



American Physical Society
Far West Section
serving California, Nevada and Hawai'i



APS FWS Newsletter 2025

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The Far West Section of the American Physical Society provides a platform to connect physicists in one of the most vibrant academic and industrial regions of the USA, especially those living or working in California, Nevada, and Hawaii. We promote interactions between state and private universities, colleges, government laboratories, and industry to advance and disseminate scientific knowledge.

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Letter from the Chair

David Lederman, FWS Chair, UC Santa Cruz

As we reflect on the past year and look toward the future, I want to express my heartfelt gratitude for your engagement and dedication to the field of physics in general and to the APS Far West Section in particular. The strength of our community lies in our shared passion for inquiry, collaboration, and the advancement of knowledge.



In 2025, the FWS Executive Committee worked hard to organize our Annual Meeting in Santa Cruz this past October. We had a record number of participants, two industrial sponsors (Quantum Design USA and General Atomics), and several academic sponsors (UC Santa Cruz, UC Merced, and Stanford University) seeking to recruit graduate students. The first evening included a career workshop organized by the APS and the UC Santa Cruz Society of Physics Students that was very well attended.

Aside from that, the FWS Executive Committee had extensive discussions on how to support the Physics Department at Sonoma State University, which in January 2025 was slated to phase out its Physics BS and BA degree programs. As a result of these discussions, in February several of the Executive Committee members signed a letter to the CSU Board of Trustees expressing our concerns about discontinuing a Physics program that historically has had high graduation rates and alumni that have made impressive impacts in Physics research and education. The FWS also participated in the APS Leadership Conference and Congressional Visit Day. The Congressional Visit Day is an opportunity for the Physics community to engage with our elected representatives about the importance of our scientific mission. Recognizing the importance of this endeavor, the FWS will expand its participation in this event in 2026 by including four Executive Committee members.

I would like specially thank Hendrik Ohldag, the FWS Secretary/Treasurer, who has served in this capacity for several years, and whose leadership has been instrumental in organizing and running the Annual Meetings. Looking forward, I would like to extend a warm welcome to our incoming FWS Chair, John Price from CSU Dominguez Hills. We are also excited to announce plans for our upcoming 2026 Annual Meeting to be held in San Luis Obispo, which promises to deliver inspiring talks from leading experts, workshops, and opportunities for networking. Your input is invaluable in shaping the agenda, so please feel free to share your suggestions with the Executive Committee.

More details about some of our activities can be found elsewhere in this newsletter. As we move forward, let us remain committed to promoting diversity and inclusion within our community. Encouraging a variety of perspectives enhances our collective ability to solve complex problems and push the boundaries of what we know.

Thank you for your continued support and enthusiasm. Together, we can make a lasting impact on physics and inspire the next generation of scientists.

With warm regards,

David Lederman



Report from the 2025 APS Congressional Visits Day/Leadership Meeting

John W. Price, FWS Chair-Elect, CSU Dominguez Hills

The 2025 APS Congressional Visits Day (CVD) and Annual Leadership Meeting (ALM) took place on January 29-31 in Washington, DC, and was attended by FWS Chair-Elect John Price (CSU Dominguez Hills) and Member-at-Large Camille Stavrakis (Psi Quantum Corp.). Price's group spent CVD meeting with the offices of representative Judy Chu (D, CA-28) and senator Alex Padilla (D-CA), and two members of Congress from Alabama. Stavrakis's group met with the offices of representatives Mark DeSaulnier (D, CA-10) and John Garamendi (D, CA-8), and senator Adam Schiff (D-CA). The purpose of these meetings is to inform members of Congress on legislative priorities of the American Physical Society. These include robust funding for science, support for competitive compensation for graduate students and postdocs, and support for international students and scholars, among others.

ALM began with addresses by APS President John Doyle and Past President Young-Kee Kim. It continued with a keynote address on the connections between a growth mindset and volunteering (note that all members of the Executive Committee of the Far West Section are volunteers, as are all members of the leadership of all units of the APS). Next came a panel discussion on the importance of APS as part of the global physics community, led by APS CEO Jonathan Bagger, Chief External Affairs Officer Francis Slakey, and Paul Cadden-Zimansky of Bard College, the Global Coordinator for the UN's International Year of Quantum Science and Technology. The remainder of the meeting consisted of breakout sessions led by APS leaders on a range of issues of concern to the Society. The full program can be found at <https://www.aps.org/events/2025/annual-leadership-meeting>.

Report from the 2025 Annual Meeting

Anna Kinderman, FWS Student Representative, UC Santa Cruz



We had a fantastic time in Santa Cruz for the 2025 APS Far West Section Meeting (October 10–12)! Thanks to dedicated advertising through SPS chapters across California, Nevada, and Hawaii, direct department outreach to students, and plenty of word of mouth, we had 210 registered participants, 180 of which were students. Students and researchers in the Far West Section are busy, and it showed! We also had robust

participation from undergraduate and graduate students. The FWS provided a housing subsidy to 70 undergraduate students for the duration of the conference. There were a total of 176 posters and talks.

The conference was hosted on the UC Santa Cruz campus at Stevenson College, just above the East Field with sweeping views of Monterey Bay. The setting couldn't have been better.

The meeting kicked off with a Friday (Oct 10) early evening pre-conference career workshop and panel, attended by undergraduate and graduate students from both the APS conference and UCSC. Midhat Farooq (APS) and Betsy Tanenbaum (University of Oregon) opened the evening with APS Career Mentors, followed by an engaging panel featuring speakers from industry, national labs, and philanthropy: Claudio Emma (SLAC National Accelerator Laboratory), Veronika Kruse (LLNL), Amalia Fernandez (Gordon & Betty Moore Foundation), and Sophy Shin (IBM). The conversation flowed seamlessly into a lively pizza social and was a perfect start to the days ahead. With attendance approaching 100 students, this marked the largest turnout we've ever had for an APS Far West Section student-focused pre-conference event.



Participants at the 2025 FWS APS Annual Meeting Career Workshop.

After a welcome from APS Far West Section Executive Committee Chair David Lederman, the conference officially began the following morning with a dynamic opening plenary from Stefano Profumo (UC Santa Cruz), titled *"The Search for the Cosmic Dark Matter: Where Do We Stand?"* After more coffee—the true elixir of most physicists—Claudia Ojeda-Aristizabal (California State University, Long Beach) delivered the second plenary, *"The Life of Electrons in Quantum*

Materials: Navigating Conflicting Effects and Forming New Phases of Matter.” Lunch followed at the Cowell/Stevenson Dining Hall, once again with beautiful views of the East Lower Field, before the first afternoon sessions began in Condensed Matter/Materials Science, High-Energy/Accelerator Physics, Astrophysics, and Physics Education.

We were lucky to have gorgeous sunny weather, which allowed us to host open-air poster sessions for Astrophysics, AMO, High-Energy/Accelerator, and Nuclear Physics. Lively discussions filled the courtyard, and many faculty remarked that the quality of posters exceeded expectations. After yet another coffee break, attendees dove back into sessions on Condensed Matter/Materials Science, Atomic, Molecular, and Optical Physics, Gravitation, and Nuclear Physics. Dinner featured a delicious feast catered by UC Santa Cruz Event Services, followed by an evening stand-up set from science comedian Brian Malow. His performance smoothly transitioned from science communication tips to silly stories and classic one-liners. While a room full of physicists is a tough crowd, the committee confidently called it a success—and a fun way to conclude the first full day.

Sunday morning began bright and early with our third plenary speaker, Shiva Abbaszadeh (UC Santa Cruz), who presented *“From Fundamental Physics to Next-Generation Medical Imaging,”* highlighting exciting connections between medical physics and the emerging era of quantum technologies. The final plenary—an absolute show-stopper—came from Stamatis Vokos (Cal Poly San Luis Obispo) with *“Using Physics Education Research to Understand and Improve the Learning Experience of All Students.”* The talk sparked an engaging Q&A on the future of physics education in the age of AI and fueled many follow-up conversations over the next coffee break. Across the board, our plenary speakers blew us away with novel, creative, and forward-looking ideas.

Energized by the plenaries, students, researchers, and faculty gathered in the courtyard outside the Stevenson Event Center for the final poster session, featuring Condensed Matter, Materials Science, Education, Gravitation, Plasma, Nuclear, Climate Science, and Other Physics. The diversity and quality of work once again exceeded expectations from undergraduates, graduate students, and industry participants alike. After lunch provided by the conference, the meeting wrapped up with the final set of chaired oral sessions in Condensed Matter/Materials Science, High-Energy/Accelerator Physics, Astrophysics, and Biological/Fluids/Other Physics.

To close out the weekend, we hosted a 35-minute post-conference hike along the Spring Box Trailhead with graduate students, undergraduates, and postdocs, an energizing and uniquely Santa Cruz way to end a truly memorable meeting.

Awards were given to the best presentations by graduate, undergraduate, and high school students. See below for the list of awardees.

2025 APS FWS Student Prize Awardees

Kennedy Reed Award for Best Theoretical Research by a Graduate Student

Colin J. DuHamel (California Polytechnic State University, San Luis Obispo)

Margaret Burbidge Award for Best Experimental Research by a Graduate Student

Jens Berdahl (U.S. Naval Postgraduate School)

Steven Chu Award for Best Research by an Undergraduate Student

1st place: Samuel Degen (University of California, Los Angeles)

2nd place: Mowen Zhao (University of Southern California)

3rd place: Daniel Criss (University of Hawaii, Manoa) and Louis Buchalter (California Polytechnic State University, San Luis Obispo)

Helen Quinn Award for Education or Undergraduate Research Theory

1st place: Lila Fowler (University of California, San Diego) and Aarna Garg (University of California, Santa Cruz)

2nd place: Aidan Shim (University of California, Santa Barbara)

Honorable Mention for an Excellent Presentation by a High School Student

Rafaello Banin (Piedmont High School) and Ece Yurtseven (American Robert College of Istanbul)

SPS Poster Prize

Graduate:

Noe Gonzales (Stanford University)

Eric Corona-Oceguera (California State University Long Beach)

Alexander Goytia Fajardo (California State University Long Beach)

Zachary Coustier (San Jose State University)

Undergraduate:

Arian Moghni (University of California, Santa Cruz)

Sean Mansour (University of California, San Diego)

Mary Katherine Becker (San Diego State University)

Ishan M. Joshi (University of Pennsylvania)

You can find this list as well as all previous winners on our webpage under the ‘Honors’ section, <https://engage.aps.org/fws/honors/prizes-awards>



Announcement of the 2026 Meeting

Matt Beekman, FWS Member-at-Large, Cal Poly, San Luis Obispo

We are pleased to announce the 2026 Annual Meeting of the Far West Section will be held on the Cal Poly campus in San Luis Obispo, CA, hosted by the Department of Physics in the Bailey College of Science and Mathematics. The exact date is to be determined, but will likely be held in late October or early November.

Cal Poly sits on the traditional lands of the yak tit^{yu} tit^{yu} yak tiłhini Northern Chumash Tribe of San Luis Obispo County and Region. The yak tit^{yu} tit^{yu} yak tiłhini have a documented presence in this area for over 10,000 years. The tiłhini peoples have stewarded their ancestral and unceded homelands which include all of the cities, communities, federal and state open spaces within the San Luis Obispo County region. These homelands extend East into the Carrizo Plains toward Kern County, South to the Santa Maria River, North to Ragged Point, and West beyond the ocean’s shoreline in an unbroken chain of lineage, kinship, and culture.

Like meetings past, the 2026 FWS Annual Meeting will feature plenary talks, several parallel sessions with contributed talks by FWS members, a poster session, an after-dinner speaker, and ample opportunities to mingle and network with colleagues and friends. Those who have attended in the past know the FWS Annual Meeting is a great forum for students to present their research. In addition to several student awards, limited travel support will also be available to student presenters. The meeting will take place over a weekend (Friday evening to Sunday afternoon) in the October-November timeframe; exact dates and a conference website with more details will be forthcoming soon.

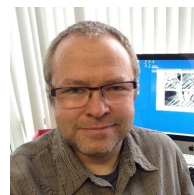


Much has changed on our campus since the FWS meeting was last held here in 2012, and we are very excited to host this year’s meeting. More information about the Cal Poly, San Luis Obispo Department of Physics can be found on the departmental webpage:

<https://physics.calpoly.edu/>. We look forward to welcoming our colleagues from California, Nevada, and Hawaii to the beautiful Central Coast!

Results of 2025 FWS Executive Committee Elections

Hendrik Ohldag, FWS Secretary/Treasurer, Lawrence Berkeley National Lab



At the end of 2025, we invited you to elect new officers to the executive committee. After the very successful meeting in Santa Cruz we had an unusually large turnout of candidates willing to join the committee. Altogether eleven section members indicated their interest to fill the positions of student and general members or to become a vice chair, which led to a very competitive election process. In the following we list the four individuals that won the elections for open positions. Please join me in congratulating them! I am sure you will have a chance to meet them in person in San Luis Obispo later this year.

Vice Chair (2026-2029): Mihai Raul Gherase, *California State University Fresno*

Member at Large (2026-2028): Veronika K. Kruse, *Lawrence Livermore National Lab*
Chris Regan, *UC Los Angeles*

Student Member (2026-2027): Ashley Lynn Robinson, *California State University Fullerton*

I would also like to thank Jianming Ban (*University of California Irvine*), Anuj Kumar (*University of California Davis*), Ryan Baumbach (*University of California Santa Cruz*), Tom Linker (*SLAC National Accelerator Center*), Luis A. Jáuregui (*University of California Irvine*), Jonathan Rodriguez (*Cal State University Stanislaus*) and Pengyu Li (*Southern University of Science and Technology*) for their willingness to run for a section officer position. Even though it did not work out for you this year, we are hoping that you will be available to support the section as a volunteer in the future.