on temperature and sea level during critical climate transitions (2008-2010) £36,000 (NERC)

Ice-rafted Debris in Middle Eocene to Early Oligocene Sediments from the Greenland Sea (2006), £15,000 (Royal Society)

Tropical SST reconstruction for the early Paleogene using Mg/Ca ratios of planktonic foraminifera (2000), \$2500 (NSF)

Awarded research grants (Co-I) (1999-2009): £397K + \$52K; ~\$568K

Assessing the role of ocean circulation in rapid climate change through the novel integration of high-resolution proxy records (2006-2009) PI: H. Elderfield £226,000 (NERC)

Using calcium isotopes to evaluate interactions between changing seawater calcium, the oceanic carbon cycle and climate during the Cenozoic (2005-2009) PI: C. de la Rocha. Co-Is: A. Galy, M. Bickle, and H. Elderfield. £151,000 (NERC)

Using benthic foraminiferal Mg/Ca to assess the climatic response to orbital and greenhouse gas forcing during the Late Pleistocene (2004-2006). PI: H. Elderfield. £20,000 (NERC)

An isotopic and geochemical investigation of Cenozoic transient climates (2002). \$30,000 (NSF)

Tropical SST reconstruction for the early Paleogene using Mg/Ca ratios of planktonic foraminifera (1999). PI: J. Zachos. \$22,000 (NSF)

Other awarded grants I contributed to (2020-present): \$600K

Collaborative Research: Exploring impacts of scholarships, cross-institutional networks, and co-curricular activities on student and faculty leadership development and the retention of Navajo students in geosciences (2020-2022), \$300,000 (PI Jenny Nakai and Nsalambi

Nkongolo; to support students, recent graduates, and faculty at Navajo Technical University and Dine College during COVID-19) (NSF)

Collaborative Research: Indigenous Geoscience Community (2020-2022): \$300,000 (PI Wendy Smythe, Senior Personnel include Judith Brown Clarke, Darryl Reano, Vernon Morris, and myself) (NSF)

>\$1M in Philanthropic Support Raised as Gifts

6. Advising

Former PhD students:

- *UCLA*: Alexandra Arnold (AOS; postdoc joint between UCLA and University Bristol); Jamie Lucarelli (EPSS; staff scientist at DOE Pacific Northwest National Laboratory), Hung-I Lee (AOS; researcher), Zeeshan Parvez (Chemistry; working in aerospace), Hannah Tandy (EPSS; GSI Environmental)
- *University of Brest*: Maxence Guillermic (Geochemistry; applying for faculty positions); Ian Foster (Geology; medical)
- *Cambridge*: Chris Roberts (Earth Sciences; University of Reading/ European Centre for Medium-Range Weather Forecasts), Caroline Dawber (Earth Sciences; AIR Worldwide, MA).

Current PhD students:

- *UCLA*: Alexa Terrazas (AOS), Hannah Tandy (EPSS), Deepshikha Upadhyay (EPSS), Robert Ulrich (EPSS; co-advised), Cameron Brown (EPSS), Randy Flores (EPSS; co-advised), Jade Knighton (EPSS; co-advised), Hayley Bricker (EPSS; co-advised), Daniel Sepulveda Arias (EPSS), Kira Fish (AOS; co-advised), Danielle Hoague (IoES; co-advised), Bobby Dellinger (AOS)

Committee member for PhD students:

- *UCLA*: Terri Arias-Young (AOS), Dayanni Bhagwandin (Chemistry), Krystle Cobian (Education), Danielle Kalani Heinz (Archeology), Amr Shahat (Archeology), Wu Sun (AOS), Thomas Weber (AOS); Carolyn Rodriguez (Education); Olivia Simons (AOS); Moriah Byrd (AOS); Elijah Catalan (IoES); Carolina Fulginiti (AOS)

Former M.Sc. students:

- *UCLA*: Lauren Santi (EPSS), Bryce Mitsunaga (EPSS), John Mering (EPSS), Rosaleen Gilmore (AOS; co-advised), Dustin Pittman (AOS; co-advised), Trung Nguyen (AOS; co-advised), Ruslana Dalinina (Statistics; co-advised).
- *CSULA* (all Geological Sciences): Ricardo Lopez- Maldonado, Stephanie Darling, Kazumi Nakamura
- *University of Brest* (all Geology): Dimitri Rougessen, Lea Bonnin, Julien Danzelle.
- *Cambridge* (Earth Sciences Part 3): Anya Crocker, Michael Spencer, Chris Roberts, Helen Macintyre, Aileen Dennis, Caroline Sindrey.

Committee member for former MS students:

- *UCLA*: Ilian DeCorte (AOS)

Undergraduate students (not complete):

- *UCLA*: Dennise Valadez, Randy Flores, Hayley Bricker, Irvin Mataramos, Alexa Terrazas, Andrea Guzman-Metevier, Alexandra Arnold, Jessica Canet, Jamie Dix, Joshua Sarna, Jonathan Estaris, Poline Pourmorady, Ryan Dill, Chloe Wicker, Nathan Davila, Lilian Chou, Steve Flores, Miguel Gutierrez, Thanh Nguyen, Leslie Nelson, Adam Richardson Audrey Brown, Angel Fulgencio, Samantha Praskin, Nancy Herrera, Alexandra Villa, Deepshikha Upadhyay, Greg Jesmok, Justin Voon, Casey Yamamoto, Leo Pham, Matthew Li, Sean Burford, Tyler Vollmer, Christine Lopez, Yung Cheah, Lydia Rycroft, Vanessa Brillo, Ryan

Dill, Robert Gamariello, Caitlin Cartmell, Jimmy Lee, Savannah Trewman, Akshat Mahajan, Brittany Miles, Mellisha Stokes, Mariam Sahakyan, Nam Duc Lai, Shirley Lee.

- *Santa Monica College*: Naarai Hernandez
- *East LA College*: Joshua Rubi, Kevin Miguel
- *CSULA*: Marcus Enriquez
- *Savannah State University*: Sena Tay
- *Fort Valley State University*: Cameron Brown, Dana Brown
- *Navajo Technical University*: Velynda Sandoval
- *Bryn Mawr College*: Shakhari Badgett
- *Williams College*: Jorge Castro
- *Nanjing University*: Wu Sun, Ning Zhao
- *Cornell University*: Clara Alvarez, Christopher Bentley
- *Cambridge*: Aaron Bufe, Emma Khadun, Oliver Shorttle, Katie Atkinson, Yannick Bahe.
- *Kiel*: Jan Tolzmann, Owena Reinke.
- *UC Santa Cruz*: Alejandro Aguilar Joanna Viserta-Gallinis, Jay Rehor, Jessica Chapman
- *York*: Amy Ruddlesen
- *Macalester College*: Eleanor Bushnell

High school students (not complete):

- *UCLA*: Edgar Cruz, Jason Ibarra, Alexander Ke, Ben Tran, Kevin Sepukkal, Hermes Ip, Rachel Wei, Kelsey Brooks, Richard Wang, Zachary Lipel, Mikael Kalin, Lily Zhou, Suna Zenioglu, Rain Tsong
- *Cambridge*: Lavaniya Thanabalasundaram, Amy Ruddlesen, Zahrah Rosun, Ruby Jennings, Muhammad Yaradua, Sakshi Sadhu.
- Jamie Lucarelli (2022-present; applying for faculty positions); Maxence Guillermic (2019-present; co-advised; applying for faculty positions)

Past postdoctoral advisees:

- Jamie Lucarelli (2022-2023; staff scientist at DOE); Maxence Guillermic (2019-2023; currently project scientist); Juan Lora (2014-2019, NSF Postdoctoral Fellow, Chancellor's Postdoctoral Fellow; assistant professor at Yale), Jesse Bateman (2017-2022, UPLIFT Postdoctoral Fellow; assistant professor at SUNY),
- Jory Lerback (2022-2023; UC President's Postdoctoral Fellow; DOE postdoctoral scholar); Cristian Roman-Palacios (2021-2022 – assistant professor at Univ Arizona); Hannah Carroll (2021-2023; UPLIFT Postdoctoral Fellow; assistant professor at Western Colorado University); Yama Dixit (Marie Curie Postdoctoral Fellow; 2015-2017; assistant professor at Indian Institute of Technology), Andrew Kowler (2015-2017; NSF Postdoctoral Fellow; research scientist at Nevada EPA); Will Defliese (2014-2017; assistant professor at Univ. Queensland), Victoria Petryshyn (2012-2016; assistant professor at USC); Pamela Hill (2010-2013; adjunct at CSU Long Beach), Sean Loyd (2010-2013; Agouron Fellow; associate professor at CSU Fullerton); Yongbo Peng (2012; assistant research professor at Nanjing University).

Technical staff:

- *UCLA*: Ben Elliott (2015-present; 2012), Antra Priyadarshi (2014- 2015; health care), Jianwu Tang (2013-2014; Pace Analytical); Maxence Guillermic (2023-present)
- *Cambridge*: Jiaojiao Li (2009-2010), Jeannie Booth (2006-2010), Robbie Macdonald (2007), Ruth Shaw (2006-2007), Simon Crowhurst (2005-2007; Cambridge Earth Sciences), Patrizia Ferretti (2004; Associate Professor University of Venice)

School teachers:

- *UCLA*: Altair Maine; Stephanie Darling, Joanne Antibus.

7. Science teaching

- *UCLA:*
 - *Introduction to Environmental Science*
 - *Blue Planet: Introduction to Oceanography*
 - *Rock whispering: A storytelling of the geological record of extreme climates*
 - *Geochemical Proxies in Paleoclimatology*
 - *Science and communications under authoritarian regimes - then and now*
 - *UCLA Centennial Initiative: Women and minorities in the geosciences at UCLA*
 - *Biological and Environmental Geochemistry*
 - *Environmental Sciences Practicum*
 - *Historical and Regional Geology*
 - *Fracking in California and the Geology of the Monterey Formation*
 - *Undergraduate Journal Club Seminar*
 - *Geochemistry Seminar*
 - *Clumped isotope geochemistry*
 - *Advanced Topics in Geochemistry*
 - *Application of Geochemical Proxies in Paleoclimatology*
- *Cambridge:*
 - *NatSci Tripos: ‘Introduction to the hydrosphere’ (~150 students in their 2nd year from Chemistry, Physics, Earth Science, and Biology)*
- *Students on Ice:*
 - *Antarctic paleoclimate*
- *Agouron Summer Course:*
 - *Clumped Isotope Geochemistry*
- *University of Brest:*
 - *Clumped Isotope Geochemistry*
- *Santa Monica College:*
 - *Introduction to research methods*
- *UCLA faculty training (instructor/facilitator):*
 - *Teach-in co-organizer, Infusing Climate Science and Sustainability Across the Curriculum*
 - *Workshop co-organizer and co-facilitator, Infusing Climate Science and Sustainability Across the Curriculum*

8. Memberships

| | |
|--|--------------------------------|
| American Geophysical Union (Lifetime) | Geochemical Society |
| Geological Society of America | Earth Sciences Women’s Network |
| Association of Polar Early Career Scientists | 500 Women Scientists |
| Association of Women Scientists and Engineers | Union of Concerned Scientists |
| Asian Americans and Pacific Islanders in Geosciences | |

Also a supporting member of:

| | |
|---|---|
| National Association of Black Geoscientists | National Technical Association |
| American Indian Science and Engineering Society | National Association of Black Geoscientists |
| Society for Advancement of Chicanos and Native Americans In Science | |

9. Administrative leadership

Service on advisory panels, editorial boards, and committees

NASEM – Board on Atmospheric Sciences and Climate (2021-2024)

NASEM - U.S. National Committee for the International Union for Quaternary Research (2020-2024)

UCAR's President's Advisory Committee on University Relations (2021-2024)
NASEM - Board on Atmospheric Sciences and Climate Meeting co-organizer and moderator:
Incorporating Equity and Justice into the Nation's Weather, Water, and Climate Services
(2021)
American Geophysical Union – Partnership Task Force (2020-2021)
Associate Editor, Geophysical Research Letters (2017-2022)
Associate Editor, special issue on Clumped Isotope Geochemistry in journal Geochemistry,
Geophysics, Geosystems (2017-2020)
Geosciences panelist for multiple programs: NSF, NSF/NDSEG/SMART Graduate Fellowships
(2010-present)
Ad hoc reviewer for multiple programs: NSF (Chemical Oceanography; Arctic Natural Sciences;
Paleo Perspectives on Climate Change, Marine Geology & Geophysics; Geobiology and
Low-temperature geochemistry; Sedimentary Geology and Paleobiology; Instrumentation and
Facilities), Department of Energy, NERC (UK), NWL (Netherlands), UCLA Faculty
Research Grants (2009-present)
Reviewed manuscripts for multiple journals including: Geology, Earth and Planetary Science
Letters, Paleoceanography, Geochimica et Cosmochimica Acta, Biogeosciences, Climate of
the Past, Marine Micropaleontology, Journal of Sedimentary Research, Geochemistry,
Geophysics, Geosystems, Rapid Communications in Mass Spectrometry (2009-present)
Geosciences panel chair for NSF Graduate Fellowship Program (2013)

University Service

Faculty Advisory Committee, Honors Collegium (2016-present)
Committee on Committees (2017-2018)
Faculty Extramural Fellowship Advisor from all departments, UCLA Graduate Division (2016-
2017)
UCLA Dissertation Year Fellowship Reviewer (2016)
Chemistry and Biochemistry Department 8-Year Review Committee (2016)
Mechanical and Aerospace Engineering 8-Year Review Committee (2016)
Undergraduate Council (2015-2017)
Student Welfare Subcommittee, Undergraduate Council (2015-2017)
Faculty Advisory Committee for Environmental Science and Engineering Program (2015-2018)
UC Faculty Curriculum Workshop Co-Leader for Infusing Climate Science and Sustainability
Across the Curriculum, (2015-present)
UCLA Undergraduate Research Scholars Program Review Committee (2015)
Faculty panelist, UCLA Honors Collegium 101A course (2015)
Library Prize for Undergraduate Research Committee (2015)
Faculty Leader for the SMC/UCLA Science and Research Initiative - Aims to increase the number
of low-income community college students that transfer to a baccalaureate program in a
STEM field (2013- 2014)
NSF-AGEP CA Faculty Advisory Committee (2014-present)

DEI service

Center for the Study of Women Advisory Committee (2022-2024)
Advisory board, Second National Conference for Justice in Geoscience (2022-present)
Associate editor, special issue, In Our Voices, Journal of Geoscience Education (2021-2023)
American Indian Studies Center Faculty Advisory Committee (2021-present)
National Diversity Pathways and Fellowships Programs in Environmental Fields – Steering
Committee (2021-present)
UC WOC geoscience faculty network, founder and participant (2020-present)
Cultivating cHampions and Allies Navigating Geoscience Equity (CHANGE) workshop organizer
(2020-present)
Office of Vice Chancellor for Research and Creative Activities - Diversity in Research Committee
(2019-2022)
Ethics in computer science education working group (2021-2022)

Geochemical Society - Diversity Committee (2020-2021)
 Supported workshops and conferences focused on inclusion in STEM, including Reclaiming STEM (2019, 2020), Inclusive Sustainability at UCLA (2020), Behind the STEAMH (2020)
 Helped to support student and postdoc-led initiative to develop Earth Science Mentor Match (2mentormatch.github.io) (2020)
 National Diversity Pathways and Fellowship Programs in Conservation and Environmental Fields – participant (2019-present)
 Center for Diverse Leadership in Environmental Science founder and director working with >130 early career fellows from >20 institutions across the US, and 23 STEM faculty fellows (2018-present)
 Supported video storytelling projects about 19 of our students experiences with inclusion in STEM (2019)
 Participant in video storytelling projects relating to inclusion in STEM led by Kendall Moore (URI) and Catalina Martinez (NOAA) (2019)
 Invited participant in NSF-supported workshop Academic Incivility in STEM (2019)
 Led workshop on Organizing for Change in Higher Education for the Doris Duke Conservation Scholars Program (2019)
 Invited participant in workshop on the Future of Diversity Pathway Programs in Environmental Science (2019)
 OASES (The Organization of African-American Students Excelling in STEM) talk (2017)
 PEERS (Program for Excellence in Education and Research in the Sciences) talk (2017)
 UCLA Diversity Course Symposium Co-organizer (2017)
 Faculty panelist on work-life balance: California Alliance AGEP Meeting at UCLA (2017)
 Advisory board, 500 Women Scientists – organization of 19,000+ womyn scientists (2016-2017)
 Diversity Initiative Steering Committee (2016-2017)
 Institute for the Environment and Sustainability Diversity Committee representative (2016-2017)
 Developing course for UCLA College Undergraduate Diversity Requirement (2016-2017)
 Leadership committee, 500 Women Scientists (2016)
 Keynote lecture at ADSE (Alliance for Diversity in Science and Engineering) Meeting (2016)
 Invited participant in NSF-supported workshop Sexual Harassment in the Sciences: A Call to Respond, (2016)
 Climate for Diversity in Physical Sciences Town Hall Facilitator (2016)
 Established two peer mentoring facebook groups: Equity and Inclusion in Geoscience and Environmental Science, and Society for Difficult Women (2016)
 Member of Earth Science Women’s Network (ESWN) and ESWN’s Diversity Task Force (2015-present)
 Active proponent of UCLA College Undergraduate Diversity Requirement in Division of Physical Sciences (2015)
 Faculty panelist: California Alliance AGEP Meeting at Caltech (2015)
 Wrote letter to Science and AAAS about damaging stereotypes in science that garnered 600+ signatures and prompted a discussion on what can be done to support diversity in STEM, and responded to academics and media outlets on subject (2015)

Department Service (Earth, Planetary, and Space Sciences)

Departmental Representative to Physical Sciences Division Diversity Committee (2018-2019)
 Clean Lab Facility Committee (2015-present)
 Website committee (2015-2017)
 Faculty search committee for Geologist, reached out to excellent candidates from diverse backgrounds, including the person we eventually hired (2015)
 Educational and Public Outreach committee (2014-present)
 Departmental liaison for programs involving minors (2012-present)
 Ad hoc committee member for personnel actions (2010-present)
 Faculty Relations Committee (2010-2012)
 Departmental Scribe (Winter-Spring 2011, Spring 2012, Fall 2016)
 IGPP Fellowship Committee (2010-2011)

Department Service (Institute of the Environment and Sustainability)

Faculty Director, Center for Diverse Leadership in Science (2017-present)

Speaker, IoES Gala (2018)

Ph.D. Program Co-Director (2017-2018)

IoES Awards Committee Chair (2016-present)

Faculty Advisory Committee for Environmental Science B.S. Program (2015-present)

Leaders in Sustainability Faculty Advisory Committee (2014-present)

10. Public Impact**Public impact (Recent):**

Research with Esperanza Community Housing community fellows and students, on planning and implementation of Promotoras community-engaged research and education, including GIS for Community Health, contributing to science-informed decision-making with SB1137 (2018-present)

Collaborations with Museum of Contemporary Art (MOCA) in Los Angeles and Rebecca Lowery, Josh Kline, Haley Mellin, Kelsey Shell, for their series *Climate Conversations* (2024)

Collaborations with youth and young adult activists and community fellows and early career fellows on engagement relating to evidence-based decision making related to repeal of SB 1137, 1497, Genesis v. EPA (2018-present)

Assessment research relating to tribal and community partnerships with UCLA (2019-present)

Research with the Gabrielino-Tongva Band, at the request of Elders, on measurement and interpretation of geochemical data for water samples from Kuruvunga Springs, and impacts of tribal co-management, with fellows. Fellows engaged in native plant restoration and stewardship, discussions of native foods and food sovereignty, cultural wellness, and curriculum. Tongva stewardship of the sacred spring site will continue and another spring will be liberated. (2020-present)

Collaborated with the Broad Museum and Flaunt Magazine on #infiniteLA, a series for Yayoi Kusama's Infinity Mirrors exhibition featuring different community leaders including Black Lives Matter co-founder Patrisse Cullors, Homeboy Industries founder Father Greg Boyle, artist Mark Bradford. I discussed Mirrored Room—The Souls of Millions of Light Years Away as an allegory for human potential, social justice, and our relationships with each other and the natural world; this is the most photographed piece in the world.
<https://www.thebroad.org/infinitela>

Collaborated with the Broad Museum as an advisor on Joseph Beuys: 7000 Oaks and Social Forest: Oaks of Tovaangar, on reforestation and ecological reconciliation and social justice in the face on climate change, and developing a project to monitor impacts on ecosystems, people, communities, and climate resilience, and published a creative piece (2022-present).

Collaborated to create a Storytelling as Medicine video series highlighting stories of students sharing the meaning of mentorship and their passions and aspirations, and a video series for Veterans in STEM (2019-present).

Highlighted in films by Professor Kendall Moore in the Can We Talk? series, on Allyship and equity-minded leadership, and Decolonizing STEM, shown at NAS, and STEM departments and societies (2018-present).

Collaborated with Jimmy Kimmel on two features relating to climate change, reaching ~3M people.

Created Youtube Channel with student videos on environmental issues from a film festival I organize regularly as part of a class, with over 30,000 views (2010-present)

Creative activities relating to storytelling, including support of youth and elders sharing stories to the fellows community and to other communities (their own communities, scientific conferences, National Academies of Science, open science meetings) (2018-present)

Using storytelling as a tool for advancing informed policy (relating to repeal of SB 1137, 1497, for Genesis v. EPA) (2018-present)

Storytelling for envisioning different environmental futures (Climate Storytelling 2075 project, Eco Afro Futures, Indigenous stewardship and water quality and spring liberation, Native plant restoration, impacts of agribusiness on soil health and environmentally reparative approaches), for intergenerational discussions (Science as ceremony, Native foods and intergenerational engagement and cultural re-learning, developing green energy and green workforce in areas that oil/gas/refining has historically/currently recruited from) (2023-present).

Public impact (Earlier):

Answered questions pertaining to climate change and ocean acidification on >20 occasions as service, including for Union of Concerned Scientists; wrote technical comment on ocean acidification for NOAA and Center for Biological Diversity; provided expert testimony (2011-present)

Organized workshops and given talks on applying for graduate and postdoctoral fellowships (2011-present)

Designed multiple exhibits and presented them with members of research group for UCLA's Annual Physical Sciences Outreach Day (2011-present)

Scientific American (2020)

Futures CoLab, Disrupting systems for global sustainability (2019)

Community awards and hires of opportunity nominating committee for people from marginalized groups (2018-2019)

Panelist, Diversity at Environmental Organizations, North American Carbon World Conference (2019)

Multiple NPR Interviews During Climate Week (2019)

Southern California Green Teams (2019)

North American Carbon World (2019)

Do-Fest (2018)

Climate Justice Forum, Environmentalists of Color Collective (2018)

Summary newsletter of recent federal actions relating to climate and the environment (2017)

Climate Change Public Service Announcement, Jimmy Kimmel Live (2 million views live, 930,000+ views on youtube), and responded to academics and media outlets on subject (2016)

Developed an annual *Oceanography Student Film Festival* as part of a course to non-geoscience students that I teach. Students have to submit science communication projects. Winning videos are online and are circulated to K-12 science educators through my class youtube channel. One student video has over 21,000 hits! (2011-present)

Women in Philanthropy at UCLA, Challenges in climate science and higher education in a changing landscape (2016)

Bruin Family Weekend- Hidden in Rock, Frozen in Time: Understanding Extreme Climate Change (2016)

UCLA Luskin Symposium: Earth Now, Earth 2050 (2016)

Zocalo/UCLA event: Panelist discussing if fracking is good for California at event moderated by LA Times journalist (2015)

Speaker – Know Tomorrow UCLA student event on climate change (2015)

Interviewed by Xinhua News Agency on climate change (2012-2013)

Women in Philanthropy at UCLA: Panelist on Thriving in a Hotter Los Angeles (2014)

Awards judge at L.A. Basin Earth and Planetary Student Research Symposium (2014, 2011)

Worked with foster students and students in shelters through Haven House (2012)

Co-developed first university Mindshare public outreach event for the Division of Physical Sciences at UCLA with Douglas Campbell, the co-founder of Mindshare. This was a geoscience cafe (think TedX meets art festival) that featured a series of talks by departmental faculty and exhibits by members of our department, as well as art installations. 200-300 people attended the event, and several thousand people watched the event online (2012)

Science fair judge for American Geological Institute at Intel Science Fair (2011)

Participant in Communicating Science in a Challenging Media Environment – Union of Concerned Scientists (2011)
 Participant in Alan Alda workshop on Communicating Science – Kavli Foundation (2011)
 Developed concept map to communicate how geological data are used to study climate processes and national climate literacy principles to high school students as a faculty participant in COSEE workshop; taught group of four graduate student participants how to do the same (2011)
 Interviewed by Fiji TV for US State Dept.-supported documentary on climate change (2011)
 Cambridge Science Festival lecture on paleoclimate to the public (2011)
 Gave seminar at workshop on academic research and applying to graduate school to undergraduates in ACCESS program at Loyola Marymount University (2010)
 Interviewed by New Scientist on research and climate change issues (2010)
 Comenius lectures - to business people on climate change (2006-2009)
 Interviewed by *Time Magazine* on research and climate change issues (2009)
 Interviewed by *Scientific American* on research and climate change issues (2009)
 Interviewed by *BBC* on research and climate change issues (2009)
 Interviewed by *Columbian National Public Radio* on research and climate change issues (2009)
 Grant and proposal writing workshop - Association of Black Women in Higher Education (2009)
 Research on new isotopic technique featured on *Discovery Channel* website (2009)
 Advised BBC Program *Blue Peter* for episode “Green Peter” on climate change (2007)
 I’m a Scientist, Get me out of here! Participant (2008 – won third place!)
 Engineering and Physical Sciences Research Council ‘NOISE – New Outlooks in Science and Engineering’ role model and MentorSET participant (2004-2008)
 Royal Society of Chemistry: What Chemistry has done for me (2007)
 Interviewed by *Cambridge Evening News* (2004, 2006)
 Interviewed by *Spectrum* and *Mint* (2004)

K-12 outreach

Women in STEAM
 Work with high school students and teachers on research projects
 Hosted K-12 students from schools in Los Angeles and Riverside County in laboratory tours
 Hosted students from Project Scientist, non-profit dedicated to girls in STEM
 Organized hands-on science experiments at two family shelters
 Science fair judge for American Geological Institute at Intel Science Fair
 Faculty participant, “Geoscience fundamentals in the Field” – Three week course for middle and high school science teachers
 Developed lesson plan for secondary school students on “Fossils and climate change” focused on understanding the climate history of Antarctica and Nebraska for the past 160 million

Science/Climate science communication training

Science communication workshop for Santa Monica College students (2014)
 Communicating Science in a Challenging Media Environment – Union of Concerned Scientists (2011)
 Communicating Science – Kavli-CNSI (2011)
 Making a concept map to communicate – COSEE (2011)
 Using discovery-based learning techniques to stimulate critical thinking – Dave Harwood (2010)
 Keynote lecture on resilience at ADSE (Alliance for Diversity in Science and Engineering) Young Researchers Annual Meeting (2016)

11. Examples of Scientific Impact

Invited Talks and Lectures

Keynotes and Plenaries

- 2024 Keynote lecture, Academia Sinica workshop, *Frontiers of carbonate clumped isotope geochemistry as an applied tool in climatology and oceanography, within an inclusive science framework*
- 2023 Convocation: Berea College, *Bringing together diverse perspectives on water and climate*
- 2022 Tyndall Lecture: University of Bristol, *Frontiers in the study of climate and environmental change: From new tracers to an inclusive science framework*
- 2022 Keynote Lecture: South American Symposium on Isotope Geology, *Perspectives on South American paleoclimates from carbonate clumped isotope thermometry*
- 2022 Plenary lecture, International Conference on Paleoceanography, *Frontiers of carbonate clumped isotope thermometry, within an inclusive science framework*
- 2022 Plenary lecture, Challenger Society on Oceanography, *Frontiers of carbonate clumped isotope thermometry, within an inclusive science framework*
- 2022 Keynote lecture, New Horizons Conservation Conference, *Environmental imagination and justice*
- 2022 Southeastern Biogeochemistry Symposium, *Clumped isotope geochemistry and paleoclimate*
- 2021 Keynote lecture, Oregon State University, *Racism and culture in STEM and society*
- 2021 Keynote lecture, Rutgers University, *Frontiers of carbonate clumped isotope thermometry, within an inclusive science framework*
- 2021 Bromery conversation, Geological Society of America
- 2020 Keynote lecture, International Conference on Paleoceanography and Paleoclimate
- 2019 Keynote lecture, North American Carbon World
- 2019 Keynote lecture, Climate Justice Forum, Environmentalists of Color Collective
- 2018 Keynote talk, Just Inclusion, Do-Fest
- 2018 Keynote talk, East Los Angeles College
- 2016 Keynote lecture, Alliance for Diversity in Science and Engineering: *Resilience*
- 2015 Keynote lecture, PaleoOcean: *Emerging proxies in paleoceanography*
- 2014 Keynote talk, Clumped isotope workshop (ETHZ): *In search of processes driving observed clumped-isotope fractionations in geoscience systems: New insights from data and theory*
- 2013 Keynote lecture, Kongsberg Seminar (University of Oslo): *Cenozoic polar climates*

Invited talks - universities and research institutes and foundations (accepted invitations)

- 2025 UC Davis
- 2024 Scripps Institute of Oceanography: *Frontiers of carbonate clumped isotope geochemistry and inclusive STEM*
 UC Riverside: *Frontiers of carbonate clumped isotope geochemistry and and inclusive STEM*
 NASEM: *Ocean Justice and Environmental Imagination*
 Waverley Foundation: *From Environmental Imagination to Climate Action*
- 2023 Earth-Life Science Institute and Tokyo Institute of Technology: *Frontiers of carbonate clumped isotope geochemistry as an applied tool in climatology and oceanography, within an inclusive science framework*
- 2022 Wellcome Trust: *Access and belonging fuel health, diversity, and discovery in STEM*
 University of Bristol BRIDGE (Geography): *Bringing together diverse perspectives on water and climate*
 British Antarctic Survey: *Carbonate clumped isotope geochemistry as an applied tool in paleoceanography and paleoclimate*
 Cambridge Geography: *Bringing Together Diverse Perspectives on Water and Climate*
 Woods Hole Oceanographic Institution/MIT: *Frontiers of carbonate clumped isotope geochemistry and inclusive STEM*
 Stanford University: *Frontiers of carbonate clumped isotope geochemistry and inclusive STEM*
 Brown University (2 talks): *Environmental imagination, justice, and the university and*

- Frontiers of carbonate clumped isotope geochemistry and inclusive STEM*
 Simons Foundation: *Enacting change in your organization through an equity lens*
 Boise State University: *Frontiers of carbonate clumped isotope geochemistry and inclusive STEM*
- 2021 MIT: *Frontiers of carbonate clumped isotope geochemistry within an inclusive science framework*
 Yale: *Frontiers of carbonate clumped isotope geochemistry within an inclusive science framework*
 Purdue: *Frontiers of carbonate clumped isotope geochemistry within an inclusive science framework*
 Simons Foundation (2 talks): *Access and belonging fuel diversity and discovery in STEM and Transforming culture in STEM: Empowering people everyday and being in community*
 Barnard College: *Hidden in Ice, Frozen in Time*
 University of Colorado, Boulder: *Frontiers of carbonate clumped isotope geochemistry within an inclusive science framework*
 Virginia Institute of Technology (2 talks): *Frontiers of carbonate clumped isotope geochemistry within an inclusive science framework and Transforming geoscience and environmental science: An ecosystem approach to broaden pathways and advance systemic change*
 Rutgers University: *Frontiers of carbonate clumped isotope geochemistry within an inclusive science framework*
 Oregon State University (2 talks): *Frontiers of carbonate clumped isotope geochemistry within an inclusive science framework and Transforming geoscience and environmental science: An ecosystem approach to broaden pathways and advance systemic change*
 University of Maryland, College Park: *Frontiers of carbonate clumped isotope geochemistry within an inclusive science framework*
 John Hopkins University: *Frontiers of carbonate clumped isotope geochemistry within an inclusive science framework*
 University of Southern California: *Frontiers of carbonate clumped isotope geochemistry in paleoclimate and paleoceanography*
 University of Pittsburgh: *Frontiers of carbonate clumped isotope geochemistry within an inclusive science framework*
 Texas A&M University: *Carbonate clumped isotope geochemistry as an applied tool in paleoceanography and paleoclimate*
 University of Cincinnati: *Frontiers of carbonate clumped isotope geochemistry within an inclusive science framework*
- 2020 Lamont-Doherty Earth Observatory at Columbia University: *Carbonate clumped isotope geochemistry as an applied tool in paleoceanography and paleoclimate*
 UC Santa Cruz: *Carbonate clumped isotope geochemistry as an applied tool in paleoceanography and paleoclimate*
 University of Leeds: *Carbonate clumped isotope geochemistry as an applied tool in paleoceanography and paleoclimate*
 University of Alberta: *Frontiers of carbonate clumped isotope geochemistry in paleoceanography and paleoclimate*
 London Paleoclimate Network: *Carbonate clumped isotope geochemistry as an applied tool in paleoclimate*
 Science Philanthropic Alliance: *Why diversity and inclusion need to be a pillar of US science in the 21st century*
 Packard Convening on Climate and the Oceans: *Racial equity and justice and the need to reform our institutions in ocean and climate science*
 UCLA Social Sciences Dean and Chairs Meeting: *Center for Diverse Leadership in Science*
 University of Wyoming: *Transforming green science: Changing the culture and widening*

- the pathways*
- 2019 University of Utah (2 talks and student roundtable): *Frontiers in the study of past climate and environmental change: From new tracers to an inclusive science model, and Glacial climate from clumped isotope thermometry*
 Arizona State University (2 talks and student roundtable): *Transforming STEM: Changing the culture and widening the pathways, and Glacial climate from clumped isotope thermometry*
 California State University, Northridge (2 talks): *How recrystallized are foraminifera in ancient ocean sediments? And Transforming STEM: Changing the culture and widening the pathways*
 University of Rhode Island (talk and panel): *Transforming Geoscience and Environmental Science: Changing the culture and widening the pathways*
 University of California, Merced (2 talks): *Glacial climate from clumped isotope thermometry, and Transforming STEM: Changing the culture and widening the pathways*
- 2018 National Science Foundation (2 talks): *Transforming STEM: Changing the culture and widening the pathways in Environmental Science and Geoscience and New frontiers in the study of past climate and environmental change*
 Navajo Technical University: *Studying the history of climate and environmental change*
 Scripps Institute of Oceanography: *Glacial climate from clumped isotope thermometry*
 UCLA Physics and Astronomy Department Diversity Committee: *Center for Diverse Leadership in Science*
 UCLA Division of Physical Sciences Diversity Committee: *Center for Diverse Leadership in Science*
- 2017 California State University, Fullerton: *Glacial climate from clumped isotope thermometry*
 University of Iowa (3 talks): *Glacial climate from clumped isotope thermometry; New frontiers in the study of past climates and environmental change; Discovering ice on a “greenhouse” planet: A new paradigm for the Eocene greenhouse-icehouse transition*
 Los Alamos National Laboratory Physics Colloquium: *Insights into regional patterns of warming and climate change since the last ice age from novel methods*
- 2016 University of California, Santa Cruz: *Glacial climate from clumped isotope thermometry*
 University of Minnesota: *Clumped isotope geochemistry and paleoclimate*
 Florida State University: *Clumped isotope geochemistry and paleoclimate*
- 2015 Georgia Institute of Technology: *Clumped isotope geochemistry and paleoclimate*
 University of Southern California: *Clumped isotope geochemistry and paleoclimate*
 CNRS (Laboratory Domane Oceanique): *Stable isotope geochemistry and paleoceanography*
 IFREMER: *Stable isotope geochemistry and paleoceanography*
 European Institute for Marine Sciences: *Stable isotope geochemistry and paleoceanography*
- 2014 University of Michigan, Ann Arbor: *New insights into paleoclimate from emerging proxies*
 Rice University: *Clumped isotope geochemistry and paleoclimate*
 University of Michigan, Ann Arbor: *Clumped isotope geochemistry and paleoclimate*
 UCLA: *Clumped isotope geochemistry and glacial climate*
 European Institute for Marine Sciences: *Clumped isotope geochemistry and paleoclimate*
- 2013 University of Copenhagen: *Clumped isotope geochemistry and applications to sedimentary geology*
 University of California, Riverside: *Clumped isotope geochemistry and paleoclimate*
 Royal Holloway - University of London: *Clumped isotope geochemistry and paleoclimate*
 University of Virginia: *Glacial climate and clumped isotope thermometry*
 University of Virginia: *Ocean pH and carbon dioxide levels from the chemistry of foraminifera*
 Southern Methodist University: *Glacial climate from clumped isotope thermometry*

- University of Tennessee, Knoxville: *Glacial climate from clumped isotope thermometry*
 California State University, Northridge: *Glacial climate from clumped isotope thermometry*
- 2012 University of Edinburgh: *Clumped isotope geochemistry and paleoclimate*
 Center for Applied Statistics, UCLA: *Other worlds: Geosciences problems in paleoclimate, biogeochemistry, and astrobiology that would benefit from the application of statistics*
 Institute of the Environment and Sustainability, UCLA: *Insights into glacial climate from a novel geochemical method*
 University of Wisconsin, Madison: *Recent developments in clumped isotope geochemistry and glacial climate*
 University of Southern California: *Recent developments in clumped isotope geochemistry*
 United States Geological Survey Stable Isotope Laboratory: *Recent developments in clumped isotope geochemistry*
- 2011 University of California, Berkeley: *Clumped isotope geochemistry and glacial climate*
 University of California, Santa Barbara: *Reconstructing glacial climate using clumped isotope thermometry*
 Cornell University: *Discovering ice on a “greenhouse” planet: Evidence for bipolar glaciation from 44 to 30 million years ago*
 Cornell University: *Reconstructing glacial climate using clumped isotope thermometry*
 University of California, Los Angeles: *Ocean pH and carbon dioxide levels from the chemistry of foraminifera*
- 2010 Institute for Marine Research, CNR: *New constraints on ocean acidification and temperature in the past from two novel geochemical proxies: foraminiferal B/Ca ratios and clumped isotope thermometry*
- 2009 Massachusetts Institute of Technology: *Clumped isotope thermometry in Holocene and Glacial foraminifera and coccoliths from the tropical Pacific Ocean*
 Massachusetts Institute of Technology: *Ocean pH and carbon dioxide levels from the chemistry of foraminifera*
 Scripps Institute of Oceanography: *Ocean pH and carbon dioxide levels from the chemistry of foraminifera*
 University of Arizona: *Discovering ice on a “greenhouse” planet: Evidence for glacial ice in both hemispheres from ~44-30 Ma*
 University of Southern California: *Holocene and Glacial temperatures in the West Pacific Warm Pool from ¹³C-¹⁸O bond abundance in foraminifera and coccoliths*
 University of Southern California: *Ocean pH and carbon dioxide levels from the chemistry of foraminifera*
- 2008 Carnegie Institution, Department of Global Ecology: *Using the geologic record to probe climate-carbon cycle interactions*
 University of California, Los Angeles: *Discovering ice on a “greenhouse” planet: Evidence for bipolar glaciation from 44 to 30 million years ago*
 University of California, Irvine: *Discovering ice on a “greenhouse” planet: Evidence for bipolar glaciation from 44 to 30 million years ago*
 University of Southern California: *Discovering ice on a “greenhouse” planet: Evidence for bipolar glaciation from 44 to 30 million years ago*
 University of Birmingham: *Discovering ice on a “greenhouse” planet: Evidence for glacial ice in the Northern Hemisphere ~44-30 Ma*
- 2007 California Institute of Technology: *Discovering ice on a “greenhouse” planet: Evidence for bipolar glaciation 44 to 30 million years ago*
 University of Cambridge: *Discovering ice on a “greenhouse” planet: Evidence for bipolar glaciation from 44 to 30 million years ago*
 Imperial College: *Discovering ice on a “greenhouse” planet: Evidence for bipolar glaciation from 44 to 30 million years ago*
 Rutgers University: *Discovering ice on a “greenhouse” planet: Evidence for bipolar glaciation from 44 to 30 million years ago*

- GEOMAR/Univ. Kiel: *Discovering ice on a “greenhouse” planet: Evidence for glacial ice in the Northern Hemisphere ~44-30 Ma*
- 2006 University College, London: *Evidence for bipolar glaciation during the Eocene epoch (~40 Ma)*
- 2005 University of Stockholm: *Climatic consequences of rapid carbon addition to the atmosphere at the Paleocene-Eocene Boundary*
- University of Stockholm: *Evidence for early bipolar glaciation (~42 Ma) associated with global carbon cycle changes*
- University of Cambridge: *Evidence for early bipolar glaciation (~42 Ma) associated with global carbon cycle changes*
- 2004 University of Cambridge: *Marine paleoenvironments: New insights from the geochemistry of fossil shells*
- 2003 University of Cambridge: *Environmental change across the Paleocene-Eocene boundary*
- 2002 Stanford University: *Oxygen isotope systematics*
- Texas A&M University: *Early Paleogene marine paleoenvironments: New insights from the geochemistry of fossil shells*

Additional invited presentations – conferences and workshops (accepted invitations)

- 2024 NASEM Climate Crossroads panel: *Transformational Higher Education Climate Action*
- 2023 International Lapse Rate workshop: *Tropical lapse rates: New perspectives from paleo and modern data*
- 2022 Justice in Geoscience: *Opening remarks*
- 2021 NAS: *Identifying New Community-Driven Science Themes for NSF’s Support of Paleoclimate Research - BAJEDI*
- EGU: *Practical recommendations on how to combat discriminatory work environments in academia*
- 2020 AMQUA Panel: *Racial equity and justice and Black Minds*
- Geochemical Society Town Hall: *Racial equity and justice and Black Minds*
- Behind the STEAHM: *Misconceptions in Science*
- Ocean Science AGU: *Advancing systemic change through faculty and early career development to support retention and improved institutional climates*
- Ocean Sciences AGU: *Transforming Green Science: Changing the Culture and Widening the Pathways*
- NOAA panel: *Can We Talk? Obstacles Faced by People of Color in STEM and Strategies to Overcome Them*
- NCAS panel: *Applying for jobs in atmospheric and ocean science*
- SOARS panel: *Can We Talk? Obstacles Faced by People of Color in STEM and Strategies to Overcome Them*
- 2019 DOE Meeting: *Our Progress on Fundamentals and Frontiers in Carbonate Clumped Isotope Geochemistry – From paired mass 47 and mass 48 to the discovery of new isotope effects*
- AGU: *Human-centered, relational geoscience*
- AGU: *Transforming Geoscience and Environmental Science: Advancing Systemic Change Through Faculty and Early Career Development to Support Retention and Improved Institutional Climates*
- 2017 DOE Meeting: *New Discoveries – Controls on Carbonate Isotope Signatures in Carbonate Minerals*
- 2016 European Geosciences Union: *Greenland ice initiation and Arctic sea ice coincide with Eocene and Oligocene climate changes*
- 2015 Kavli Frontiers of Science Symposium: *New Frontiers in the Study of Pleistocene to Modern Records of Climate Change*
- 2014 DOE Meeting (Geoscience Models - Where are the rocks?): *In search of processes driving observed clumped-isotope (dis)equilibrium in geoscience systems: New insights from data and theory*
- 2013 American Geophysical Union Fall Meeting: *From wetlands to sauropods (?) and cold*

- seeps: New perspectives on methane cycling in the Phanerozoic*
 Critical transitions workshop (NSF – CNNSF, China): *Carbonate clumped isotope thermometry: applications to sedimentary geology*
- 2011 Royal Society – Kavli workshop on the carbon cycle (UK): *Planktic foraminiferal B/Ca ratios*
- 2010 Carbonate diagenesis conference (China): *Carbonate clumped isotope thermometry: Principles and applications*
- 2009 Chapman Conference on Abrupt Climate Change (Ohio State University): *Holocene and Glacial temperatures in the West Pacific Warm Pool from ^{13}C - ^{18}O bond abundance in foraminifera and coccoliths*
- 2007 European Geosciences Union Annual Meeting: *Early Cenozoic glacial history: Insights from Pacific records of seawater $\delta^{18}\text{O}$*
 International Symposium on Antarctica in the Earth Sciences: *Evidence for glacial ice on Antarctica and the Northern Hemisphere during the Eocene and Oligocene: Insights from Pacific records of seawater $\delta^{18}\text{O}$*
- 2006 European Geosciences Union Annual Meeting: *New results from ODP and IODP on the greenhouse-icehouse transition*
 Ocean Drilling Program deciphering sea level change workshop: *New evidence for Middle Eocene to Early Oligocene bipolar glaciation associated with global carbon cycle changes*
- 2005 American Geophysical Union Fall Meeting: *Constraints on Paleocene and Eocene tropical sea-surface temperatures and meridional temperature gradients from Mg/Ca and oxygen isotope ratios of foraminifera from sediments recovered by the Ocean Drilling Program*
 American Geophysical Union Fall Meeting: *New results from ODP and IODP on the greenhouse-icehouse transition: Evidence for Eocene bipolar glaciation associated with global carbon cycle changes*
 Comer Annual Meeting (Columbia University): *Relationships between rapid changes in climate and the carbon cycle*

Aradhna Tripati
Full publication list

* indicates a student or postdoc mentee. Underline indicates corresponding author.

133. Tripati, A., 2025, Reflection on Social Forest: The Oaks of Tovaangar, in Joseph Beuys - 7000 Oaks, *Broad Museum*.
132. Tripati, A., Tandy, H.*, Villa, A.*, Flores, R.*, Carroll, H.*, Guillermic, M.*, Maradiaga, I.*, Blair, C.*, Zerehaimanot, B.*, Brown, D.*, Ulrich, R.*, Roman-Palacios, C.*, Kuppusamy, M., Bryant, R., de La Cruz, J.*, Chang, F., Eagle, R., Tomaiso, C.*, Marchitto, T., Came, R., Lynch-Stieglitz, J., in review 2025, Clumped isotope thermometry in foraminifera as a tool in paleoceanography: New planktic and benthic data and constraints on non-thermal effects, *Paleoceanography and Paleoclimatology*.
131. Tandy, H.*, Flores, R.*, Subhas, A., Schmidt, D., Khan, T., Gwak, S., Savage, L., Eagle, R., Tripati, A., in review 2025, Dissolution effects on clumped isotope signatures in planktic foraminifera, *Paleoceanography and Paleoclimatology*.
130. Terrazas, A.*, Hwangbo, N.*, Arnold, A.*, Ulrich, R.*, Tripati, A., in press 2025, Seasonal lake-to-air temperature transfer functions derived from an analysis of 1395 modern lakes: A tool for reconstructing air temperature from proxy-derived lake water temperature, *The Depositional Record*.
128. Mentzer, C., Garziona, C., Jaramillo, C., Hinojosa, L., Escobar, J., Glad, N., Gomez, S., Upadhyay, D., Tripati, A., Thirumalai, K., 2025, Late Miocene-early Pliocene hydroclimate evolution of the western Altiplano, northern Chile: Implications for aridification trends under warming climate conditions. *Global and Planetary Change*. V. 245, 104674.
127. Deak, M.*, Porter, W., Mathewson, P., Lovelace, D., Flores, R.*, Tripati, A., Eagle, R., Schwartz, D., Butcher, M., 2025, Metabolic skinflint or spendthrift? Insights into ground sloth integument and thermophysiology revealed by biophysical modeling and clumped isotope paleothermometry *Journal of Mammalian Evolution*, 32, <https://doi.org/10.1007/s10914-024-09743-2>.
126. Arnold, A.*, Mering, J.*, Santi, L.*, Roman-Palacios, C.*,Tripati, A., 2024. Comparative clumped isotope temperature relationships in freshwater carbonates. *The Depositional Record*, 00, 1-26, <https://doi.org/10.1002/dep2.312>.
125. Tripati, A., Shepherd, M., Morris, V., Andrade, K.*, Whyte, K.P., David-Chavez, D.M., Hosbey, J., Trujillo-Falcón, J.E., Hunter, B.*, Hence, D. and Carlis, D., 2024. Centering Equity in the Nation's Weather, Water, and Climate Services. *Environmental Justice*, 17(1), pp.45-53.
124. Parvez, Z.A.*, El-Shenawy, M.I.*, Lucarelli, J.K.*, Kim, S.T., Johnson, K.R., Wright, K., Gebregiorgis, D., Montanez, I.P., Wortham, B., Asrat, A. and Reinhardt, E., Christensen J., Matamoros I.*, Rubi J.*, Miguel K.*, Elliott B. M., Flores R.*, Kovacs S., Eagle R.A., Tripati A. 2024. Dual carbonate clumped isotope ($\Delta 47$ - $\Delta 48$) measurements constrain different sources of kinetic isotope effects and quasi-equilibrium signatures in cave carbonates. *Geochimica et Cosmochimica Acta*, 366, pp.95-112.
123. Moretti, S., Auderset, A., Deutsch, C., Schmitz, R., Gerber, L., Thomas, E., Luciani, V., Petrizzo, M.R., Schiebel, R., Tripati, A. and Sexton, P., 2024. Oxygen rise in the tropical upper ocean during the Paleocene-Eocene Thermal Maximum. *Science*, 383(6684), pp.727-731.
122. Cenozoic CO2 Proxy Integration Project (CenCO2PIP) Consortium, Toward a Cenozoic history of atmospheric CO2. *Science*, 382(6675), p.eadi5177.
121. Lucarelli, J.K.*, Purgstaller, B., Ulrich, R.N.*, Parvez, Z.*, Leis, A., Goetschl, K.E., Eagle, R.A., Dietzel, M. and Tripati, A., 2023. Dual clumped ($\Delta 47$ - $\Delta 48$) isotope data for amorphous carbonates and transformation products reveal a novel mechanism for disequilibrium clumped isotope effects. *Geochimica et Cosmochimica Acta*, 359, pp.119-134.
120. Marvel, K., W. Su, R. Delgado, S. Aarons, A. Chatterjee, M.E. Garcia, Z. Hausfather, K. Hayhoe, D.A. Hence, E.B. Jewett, A. Robel, D. Singh, A. Tripati, and R.S. Vose, 2023: Ch.

2. Climate trends. In: **Fifth National Climate Assessment**. Crimmins, A.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA. <https://doi.org/10.7930/NCA5.2023.CH2>
119. Ostoja, S.M., A.R. Crimmins, R.G. Byron, A.E. East, M. Méndez, S.M. O'Neill, D.L. Peterson, J.R. Pierce, C. Raymond, **A. Tripathi**, and A. Vaidyanathan, 2023: Focus on western wildfires In: **Fifth National Climate Assessment**. Crimmins, A.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA. <https://doi.org/10.7930/NCA5.2023.F2>
118. Bricker, H.L.*, Bateman, J.B.*, Elliott, B., Mitsunaga, B.A.*, Mering, J.*, Foster, I.S.*, Yanes, Y., Oches, E.A., Eagle, R.A. and **Tripathi, A.**, 2023. A multi-region study of carbonate clumped isotope data from terrestrial snails. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 628, p.111754.
117. Hunter, B.*, **Tripathi A.**, Coleman Flowers C., Wilson O., Wilson B., 2023, Theories of Change: A Framework to Improve Engineering Efforts to Advance Environmental Justice. *Environmental Justice*. 16., pp. 390-402
116. Lee, H.I.*, Mitchell, J.L., Lora, J.M.* and **Tripathi, A.**, 2023. Influence of stationary waves on precipitation change in North American summer during the Last Glacial Maximum. *Journal of Climate*, 36(10), pp.3165-3182.
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114. Lucarelli, J.*, Carroll, H.*, Eagle, R., **Tripathi, A.**, 2023, Paired carbonate standard clumped isotope (\square_{47} and \square_{48}) values on the absolute reference frame from equilibrated gas and carbonate standard-based transfer functions, *G-cubed*.
113. Lopez-Maldonado*, Bateman, J.*, Ellis, A., Bader, N., Ramirez, P., Tabor, C., Jesmok, G.*, Upadhyay, D.*, Mitsunaga, B.*, Elliott, B.*, Lora, J.*, **Tripathi, A.**, 2023, Temperature and hydrological cycle changes in the Pacific Northwest Over the Past 36,000 years from clumped isotope and model analysis.
112. **Tripathi, A.**, Shepherd, M., Morris, V., Glackin, M., Falcon, J.T., Whyte, K.P., Andrade, K.*, Hunter, B.*, Myrbo, A., 2023, Centering Equity and Justice in the Nation's Weather, Water, and Climate Services, *Environmental Justice*.
111. Griffiths, M., Eagle, R., Kim, S., Flores, R.*, Tripathi, A., and 7 co-authors, 2023, Endothermic physiology of extinct megatooth sharks, *PNAS*.
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109. Chen, C.*, Kahanamoku, S.*, **Tripathi, A.**, Alegado, R., Andrade, K.*, Morris, V., 2022, Decades of systemic racial disparities in NSF funding rates, *e-Life*.
108. Jones, M.*; Hoague, D.*; Spriggs, R.*; Catalan, E.*; Adams, N.*; Watkins, T.; **Tripathi, A.**; Norris, K., 2022, A Framework for Authentic Community-University Research, *Ethnicity and Disease*.
107. Richter, F. *, Garzione, C., An, Z., Liu, W., Qiang, X., Chang, H., Cheng, F., Li, X., **Tripathi, A.**, 2022, High elevation record of Plio-Pleistocene global cooling and surface uplift for the northeastern Tibetan Plateau, *GSA Bulletin*
106. Meckler, N., Sexton, P., Piasecki, A., Leutert, T.*, Marquardt, J., Ziegler, M., Agterhuis, T., Rae, J., Barnet, J., **Tripathi, A.**, Bernasconi, S., 2022, Cenozoic evolution of deep-sea temperature from clumped isotope thermometry, *Science*.
105. Cheng, F.*, Garzione, C., Li, X., Salzmann, U., Schwarz, F., Haywood, A., Tindall, J., Nie, J., Li, L., Wang, L., Elliot, B., Liu, W., Uphadahay, D.*, Arnold, A.*, **Tripathi, A.**, 2022, Alpine permafrost could account for a quarter of thawed carbon based on Plio-Pleistocene paleoclimate analogue, *Nature Communications*.
104. Chang, B.*, Li, C., Huang, J., Huang, K., Lloyd, M., Luo, G., She, Z., Xie, S., Tong, J., Zhu,

- M., Algeo, T., Lyons, T., Foster, I.*, **Tripati, A.**, 2022, A ~60-Myr-long, high-resolution record of Ediacaran paleotemperature, *Science Bulletin*.
103. Linol, B., Bauer, A., Lombardo, A., Montanez, I., Upadhyay, D.*, Jesmok, G.*, Kelley-Cosio, A.*, **Tripati, A.**, de Wit, M., 2021, Towards disentangling climate and tectonic changes of southernmost Africa using strontium isotope stratigraphy and clumped isotopes, *South African Journal of Geology*.
102. Nirmal, B., Mohan, K., Prakasam, M., **Tripati, A.**, Mortyn, P.G., Rodriguez-Sanz, L., 2021, Pleistocene surface-ocean changes across the southern subtropical front recorded by distinct morphotypes of *Orbulina universa* and oxygen isotope analysis, *Marine Micropaleontology*.
101. Prasanna, K., Ghosh, P., Eagle, R., **Tripati, A.**, Kapur, V., Feeney, R., Fosu, B., Mishra, D., 2021, Temperature reconstruction for early Lower Miocene (Burdigalian) of India using a revised otolith based calibration of the carbonate 'clumped isotope' paleothermometer, *G-cubed*.
100. Guillermic, M.*, Misra, S., Eagle, R., **Tripati, A.**, 2022, Atmospheric CO₂ estimates for the last 17 million years based on foraminiferal $\delta^{11}\text{B}$ at Ocean Drilling Program Sites 806 and 807 in the Western Equatorial Pacific warm pool, *Climate of the Past*.
99. Pourret, O., Middleton, J., Ibarra, D.E., Irawan, D.E., Rouff, A., Anand, P., **Tripati, A.**, Riches, A.J. and Dosseto, A., 2021. Diversity among Editorial Boards of Elements and other selected Geochemistry, Cosmochemistry, Mineralogy and Petrology journals. *Elements*, 17, 150-152.
98. Terrazas, A.*, Kowler, A.*, Santi, L.*, Marshall, K.*, Geoman-Shulsky, S.*, Arnold, A.*, **Tripati, A.**, 2021, Evolution of hydroclimates since the Last Glacial Maximum: New Insights from Clumped Isotope Results from Willcox Basin, Arizona, *USJ*.
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96. Sun, F., Wang, Y., Jablonski, N., Hou, S., Ji, X., Wolff, B., **Tripati, A.**, Cao, J., Yang, X., 2021, Paleoenvironment of the Late Miocene Shuitangba hominoids from Yunnan, Southwest China: Insights from stable isotopes, *Chemical Geology*.
95. Bernasconi, S., and many authors including Uphadhyay, D.*, Lucarelli, J.*, **Tripati, A.**, 2021, A community effort to improve inter-laboratory standardization of the carbonate clumped isotope thermometer using carbonate anchors, *Geochemistry, Geophysics, Geosystems*
94. Upadhyay, D.*, Lucarelli, J.*, Arnold, A.*, Flores, R. *, Bricker, H.*, Ulrich, R.*, Jesmok, G. *, , Defliese, W.*, Eagle, R., Carroll, H.*, Bateman, J.*, Petryshyn, V.*, Loyd, S.*, Tang, J.*, Priyadarshi, A.*., Elliott, B., **Tripati, A.**, 2021, Carbonate clumped isotope analysis (Δ_{47}) of 21 carbonate standards determined via gas source isotope ratio mass spectrometry on four instrumental configurations using carbonate-based standardization and multi-year datasets, *Rapid Communications in Mass Spectrometry*.
93. Li., H.*, Liu, X., Arnold, A.*, Elliott, B., Flores, R. *, Kelley, A. *, **Tripati, A.**, 2021, Clumped isotope signatures in modern lacustrine authigenic carbonates and implications for paleotemperature and paleoelevation reconstructions, *EPSL*.
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91. Kittinger, J., Cheng, S., Neher, J., Scoville-Weaver, A., Ahumada, J., Tripati, A., Lout, G., (2021), Preparing conservation practitioners for the Anthropocene, *Frontiers in Ecology*.
90. Li, H., Liu, X., **Tripati, A.**, Feng, S., (2021), Controls on the oxygen isotope composition of lacustrine authigenic carbonates, *Scientific Reports*.
89. Defliese, W.*, **Tripati, A.**, 2020, Analytical effects on clumped isotope thermometry: Comparison of a common sample set run using multiple instruments and methods, *Rapid Communications in Mass Spectrometry*, doi.org/10.1002/rcm.8666.
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87. Santi, L.*, Arnold, A.*, Ibarra, D., Whicker, C.*, Mering, J.*, Lomarda, R.*, Lora, J.*, **Tripati, A.**, 2020, Clumped Isotope Constraints on Changes in Hydroclimate in the Northwest Great Basin: Lake Surprise, California, *GSA Bulletin*.
86. Guillermic, M.*, Misra, S., Eagle, R., Villa, A.*, Chang, F., Tripati, A., 2020, Seawater pH reconstruction using boron isotopes in multiple planktonic foraminifera species with different ecological niches and their potential to constrain pH and pCO₂ gradients, *Biogeosciences*.
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82. Lee, Hung-I*, Mitchell, J., **Tripati, A.**, Lora, J.*, Chen, G., Huang, C., Ding, Q., 2020, North Pacific and Atlantic water vapor ribbons and monsoon onset prediction in East Asia, *Biophysical Research Letters*.
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79. Santi, L.*, Arnold, A.*, Ibarra, D., Whicker, C.*, **Tripati, A.**, 2019, Fluctuations in lake level in the Northern Great Basin for the Last Deglaciation, *Proceedings of the Desert Symposium*, 176-186.
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EXHIBIT B

AWARD NOTICE

Award Date: September 16, 2019
Award No. (FAIN): 1936715
Proposal No.: 1936715
Managing Division Abbreviation: ICER

Gene D. Block
Chancellor
University of California, Los Angeles
10889 Wilshire Boulevard
Suite 700
Los Angeles, CA 90095-1406
DUNS ID: 092530369

Dear Dr. Block:

The National Science Foundation hereby awards a grant of \$1,000,000 to University of California, Los Angeles for support of the project described in the proposal referenced above . This award is expected to total \$1,000,000.

This project, entitled "RAISE: Bringing Together Diverse Perspectives on Water," is under the direction of Aradhna Tripathi, shannon speed, Jessica R. Cattelino.

This award starts September 1 , 2019 and ends August 31, 2022.

This grant is awarded pursuant to the authority of the National Science Foundation Act of 1950, as amended (42 U.S.C. 1861-75) and is subject to Research Terms and Conditions (RTCs) dated March 14, 2017, and NSF Agency Specific Requirements, dated February 25, 2019, available at: <https://www.nsf.gov/awards/managing/rte.jsp>.

This institution is a signatory to the Federal Demonstration Partnership (FDP) Phase VI Agreement which requires active institutional participation in new or ongoing FDP demonstrations and pilots..

This award is subject to the Federal Funding Accountability and Transparency Act (FFATA) award term entitled, Reporting Subawards and Executive Compensation, which has been incorporated into the NSF Terms and Conditions referenced above.

If the awardee has any questions related to the pre-populated data associated with this award in the FFATA Subaward Reporting System, such questions should be submitted to: FFATAReporting@nsf.gov or by phone to: (800) 673-6188.

Funds provided for participant support may not be diverted by the awardee to other categories of expense without the prior written approval of the cognizant NSF Program Officer. Since participant support cost is not a normal account classification, the awardee organization must be able to separately identify participant support costs. It is highly recommended that separate accounts, sub-accounts, sub-task, or sub-ledgers be established to accumulate these costs. The awardee should have written policies and procedures to segregate participant support costs.

Costs of entertainment, amusement, diversion and social activities, and any costs directly associated with such costs (such as meals, lodging, rentals, transportation and gratuities) are unallowable. When certain meals are an integral and necessary part of a conference or meeting (i.e., working meals where business is transacted), grant funds may be used for such meals. Grant funds may also be used to furnish a reasonable

amount of coffee or soft drinks for conference or meeting participants and attendees during coffee breaks.

No NSF funds may be spent on meals or coffee breaks for intramural meetings of an organization or any of its components, including, but not limited to, laboratories, departments and centers.

The attached budget indicates the amounts, by categories, on which NSF has based its support.

The indirect cost rate(s) for this award is/are :

| | |
|-------------|--------------------|
| Item Name | Indirect Cost Rate |
| ----- | ----- |
| 56% of MTDC | 56.0000% |

These rates are at the time of award and are based upon the budget submitted to the NSF. It does not include any out-year adjustments. The NSF will not modify awards simply to correct indirect cost rates cited in the award notice. See the Proposal & Award Policies & Procedures Guide (PAPPG) Chapter X.A.3.a. for guidance on re-budgeting authority.

Please view the project reporting requirements for this award at the following web address [<https://reporting.research.gov/fedAwardId/1936715>].

The cognizant NSF program official for this grant is Brandon Jones, (703) 292-4713
 The cognizant NSF grants official contact is Christine Castell, (703) 292-4803.

Sincerely,

Willie Powell
 Grants and Agreements Officer

CFDA No. 47.050, Geosciences
 awards@research.ucla.edu

ICER-1936715 000
 SUMMARY PROPOSAL BUDGET

| Person MOS | Funds | | | |
|--|-------|------|------|-----------|
| | cal | acad | sumr | By NSF |
| A. (9.00) Total Senior personnel | 0.00 | 0.00 | 4.49 | \$96,855 |
| B. Other Personnel | | | | |
| 1. (0.00) Post Doctoral associates | 0.00 | 0.00 | 0.00 | \$0 |
| 2. (0.00) Other professionals | 0.00 | 0.00 | 0.00 | \$0 |
| 3. (6.00) Graduate students | | | | \$99,768 |
| 4. (0.00) Secretarial-clerical | | | | \$0 |
| 5. (0.00) Undergraduate students | | | | \$0 |
| 6. (12.00) Other | | | | \$88,638 |
| Total salaries and wages (A+B) | | | | \$285,261 |
| C. Fringe benefits (if charged as direct cost) | | | | \$57,218 |
| Total salaries wages and fringes (A+B+C) | | | | \$342,479 |
| D. Total permanent equipment | | | | \$0 |

| | | |
|--|----------|-------------|
| E. Travel | | |
| 1. Domestic | \$55,350 | |
| 2. International | \$0 | |
| F. Total participant support costs | | \$234,199 |
| G. Other direct costs | | |
| 1. Materials and supplies | \$30,300 | |
| 2. Publication costs/page charges | \$0 | |
| 3. Consultant services | \$0 | |
| 4. Computer (ADPE) services | \$0 | |
| 5. Subawards | \$0 | |
| 6. Other | \$87,869 | |
| Total other direct costs | | \$118,169 |
| H. Total direct costs (A through G) | | \$750,197 |
| I. Total indirect costs | | \$249,803 |
| (For information on the rate used, please refer to the award notice) | | |
| J. Total direct and indirect costs (H+I) | | \$1,000,000 |
| K. Fee | \$0 | |
| L. Amount of this request (J) or (J+K) | | \$1,000,000 |
| M. Cost sharing | \$0 | |

EXHIBIT C

NATIONAL SCIENCE FOUNDATION

Award Notice

Award Number (FAIN): 1936715

Managing Division Abbreviation: ICER

Amendment Number: 001

AWARDEE INFORMATION

Award Recipient: University of California, Los Angeles

Awardee Address: 10889 Wilshire Boulevard Suite 700 Los Angeles, CA 900951406

Official Awardee Email Address: awards@research.ucla.edu

Unique Entity Identifier (DUNS ID): 092530369

AMENDMENT INFORMATION

Amendment Type: Supplement

Amendment Date: 07/20/2020

Amendment Number: 001

Proposal Number: 2031648

Amendment Description:

The purpose of this amendment is to:

- Add supplemental support to the award in the amount shown below in the Funding Information section .

Funds provided for participant support may not be diverted by the awardee to other categories of expense without the prior written approval of the cognizant NSF Program Officer. Since participant support cost is not a normal account classification, the awardee organization must be able to separately identify participant support costs. It is highly recommended that separate accounts, sub-accounts, sub-task, or sub-ledgers be established to accumulate these costs. The awardee should have written policies and procedures to segregate participant support costs.

Except as modified by this amendment, the award conditions remain unchanged.

AWARD INFORMATION

Award Number (FAIN): 1936715

Award Instrument: Standard Grant

Award Date: 09/16/2019

Award Period of Performance: Start Date: 09/01/2019 End Date: 08/31/2022

Project Title: RAISE: Bringing Together Diverse Perspectives on Water

Managing Division Abbreviation: ICER

Research and Development Award: Yes

Funding Opportunity: NSF 19-1 Proposal & Award Policies & Procedures Guide - PAPPG

CFDA Number and Name: 47.050 Geosciences

FUNDING INFORMATION

Amount Obligated by this Amendment: \$199,999

Total Intended Award Amount: \$1,000,000

Total Approved Cost Share or Matching Amount: \$0

Total Amount Obligated to Date: \$1,199,999

PROJECT PERSONNEL

Principal Investigator:
Aradhna Tripati

Email: ripple@zephyr.ess.ucla.edu

Institution: University of California-Los Angeles

Co-Principal Investigator:
Jessica R Cattelino

Email: jesscatt@anthro.ucla.edu

Institution: University of California-Los Angeles

Co-Principal Investigator:
shannon speed

Email: speed@aisc.ucla.edu

Institution: University of California-Los Angeles

NSF CONTACT INFORMATION

Managing Grants Official
(Primary Contact)
Name: Angela A. Turner
Email: aturner@nsf.gov

Awarding Official
Name: Willie M. Powell
Email: wpowell@nsf.gov

Managing Program Officer
Name: Brandon Jones
Email: mbjones@nsf.gov

GENERAL TERMS AND CONDITIONS

This is awarded pursuant to the authority of the National Science Foundation Act of 1950, as amended (42 U.S.C. 1861-75) and is subject to Research Terms and Conditions (RTCs) dated 03/14/2017, and NSF Agency Specific Requirements, dated 02/25/2019, available at <https://www.nsf.gov/awards/managing/rtc.jsp>.

This institution is a signatory to the Federal Demonstration Partnership (FDP) Phase VI Agreement which requires active institutional participation in new or ongoing FDP demonstrations and pilots.

BUDGET

A. Senior Personnel

| | |
|---|-----------|
| Senior Personnel Count | 0.00 |
| Senior Personnel Calendar Months | 0.00 |
| Senior Personnel Academic Months | 0.00 |
| Senior Personnel Summer Months | 0.00 |
| Senior Personnel Amount | \$0 |
| B. Other Personnel | |
| Post Doctoral Scholars | |
| Post Doctoral Count | 0.00 |
| Post Doctoral Calendar Months | 0.00 |
| Post Doctoral Academic Months | 0.00 |
| Post Doctoral Summer Months | 0.00 |
| Post Doctoral Amount | \$0 |
| Other Professionals | |
| Other Professionals Count | 0.00 |
| Other Professionals Calendar Months | 0.00 |
| Other Professionals Academic Months | 0.00 |
| Other Professionals Summer Months | 0.00 |
| Other Professionals Amount | \$0 |
| Graduate Students | |
| Graduate Students Count | 0.00 |
| Graduate Students Amount | \$0 |
| Undergraduate Students | |
| Undergraduate Students Count | 0.00 |
| Undergraduate Students Amount | \$0 |
| Secretarial - Clerical | |
| Secretarial - Clerical Count | 0.00 |
| Secretarial - Clerical Amount | \$0 |
| Other | |
| Other Count | 1.00 |
| Other Amount | \$77,044 |
| <i>Total Salaries and Wages (A+B)</i> | \$77,044 |
| C. Fringe Benefits | \$38,830 |
| <i>Total Salaries, Wages, Fringe Benefits (A + B + C)</i> | \$115,874 |
| D. Equipment | \$0 |
| E. Travel | |
| Domestic | \$0 |
| International | \$0 |

| F. Participant Support Costs | |
|---|------------------|
| Participant Support Costs Stipends | \$18,000 |
| Participant Support Costs Travel | \$0 |
| Participant Support Costs Subsistence | \$0 |
| Participant Support Costs Other | \$0 |
| Total Number of Participants | 8.00 |
| <i>Total Participant Costs (F)</i> | \$18,000 |
| G. Other Direct Costs | |
| Materials Supplies | \$0 |
| Publication Costs | \$0 |
| Consultant Services | \$0 |
| Computer Services | \$0 |
| Subawards | \$0 |
| Other | \$792 |
| <i>Total Other Direct Costs (G)</i> | \$792 |
| H. Total Direct Costs (A Through G) | \$134,666 |
| I. Indirect Costs* | \$65,333 |
| J. Total Direct and Indirect Costs (H + I) | \$199,999 |
| K. Fees | \$0 |
| L. Total Amount of Request (J) OR (J + K) | \$199,999 |
| M. Cost Sharing Proposed Level | \$0 |

EXHIBIT D

NATIONAL SCIENCE FOUNDATION

Award Notice

Award Number (FAIN): 1936715

Managing Division Abbreviation: ICER

Amendment Number: 002

AWARDEE INFORMATION

Award Recipient: University of California, Los Angeles

Awardee Address: 10889 Wilshire Boulevard Suite 700 Los Angeles, CA 90095-1406

Official Awardee Email Address: awards@research.ucla.edu

Unique Entity Identifier (DUNS ID): 092530369

AMENDMENT INFORMATION

Amendment Type: Supplement

Amendment Date: 08/16/2021

Amendment Number: 002

Proposal Number: 2141981

Amendment Description:

The purpose of this amendment is to:

- Add supplemental support to the award in the amount shown below in the Funding Information section .

Except as modified by this amendment, the award conditions remain unchanged.

AWARD INFORMATION

Award Number (FAIN): 1936715

Award Instrument: Standard Grant

Award Date: 09/16/2019

Award Period of Performance: Start Date: 09/01/2019 End Date: 08/31/2022

Project Title: RAISE: Bringing Together Diverse Perspectives on Water

Managing Division Abbreviation: ICER

Research and Development Award: Yes

Funding Opportunity: NSF 19-1 Proposal & Award Policies & Procedures Guide - PAPPG

CFDA Number and Name: 47.050 Geosciences

FUNDING INFORMATION

Amount Obligated by this Amendment: \$99,999
Total Intended Award Amount: \$1,000,000
Total Approved Cost Share or Matching Amount: \$0
Total Amount Obligated to Date: \$1,299,998

PROJECT PERSONNEL

| | | |
|--|--|--|
| Principal Investigator: Aradhna Tripati | Email: ripple@zephyr.ess.ucla.edu | Institution: University of California-Los Angeles |
| Co-Principal Investigator: Jessica R Cattelino | Email: jesscatt@anthro.ucla.edu | Institution: University of California-Los Angeles |
| Co-Principal Investigator: shannon speed | Email: sspeed@aisc.ucla.edu | Institution: University of California-Los Angeles |

NSF CONTACT INFORMATION

| | | |
|--|--|--|
| Managing Grants Official (Primary Contact) Name: Angela A. Turner Email: aturner@nsf.gov | Awarding Official Name: Willie M. Powell Email: wpowell@nsf.gov | Managing Program Officer Name: Brandon Jones Email: mbjones@nsf.gov |
|--|--|--|

GENERAL TERMS AND CONDITIONS

This is awarded pursuant to the authority of the National Science Foundation Act of 1950, as amended (42 U.S.C. 1861-75) and is subject to Research Terms and Conditions (RTCs) dated 11/12/2020, and NSF Agency Specific Requirements, dated 11/12/2020, available at <https://www.nsf.gov/awards/managing/rtc.jsp>.

This institution is a signatory to the Federal Demonstration Partnership (FDP) Phase VI Agreement which requires active institutional participation in new or ongoing FDP demonstrations and pilots.

BUDGET

| A. Senior Personnel | |
|----------------------------------|------|
| Senior Personnel Count | 0.00 |
| Senior Personnel Calendar Months | 0.00 |
| Senior Personnel Academic Months | 0.00 |
| Senior Personnel Summer Months | 0.00 |

| | |
|---|----------|
| Senior Personnel Amount | \$0 |
| B. Other Personnel | |
| Post Doctoral Scholars | |
| Post Doctoral Count | 1.00 |
| Post Doctoral Calendar Months | 7.50 |
| Post Doctoral Academic Months | 0.00 |
| Post Doctoral Summer Months | 0.00 |
| Post Doctoral Amount | \$43,750 |
| Other Professionals | |
| Other Professionals Count | 1.00 |
| Other Professionals Calendar Months | 1.00 |
| Other Professionals Academic Months | 0.00 |
| Other Professionals Summer Months | 0.00 |
| Other Professionals Amount | \$8,051 |
| Graduate Students | |
| Graduate Students Count | 0.00 |
| Graduate Students Amount | \$0 |
| Undergraduate Students | |
| Undergraduate Students Count | 0.00 |
| Undergraduate Students Amount | \$0 |
| Secretarial - Clerical | |
| Secretarial - Clerical Count | 0.00 |
| Secretarial - Clerical Amount | \$0 |
| Other | |
| Other Count | 0.00 |
| Other Amount | \$0 |
| <i>Total Salaries and Wages (A+B)</i> | \$51,801 |
| C. Fringe Benefits | \$10,778 |
| <i>Total Salaries, Wages, Fringe Benefits (A + B + C)</i> | \$62,579 |
| D. Equipment | \$0 |
| E. Travel | |
| Domestic | \$0 |
| International | \$0 |
| F. Participant Support Costs | |
| Participant Support Costs Stipends | \$0 |
| Participant Support Costs Travel | \$0 |
| Participant Support Costs Subsistence | \$0 |
| Participant Support Costs Other | \$0 |
| Total Number of Participants | 0.00 |

| | |
|---|-----------------|
| <i>Total Participant Costs (F)</i> | \$0 |
| G. Other Direct Costs | |
| Materials Supplies | \$0 |
| Publication Costs | \$0 |
| Consultant Services | \$0 |
| Computer Services | \$0 |
| Subawards | \$0 |
| Other | \$1,523 |
| <i>Total Other Direct Costs (G)</i> | \$1,523 |
| H. Total Direct Costs (A Through G) | \$64,102 |
| I. Indirect Costs* | \$35,897 |
| J. Total Direct and Indirect Costs (H + I) | \$99,999 |
| K. Fees | \$0 |
| L. Total Amount of Request (J) OR (J + K) | \$99,999 |
| M. Cost Sharing Proposed Level | \$0 |

EXHIBIT E

NATIONAL SCIENCE FOUNDATION

Award Notice

Award Number (FAIN): 1936715

**Managing Division
Abbreviation:** RISE

Amendment Number: 003

RECIPIENT INFORMATION

Recipient (Legal Business Name): UNIVERSITY OF CALIFORNIA, LOS ANGELES
Recipient Address: 10889 WILSHIRE BLVD STE 700 LOS ANGELES, CA 90024-4200
Official Recipient Email Address: awards@research.ucla.edu
Unique Entity Identifier (UEI): RN64EPNH8JC6

AMENDMENT INFORMATION

Amendment Type: No Cost Extensions
Amendment Date: 08/09/2024
Amendment Number: 003
Proposal Number: Not Applicable
Amendment Description:

The purpose of this amendment is to extend the end date from 08/31/2024 to 08/31/2025 in accordance with the NSF Approved No-Cost Extension request submitted on 08/07/2024 without additional funds to allow for the completion of the agreed-to level of effort.

Except as modified by this amendment, the award conditions remain unchanged.

PROJECT PERSONNEL

Principal Investigator:
Aradhna Tripathi

Email: ripple@zephyr.ess.ucla.edu

Organization:
UNIVERSITY OF
CALIFORNIA, LOS
ANGELES

co-Principal Investigator:
Jessica R Cattelino

Email: jesscatt@anthro.ucla.edu

Organization:
UNIVERSITY OF
CALIFORNIA, LOS
ANGELES

co-Principal Investigator:
shannon speed

Email: speed@aisc.ucla.edu

Organization:
UNIVERSITY OF
CALIFORNIA, LOS
ANGELES

NSF CONTACT INFORMATION

Managing Grants Official
(Primary Contact)
Name: Angela A. Turner
Email: aturner@nsf.gov
Phone: (703) 292-7524

Awarding Official
Name: Willie M. Powell
Email: wpowell@nsf.gov

Managing Program Officer
Name: Brandon Jones
Email: mbjones@nsf.gov
Phone: (703) 292-4713

EXHIBIT F

From: **UCLA Research Admin** <DoNotReply@research.ucla.edu>
Date: Fri, Aug 1, 2025 at 9:24 PM
Subject: Grant Suspension Notice - Stop Work Order [PATS 20194592]
To: <atripati@ucla.edu>
Cc: <kiana.khaki@research.ucla.edu>, <mrathjen@epss.ucla.edu>, <PATSRecords@research.ucla.edu>

Stop Work Notice

Award #: 1936715

Title: RAISE: Bringing Together Diverse Perspectives on Water

PATS #: 20194592

Fund #(s): 23043

Professor Tripati,

UCLA has received a suspension notice from NATIONAL SCIENCE FOUNDATION (NSF) for the above referenced project.

This email is to notify you to **immediately stop incurring costs/expenditures on the grant(s) referenced above effective July 31, 2025.**

If your grant includes active subawards, OCGA will be writing to the subawardee's administrative contact with formal notice of the subaward suspension and the requirement to stop immediately all expenditures against the subaward. You may also want to separately reach out to your collaborator to provide additional context.

UCLA is required to submit to the sponsor, within 30 days of this suspension, a financial report of expenditures through July 31, 2025. OCGA will request that the subawardee submit to you, within 15 days of the notice, an invoice for expenses incurred to date so that we can include those expenses in our report to the sponsor. Extramural Fund Management (EFM) will seek the support of your fund manager to prepare a complete and accurate financial report of expenses incurred through July 31, 2025.

We are saddened that this has happened and echo the sentiments expressed in the recent communications from Chancellor Frenk and Vice Chancellor for Research Wakimoto. Campus leadership is actively engaged in working to resolve these issues. Updates will be shared as they become available. For questions regarding the suspension, please contact awards@research.ucla.edu or reach out to me directly. For financial or reimbursement-related inquiries, reach out to your EFM contact.

ACTION REQUIRED

Please:

1. Forward any communications you may receive from the federal sponsor related to this suspension to OCGA at awards@research.ucla.edu.
2. Work with your fund manager or financial staff to ensure all expenditures are reported and subaward invoices are approved.

We understand this is a stressful time, and we appreciate your dedication to research excellence at UCLA.

Tracey Fraser

Senior Director

UCLA Office of Contract & Grant Administration

10889 Wilshire Boulevard, Suite 700

Los Angeles, CA 90095-1406

T: (310) 825-0671 | E: tracey.fraser@research.ucla.edu

<https://ocga.research.ucla.edu/>

EXHIBIT G

NATIONAL SCIENCE FOUNDATION

Award Notice

Award Number (FAIN): 2232606

Managing Division Abbreviation: RISE

Amendment Number: 000

RECIPIENT INFORMATION

Recipient (Legal Business Name): UNIVERSITY OF CALIFORNIA, LOS ANGELES

Recipient Address: 10889 WILSHIRE BLVD STE 700 LOS ANGELES, CA 90024-4201

Official Recipient Email Address: awards@research.ucla.edu

Unique Entity Identifier (UEI): RN64EPNH8JC6

AMENDMENT INFORMATION

Amendment Type: New Project

Amendment Date: 06/05/2023

Amendment Number: 000

Proposal Number: 2232606

Amendment Description:

The National Science Foundation hereby awards a Continuing Grant for support of the project described in the proposal referenced above as modified by revised budget dated 03/29/2023.

Funds provided for participant support may not be diverted by the awardee to other categories of expense without the prior written approval of the cognizant NSF Program Officer. Since participant support cost is not a normal account classification, the awardee organization must be able to separately identify participant support costs. It is highly recommended that separate accounts, sub-accounts, sub-task, or sub-ledgers be established to accumulate these costs. The awardee should have written policies and procedures to segregate participant support costs.

Incentive payments or gifts to participants must be made in accordance with written institutional policies and procedures and supported by auditable documentation. The allowability of these costs will ultimately be based on the awardee institution's ability to adequately demonstrate that the incentives have been disbursed in accordance with its policies and procedures.

Costs of entertainment, amusement, diversion and social activities, and any costs directly associated with such activities (such as meals, lodging, rentals, transportation and gratuities) are unallowable.

When certain meals are an integral and necessary part of a conference or meeting (i.e., working meals where business is transacted), grant funds may be used for such meals. Grant funds may also be used to furnish a reasonable amount of coffee or soft drinks for conference or meeting participants and attendees during coffee breaks.

No NSF funds may be spent on meals or coffee breaks for intramural meetings of an organization or any of its components, including, but not limited to, laboratories, departments and centers.

AWARD INFORMATION**Award Number (FAIN):** 2232606**Award Instrument:** Continuing Grant**Award Date:** 06/05/2023**Award Period of Performance:** Start Date: 06/01/2023 End Date: 05/31/2028**Project Title:** Collaborative Research: Supporting Leadership in Diversity, Professional Development, and Geoscience Capacity Building for Veterans in STEM: The VRC-CDLS Veterans in STEM Program**Managing Division Abbreviation:** RISE**Research and Development Award:** Yes**Funding Opportunity:** PD 21-178Y Geoscience Opportunities for Leadership in Diversity**Assistance Listing Number(s) and Name(s):** 47.050 Geosciences (Predominant source of funding for SEFA reporting)**FUNDING INFORMATION****Amount Obligated by this Amendment:** \$1,096,856**Total Intended Award Amount:** \$1,871,753**Total Approved Cost Share or Matching Amount:** \$0**Total Amount Obligated to Date:** \$1,096,856**Expenditure Limitation:** Not Applicable

Contingent on the availability of funds and scientific progress of the project, NSF expects to continue support at approximately the following level:

| Fiscal Year | Increment Amount |
|-------------|------------------|
| 2024 | \$774,897 |

PROJECT PERSONNEL**Principal Investigator:**

Aradhna Tripathi

Email:

ripple@zephyr.ess.ucla.edu

Organization: UNIVERSITY OF

CALIFORNIA, LOS ANGELES

COLLABORATIVE INFORMATION

| Proposal ID | Lead | PI Name | Organization |
|-------------|------|------------------|---------------------------------------|
| 2232606 | Y | Aradhna Tripathi | University of California, Los Angeles |
| 2232607 | N | Djuradj Babic | East Los Angeles College |

NSF CONTACT INFORMATION**Managing Grants****Official** (Primary

Contact)

Name: Angela A.

Turner

Email:

aturner@nsf.gov

Phone: (703) 292-7524**Awarding Official****Name:** Willie M. Powell**Email:** wpowell@nsf.gov**Managing Program Officer****Name:** Brandon Jones**Email:** mbjones@nsf.gov**Phone:** (703) 292-4713**GENERAL TERMS AND CONDITIONS**

This is awarded pursuant to the authority of the National Science Foundation Act of 1950, as amended (42 U.S.C. 1861-75) and is subject to Research Terms and Conditions (RTCs) dated 11/12/2020, and NSF Agency Specific Requirements, dated 01/30/2023, available at <https://www.nsf.gov/awards/managing/rtc.jsp>.

This institution is a signatory to the Federal Demonstration Partnership (FDP) Phase VI Agreement which requires active institutional participation in new or ongoing FDP demonstrations and pilots.

BUDGET

| A. Senior Personnel | |
|----------------------------------|----------|
| Senior Personnel Count | 3.00 |
| Senior Personnel Calendar Months | 3.00 |
| Senior Personnel Academic Months | 0.00 |
| Senior Personnel Summer Months | 0.00 |
| Senior Personnel Amount | \$81,189 |
| B. Other Personnel | |
| Post Doctoral Scholars | |
| Post Doctoral Count | 3.00 |
| Post Doctoral Calendar Months | 3.00 |
| Post Doctoral Academic Months | 0.00 |
| Post Doctoral Summer Months | 0.00 |
| Post Doctoral Amount | \$18,545 |
| Other Professionals | |
| Other Professionals Count | 9.00 |
| Other Professionals Calendar | 40.50 |

| | |
|---|-----------|
| Months | |
| Other Professionals Academic Months | 0.00 |
| Other Professionals Summer Months | 0.00 |
| Other Professionals Amount | \$278,182 |
| Graduate Students | |
| Graduate Students Count | 0.00 |
| Graduate Students Amount | \$0 |
| Undergraduate Students | |
| Undergraduate Students Count | 0.00 |
| Undergraduate Students Amount | \$0 |
| Secretarial - Clerical | |
| Secretarial - Clerical Count | 0.00 |
| Secretarial - Clerical Amount | \$0 |
| Other | |
| Other Count | 0.00 |
| Other Amount | \$0 |
| <i>Total Salaries and Wages (A+B)</i> | \$377,916 |
| C. Fringe Benefits | \$147,175 |
| <i>Total Salaries, Wages, Fringe Benefits (A + B + C)</i> | \$525,091 |
| D. Equipment | \$0 |
| E. Travel | |
| Domestic | \$750 |
| International | \$0 |
| F. Participant Support Costs | |
| Participant Support Costs Stipends | \$213,750 |
| Participant Support Costs Travel | \$6,000 |
| Participant Support Costs Subsistence | \$0 |
| Participant Support Costs Other | \$6,000 |
| Total Number of Participants | 108.00 |
| <i>Total Participant Costs (F)</i> | \$225,750 |
| G. Other Direct Costs | |
| Materials Supplies | \$3,000 |
| Publication Costs | \$750 |
| Consultant Services | \$0 |
| Computer Services | \$0 |
| Subawards | \$0 |
| Other | \$42,026 |

| | |
|---|--------------------|
| <i>Total Other Direct Costs (G)</i> | \$45,776 |
| H. Total Direct Costs (A Through G) | \$797,367 |
| I. Indirect Costs* | \$299,489 |
| J. Total Direct and Indirect Costs (H + I) | \$1,096,856 |
| K. Fees | \$0 |
| L. Total Amount of Request (J) OR (J + K) | \$1,096,856 |
| M. Cost Sharing Proposed Level | \$0 |

*Indirect Cost Rates

| Item Name | Indirect Cost Rate |
|------------------|---------------------------|
| MTDC | 56.0000% |

These rates are at the time of award and are based upon the budget submitted to the NSF. It does not include any out-year adjustments. The NSF will not modify awards simply to correct indirect cost rates cited in the award notice. See the Proposal & Award Policies & Procedures Guide (PAPPG) Chapter X.A.3.a. for guidance on re-budgeting authority.

EXHIBIT H

From: **UCLA Research Admin** <DoNotReply@research.ucla.edu>
Date: Fri, Aug 1, 2025 at 9:26 PM
Subject: Grant Suspension Notice - Stop Work Order [PATS 20225325]
To: <atripati@ucla.edu>
Cc: <jinger.snyder@research.ucla.edu>, <PATSRecords@research.ucla.edu>, <vdelarosa@ioes.ucla.edu>, <vfuentes@research.ucla.edu>

Stop Work Notice

Award #: 2232606

Title: Collaborative Research: Supporting Leadership in Diversity, Professional Development, and Geoscience Capacity Building for Veterans in STEM

PATS #: 20225325

Fund #(s): 22200

Professor Tripati,

UCLA has received a suspension notice from NATIONAL SCIENCE FOUNDATION (NSF) for the above referenced project.

This email is to notify you to **immediately stop incurring costs/expenditures on the grant(s) referenced above effective July 31, 2025.**

If your grant includes active subawards, OCGA will be writing to the subawardee's administrative contact with formal notice of the subaward suspension and the requirement to stop immediately all expenditures against the subaward. You may also want to separately reach out to your collaborator to provide additional context.

UCLA is required to submit to the sponsor, within 30 days of this suspension, a financial report of expenditures through July 31, 2025. OCGA will request that the subawardee submit to you, within 15 days of the notice, an invoice for expenses incurred to date so that we can include those expenses in our report to the sponsor. Extramural Fund Management (EFM) will seek the support of your fund manager to prepare a complete and accurate financial report of expenses incurred through July 31, 2025.

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ACTION REQUIRED

Please:

1. Forward any communications you may receive from the federal sponsor related to this suspension to OCGA at awards@research.ucla.edu.
2. Work with your fund manager or financial staff to ensure all expenditures are reported and subaward invoices are approved.

We understand this is a stressful time, and we appreciate your dedication to research excellence at UCLA.

Tracey Fraser

Senior Director

UCLA Office of Contract & Grant Administration

10889 Wilshire Boulevard, Suite 700

Los Angeles, CA 90095-1406

T: (310) 825-0671 | E: tracey.fraser@research.ucla.edu

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