

diversity equity & inclusion

newsletter

January-February 2025

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Broadening Participation in STEM by Designing National Lab Research Experiences: A Conversation with Dr. Laleh Coté

by Dr. Edi M.-L. Wipf

Given the profound economic, environmental, political, and socio-cultural transformations we are collectively experiencing, are there proactive measures and focal points that allow us greater possibilities and advantage? As we enter the new year, some areas to consider might lie both in our commitments and what change leaders in our community can teach us.

Nelson Mandela asserted that "Education is the most powerful weapon which you can use to change the world." With the extensive degree to which learning and community resources contribute to scientific discovery and societal progress, research programs can be most **effective** when they foster diversity, equity, inclusion, and belonging. **Studies** have indicated that inclusive environments lead to higher levels of innovation, productivity, and employee satisfaction at large, bolstering the sustainability and success of an initiative and organization.



Dr. Laleh Coté serves as the STEM Education Program Manager in the **Workforce Development & Education** Department at Lawrence Berkeley National Laboratory (Berkeley Lab). She holds a Ph.D. in science and math education and a master's in microbiology. Her work contributes to the team's mission to inspire and prepare the next generation of scientists and STEM professionals through a suite of programs for students and faculty across STEM



disciplines. At Berkeley Lab her team strives to increase access to and broaden participation in STEM careers.

As Dr. Coté relates her early interests in performing arts to her later journey in scientific research and STEM education, she emphasizes the importance of inclusive environments in fostering growth and innovation. Through past and present efforts, she strives to demystify pathways to success and promote access to the exciting opportunities available in STEM.

Q: Can you tell us about your educational background and how it has shaped your career?

"My educational background has been instrumental in shaping my career. I've been able to apply the knowledge and skills gained during my education to contribute to my work as a scholar and professional across various roles... [It has also] instilled in me a mindset of lifelong learning and adaptability ... I want to stay current with advancements in my field, and adapt to evolving career demands."

Dr. Laleh Coté's journey began with a strong foundation in the performing arts, which gave her a deep appreciation for creativity and expression. "I grew up very interested in the performing arts, acting, singing, dancing, [as well as] poetry, writing, drawing, and music as creative outlets ... I have always liked to create art and participate alongside other creative people."

However, in her early 20s, she transitioned to biology, driven by a burgeoning interest in human health. "I had been working in customer service jobs, and wanted to try something more intellectual. My initial idea was to pursue a college degree that could be used to help people." Dr. Coté initially considered careers in medicine, such as becoming a physician or nurse. However, her experiences during internships at Berkeley Lab opened her eyes to the exciting possibilities within scientific research. "I worked at Berkeley Lab in a microbial ecology lab and found the team to be a positive and inspiring force ... I very quickly fell in love with research and answering questions, and figuring out all these different pieces of the [research] puzzle.

As a community college student taking science classes, I felt lucky to land an internship at Berkeley Lab, but didn't really know what I was doing at first ... the mentorship and guidance I received from my mentors and community college professors were invaluable. Their insights, support, and encouragement really helped shape my career aspirations and achievements. The internships and extracurricular activities really helped to prepare me for the transition from biology to STEM education. Each of the jobs and internships I had helped me to figure out how to bridge the gap between theory and practice, and prepared me to balance work and graduate studies. And, of course, now I have a passion for including community college students in our programs and my research studies!"



Discovering a deep passion for research and education ultimately guided her transition to STEM education. The interdisciplinary nature of her background has allowed her to bring a unique perspective to her work, emphasizing the importance of creativity and inclusivity in STEM fields. By completing her Master's in microbiology and Ph.D. in science and math education simultaneously, Dr. Coté was equipped with the skills to bridge the gap between conducting scientific research and educational theory to improve STEM education activities.

Q: Can you describe your journey to your current role at Berkeley Lab?

Dr. Coté's journey at Berkeley Lab began as an undergraduate intern and research assistant, where she spent approximately 4.5 years immersed in various research projects in biology. These experiences were instrumental in shaping her understanding of the scientific process and the importance of mentorship. Eventually, she transitioned to roles focused on STEM education, leveraging her research background to design and implement educational programs that inspire and support the next generation of scientists and STEM professionals.

"Interdisciplinary learning experiences allowed me to integrate knowledge from various fields ... This holistic approach provided me with a broad perspective and equipped me with diverse skills that have been beneficial in my multifaceted career."

Q: What are your current responsibilities as the STEM Education Program Manager at Berkeley Lab?

In her current role, Dr. Coté oversees multiple STEM education programs, initiatives, and research projects at Berkeley Lab. Her responsibilities include designing, implementing, and assessing internships, outreach events, and other initiatives that support the STEM workforce and learning opportunities for both students and STEM professionals. She is particularly passionate about creating inclusive environments, reducing barriers to participation, and fostering communication between students, professionals, and partner organizations. Additionally, she hopes to integrate her doctoral research about teaching and mentoring undergraduate researchers from diverse backgrounds into her role as program manager at Berkeley Lab. By introducing students to professional networks and addressing the unique needs of different groups, she aims to broaden participation in STEM and support the development of future leaders in science and technology fields.

"I collaborate closely with educators, researchers, and community partners to develop and refine our STEM curricula and outreach initiatives, [and] a significant part of my job involves developing activities and curricula that are engaging and accessible to students of all backgrounds. Regularly assessing the effectiveness of our programs is crucial, so I collect and analyze data to ensure we are meeting our objectives and making a positive impact." She tries to maintain an open mind, to ensure that her practices and strategies improve over time.

Q: What strategies do you employ to support diversity and inclusion in STEM education?

"Creating an inclusive environment where all students feel welcome and valued is a top priority. We work continuously to ensure our programs and spaces are accessible and supportive to everyone."

One of the key strategies Dr. Coté employs is taking action to reduce the mystery and perceived barriers to enter STEM fields, making them more accessible and relatable. She also focuses on culturally responsive teaching and mentorship, recognizing the importance of kindness and empathy in education and outreach. By introducing students to professional networks and providing tailored support, she addresses the unique needs of different groups, ensuring that everyone has the opportunity to succeed in STEM.



"We give access to people from all walks of life, from all backgrounds, and serve those pursuing technical and academic degrees. Partnering with organizations dedicated to supporting groups underrepresented in STEM helps us reach a broader audience, and provide more opportunities for those students.

Highlighting diverse role models in STEM is crucial, and we bring in guest speakers and showcase the work of professionals from various backgrounds to inspire our students, and we strive to create curricula that reflect diverse perspectives and are inclusive, with the goal that everyone can see themselves represented in STEM fields. We recognize that if we want to reach new and diverse populations, we need to go to where these populations are.

I go to [various] conferences, often on the national level to raise awareness of STEM careers and opportunities. [But] someone already supported those students to go to a conference, and I think about folks who aren't even aware of these [opportunities]. I therefore might meet students in a classroom, or host a visit for students to see Berkeley Lab.

[During these interactions,] I create space for conversation. When students feel empowered and brave enough to ask their questions, maybe they ask something you didn't cover in your presentation. I also discuss some things that I was scared about when I was an undergraduate at the Lab, that weren't listed on the Berkeley Lab website. What do I wear? Where do I eat my lunch? How am I going to travel? Where do I live?

For meetings or student visits, I start by taking inventory of who will be involved, what they are likely to know coming into that activity, and what they are interested in. [For instance,] do they already care and are motivated, or are they starting from a place where they need to be convinced? I weigh those positions, and make visible the goals and identities of all parties [through agendas and conversation]."

Q: Are there any upcoming initiatives and/or projects you are most excited for being part of?

"There are two programs that I have helped bring to life at Berkeley Lab in the past few years, and I'm very excited to see how they grow and evolve in the future. Both are partnership programs, which are valuable to identifying and supporting students.

The first one is a program established by both Berkeley Lab and Arizona State University (ASU), which serves many Native American students and has a wealth of resources, programs, and degree programs to celebrate and support Native American communities. With funding from the Sloan Foundation, our team established

Dr. Coté highlights two programs established in recent years: <u>ASU-Berkeley Lab STEM Pathways (ABSP) Program</u> and <u>STEM Excellence through Equity & Diversity (SEED) Scholars Honors Program</u>

the ASU-Berkeley Lab STEM Pathways (ABSP)

Program to support Native American undergraduates enrolled at ASU who are interested in graduate degrees in STEM fields through paid research internships, mentoring, and support with achieving their academic and career goals. We have had a few great summers hosting ABSP students, and now we are looking for new ways to expand the partnership, engage students attending tribal colleges and universities in California, and find long-term funding to support additional students in the future.

The second program is in partnership with UC Berkeley's **STEM Excellence through Equity & Diversity (SEED) Scholars Honors Program**, which is modeled after the renowned Meyerhoff Scholars Program. Our team, Workforce Development & Education at Berkeley Lab, has worked with the SEED Scholars Honors Program to form the new "SEED Scholars @ LBNL" internship. This is a wonderful partnership, because both teams



really have the same values in terms of increasing access to and awareness about STEM careers, especially for students from groups that have been historically excluded from participation in research and STEM careers."

In Action

Dr. Coté highlights the following in her work:

- Importance of creating space for dialogue and addressing real questions and concerns in out-reach activities.
- Take inventory of participants' backgrounds and interests when implementing culturally responsive pedagogies.
- Build rapport and trust over time with students to encourage open communication.
- The need to introduce students to professional networks and be transparent about challenges in the field.

Discussion Questions

• Are there people, programs, and/or practices that you have found helpful in demystifying the pathways to success in STEM?

• What steps do you already take or can take to introduce colleagues to professional networks and address their real-world concerns? Consider how you can build rapport, foster open communication, and provide practical advice to support their journey in STEM.

• Are there ways interdisciplinary learning experiences could enhance your research, mentoring, and/or teaching?



Student Services and Advising Professionals Unionization Movement

by Dr. Edi M.-L. Wipf

On December 16th, 2024, California's Public Employment Relations Board (PERB) confirmed that a majority of <u>Student Services and Advis-</u> ing Professionals (SSAPs) across the University of California (UC) system have signed authorization cards in support of <u>forming a union</u> that will join <u>the International Union, United Automobile,</u> <u>Aerospace and Agricultural Implement Workers</u> <u>of America</u>. This momentous achievement signifies a critical move towards creating and amplifying a collective voice to drive positive change at UC.

The UC administration now has 15 days to respond, with the expectation that they will recognize the union and swiftly move to bargaining.

In just this year of organizing, UC's own employee records have shown an estimated 30%

annual turnover rate among workers included in SSAP-UAW. Whether it involves financial aid officers, departmental advisors, health educators, or career specialists, the formation of this union presents the opportunity to negotiate in 2025, addressing pervasive issues that can significantly enhance retention. With over 3,000 signed authorization cards counted and majority support verified for forming SSAP-UAW, collective bargaining opens the door to more solutions to make SSAP roles more sustainable: equitable pay, guaranteed raises, career advancement opportunities, and a respectful and safe work environment.

In a **published statement** by UC Office of the President communication strategist **Heather Hansen**, "The UC really prides itself, I think, on its exceptional educational mission and exceptional success and performance, and that really is due in large part to the work of staff – of me and my peers," she said. "What we're basically asking for at this point is for that contribution to be recognized in an equitable way and to have an equal footing at the table in terms of the future of our work."

■ Impact on Science Graduate Students, Faculty, and Staff

Unionization of SSAPs is poised to have a profound impact on science graduate students, faculty, and staff. More stable and supportive advising and service roles could translate into better guidance and resources for graduate students, leading to improved academic outcomes. Faculty members may also benefit from a more cohesive support system, allowing them to dedicate more time to research and teaching. Additionally, staff will experience enhanced job satisfaction and career growth opportunities, fostering a more inclusive and equitable workplace.

Unions and DEI

Unions can play an instrumental role in promoting diversity, equity, and inclusion. Higher wages and decreased income inequality are among the many benefits of unionization. On average, workers covered by a union contract earn 10.2% more in wages than their nonunionized peers with similar education, occupation, and experience in the same industry. This "union wage premium" helps to reduce wage gaps for women and people of color. For instance, <u>hourly wag-</u> es for women represented by a union are 4.7% <u>higher on average than for nonunionized women</u> with comparable characteristics.

Navigating Budget Cuts

Recent budget cuts to the UC system add another layer of urgency to unionization efforts. California state legislators have agreed on a \$297.9 bil**lion spending plan** for 2024–25, which includes budget cuts for the UC and California State University systems. A one-time unallocated base reduction of \$125 million for UC resulted in an overall lower net funding increase of \$133.8 million, and as part of a statewide effort to reduce departmental budgets, UC will experience a 7.95% reduction in their operational funding starting in the 2025-26 fiscal year. These cuts are paired with tuition hikes for nonresident students - or roughly 15% of UC undergraduates, and will also necessitate a concerted effort to ensure that students, faculty, and staff receive the support they need to thrive.

Conclusion

The formation of SSAP-UAW represents a historic step towards creating a more equitable and sustainable work environment at UC. By leveraging collective voices, the challenges posed by high turnover, budget cuts, and the need for DEI can be better addressed, ultimately building a brighter future for all members of the UC community.







Campus Resource Spotlight: Inclusiveness Index

The **Othering & Belonging Institute**'s **Inclusiveness Index** offers a unique snapshot of how inclusive societies are, both globally and within the U.S. It goes beyond just economic metrics to look at a variety of social dimensions, like race, gender, sexual orientation, religion, and disability. By examining political inclusion, income inequality, incarceration rates, refugee settlement, and even greenhouse gas emissions, this index provides a holistic picture of how different groups experience inclusion.

This annual index, now in its 9th year, is an interactive tool that allows users to dive deeper into state and country rankings. You can see how different collectives stack up, explore the data behind the scores, and even track changes over time.

The goal? Not just to rate, but to spark conversations and inspire further inquiry. The index serves as a diagnostic tool to identify areas of progress and places where societies may be becoming more divided. While it's not the definitive measure of performance, it's a starting point for deeper investigation into inclusivity.

Discussion Questions

• How does your home state or country rank on the Inclusiveness Index, and what factors contribute to its position?

- What specific indicators of inclusivity do you think are most important for the communities you are part of, and why?
- How can the findings from the Inclusiveness Index be used to drive policy changes and improve social inclusion in your area?

Upcoming Events and Observances

January

National Mentoring MonthPoverty in America Awareness MonthSlavery and Human Trafficking Awareness MonthJanuary 4 - World Braille DayJanuary 15, 9am - Disability Management: Understanding the ProcessJanuary 20 - Martin Luther King, Jr. DayJanuary 24 - International Day of EducationJanuary 24, 9am - Us Versus Them: How to Reduce Polarization in AmericaJanuary 27 - International Holocaust Remembrance DayJanuary 29, 5pm - UndocuGrads: New year; mood boardUntil January 31 - Centering Philippine and Filipinx American Histories

February

Black History Month

February 1 - <u>National Freedom Day</u>
February 9, <u>1pm - Film Screening: Plastic People</u>
February 11 - <u>International Day of Women & Girls in Science</u>
February 20 - <u>World Day of Social Justice</u>
February 21, 10am - <u>Mother Language Day Celebration</u>
February 23, 1pm - <u>Film Screening: The Battle for Laikipia</u>
February 26 - <u>Biosciences Grad Gathering Event - Creative Writing Workshop</u>

Open Call for Submissions:

The Diversity, Equity, and Inclusion (DEI) Newsletter invites you to contribute your insights and perspectives on the critical topics that shape our community. If you have an idea for an article or wish to share your experiences related to DEI within the biological sciences, we encourage you to reach out. We are committed to fostering a comprehensive and inclusive dialogue by highlighting diverse viewpoints and experiences. Your contributions are vital to our mission of connecting and empowering the UC Berkeley community.

Editorial Board:

Edi M.-L. Wipf Xiaolin (Lindsay) Huang Gregory Charles Arena DEI Newsletter is always looking for writers, copy-editors and artists to bring you balanced perspectives on community in the Biological Sciences at Berkeley. Interested in working with us, or have a story or event you would like to see featured in upcoming newsletters? Email us at dei.news.biology@berkeley.edu.

Supervisors—please circulate this newsletter to lab members and staff who may not be on our listserv.