A publication of The Forum on Outreach and Engaging the Public - A forum of the American Physical Society

Vol. 10 No. 2 September 2025

PHYSICS OUTREACH & ENGAGEMENT

Letter from the Chair

Hello FOEP Membership:

Supporting public engagement in physics has rarely been so important. We face interrelated challenges: general mistrust of expertise; austerity in science funding; a broad turn against inclusivity; overemphasizing "hard" science and neglecting community orientation. Our Forum provides APS members a small but connected platform for pushing against these trends.

Still, many physicists don't leverage our network. I think that's because the structure of APS is confusing to most of us. If you're unsure what FOEP is for, let me summarize: As a Forum, we are led by rotating, APS-member volunteers, focused on providing funds, recognition, and established best practices for physicists doing outreach and public engagement (PE). Our goal is to help you broaden your impact with money or our network. In tandem, we grant the highest honors in APS for PE excellence, the Nicholson Medal and yearly APS Fellowships, spotlighting the value of this critical work.

To maintain our community, we keep a consistent institutional presence at annual APS meetings. At the 2025 Global Physics Summit we co-sponsored Squishy Science Sunday and LabEscape, as well as organizing contributed and invited sessions. In next year's GPS in Denver, we will build on this structure with a dedicated contributed session for PE by undergraduate and graduate students in particular. We're incentivizing participation with an expanded student travel grant, raised to up to $1,000 per award to accommodate increasing meeting costs. We hope you'll keep an eye out for

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JOIN US

To join FOEP at no cost prior to renewing your APS membership, send an email to membership@aps.org with your request to add FOEP to your membership. Please note that if you currently belong to two or more forums, FOEP will be added at no charge for the remainder of your membership term. On your next membership renewal notice, you will see a Forum subtotal that will include $10 for every Forum membership over two.

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this dedicated session in the upcoming March program!

We also provide funding for members' PE projects, especially those evidence-based best practices, e.g., forming sustained relationships versus one-time events, or by explicitly targeting audiences who are otherwise left out of physics. Currently, of course, many such projects are in danger due to federal cuts to workforce development and DEI programs. Though our budget through APS is marginal against these losses, we are exploring awarding multiple rounds of mini-grant awards in 2026, or otherwise formalizing our process of allocating ad hoc funds. Expect more news to come in this vein, and please reach out to us with your feedback! For now, our typical mini-grant awards are open and accepting proposals until January.

On a larger scale, we advocate for deeper connections between physicists and humanity. That means pushing for a fundamental change to the culture of physics, where research prioritizes connections with the community and multidirectional conversations are the norm. Therefore we complement our "ground-level" initiatives with birds-eye strategy, collaborating closely with APS PE Staff and the Committee for Public Engagement (CPE) to imagine new frameworks and incentive structures for physicists and their institutions. This is a long-term conversation, evolving organically alongside other cultural shifts within physics, and I'm energized by what these groups bring to the table.

I spell all of this out for you to help you get connected. How can FOEP support you? What do you need from us to build a program? To connect with your local community or with physicists in other silos? To envision new paradigms for public engagement with physics? All are welcome to participate in these conversations.

Personally, I've gained so much from growing into a leadership role in FOEP. I'm grateful to the whole Executive Committee, and especially recognize this year's outgoing leadership: Taviare Hawkins, Darsan Swaroop Bellie, and Tatiana Erukhimova. I look forward to all that FOEP has ahead of it!

All the best,
Frances Kraus
2025 FOEP Chair

Frances Kraus
Princeton Plasma Physics Laboratory

Letter from the Chair, continued

Spotlight on Outreach and Engaging the Public with Oak Nelson

This issue, we are spotlighting Oak Nelson, an associate research scientist with Columbia University. He and other colleagues have spent the past few years working on Fusion Energy Week.

Can you introduce yourself to our readers?

I'm Oak, an associate research scientist with Columbia University. I've been working with Arturo Dominguez (PPPL) and Steffi Diem (UW-Madison) for a couple of years now to put together Fusion Energy Week. The goal is to have a group-based, grassroots set of events celebrating fusion energy, taking place across the nation and globe, hosted by various individual volunteers. We want to make fusion accessible beyond the scientific community.

How did this idea come about? Who saw a need for this and how did you start?

Steffi, in particular, has been working on public reception related to fusion energy and how we might pave the way for fusion energy to be a really accessible and broadly implemented energy source. Focus groups we've done have shown us that (1) many people don't really know what fusion energy is and (2) it's often difficult to disentangle it from *fission* energy, which comes with political and societal connotations that don't apply to fusion. So there's a real need to start bringing fusion from the private research sphere into the public domain, to enhance community engagement and to give people a stake in the development of this technology.

Beyond that, there's a real need for a growing fusion workforce. There are studies that forecast a need for a growing fusion workforce to bring this energy source to the grid in a way that's sustainable for different communities.

So Fusion Energy Week was born as a grassroots communication idea, started basically in the US as a sort of a small set of events. Every year we get more interest; we've been trying to grow with more dedicated content. This past year, we were able to include a few international events as well. Everything is led by volunteers in the community.

How do you find new people to run events? Do people come to you, or do you go to them?

The hardest part of organizing Fusion Energy Week is exactly that: getting new events and new people involved. The structure we've found works is having a central team. We've been developing sets of resources to help people promote their own events. This includes educational content we can distribute, shared messaging, and artwork for a unified theme. For instance,

Oak Nelson (he/him)

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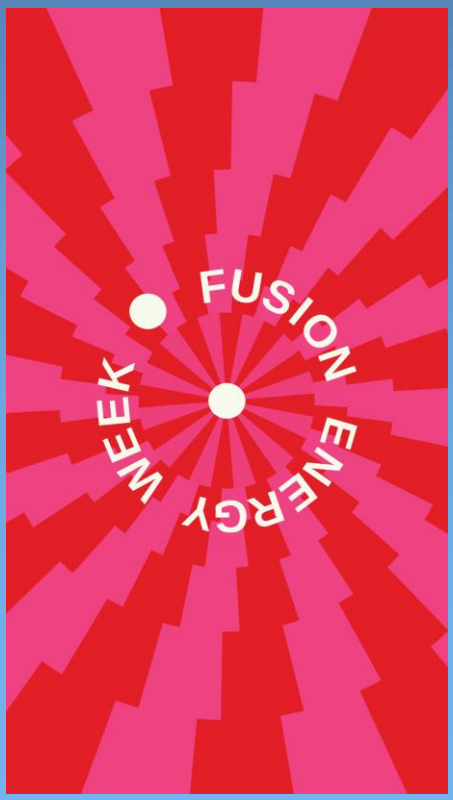
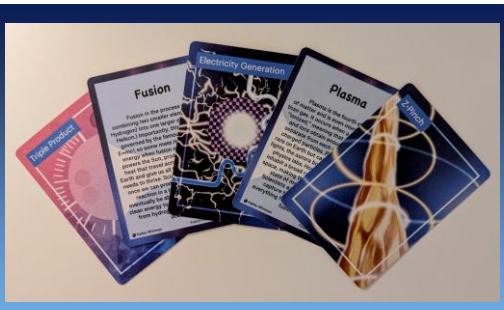


the Fusion Energy Week trading cards, originally funded by a FOEP mini-grant, have now been adopted widely. We have outreach-oriented videos and blurbs to help cater to virtual audiences as well.

As part of organizing, we've created resources to offer to anyone that wants to host an event. These include example events and pictures of past events to help inspire ideas. We've had creative examples like painting fusion-themed art, where students host paint sessions about fusion energy, or events at bars and student clubs. These aren't scientific lectures—we encourage things that aren't strictly academic.

So, we first build a set of resources and ideas, and then we reach out to our networks. The majority of hosts right now are enthusiastic scientists within the community, but that comes with limitations. For example, it's difficult to host in places like Alaska or Costa Rica if we don't have local connections. The next step is finding ways to bring in communities not already directly involved in fusion. That's tricky, but we've had a couple successes, like connecting through journalism or with several private companies that have started hosting events too.



Fusion energy trading cards funded by FOEP and available for purchase here.

Fusion Energy Week has a website: fusionenergyweek.org. On the site, there's a "Submit an Event" form, so anyone interested can sign up. You just go to the site, submit a template for your event. It doesn't have to be fully fleshed out— even a simple idea is fine. That connects your event with us. Together we can brainstorm ideas that best fit your availability and community. Then we can also connect you with resources we've developed to make it happen. All of these are hosted on our website, and we try to package everything in a flexible way.

Do specific events target students for workforce development or the general public? The audience seems open-ended.

Yeah, I think so. Certainly there isn't an "initial target audience" for Fusion Energy Week. Everyone is supposed to be included. This comes through both from the people organizing, who have different ideas and audiences they want to reach, and the types of events hosted.

If you scroll through the Fusion Energy Week website, you'll see a wide range of events: professional-style lectures, a national lab trivia night, local bar events, student-led sessions on campuses, even finals-week painting nights or relaxation time tied to fusion themes. Sometimes it's as simple as sitting at a table in the library with donuts and talking about what fusion is. Events don't need to be complicated. Some are large, others are small and easy to run. Because there's so much depth and variety, we've been able to reach different groups in different places.

That's a strength. Now you've finished your second year doing this and are planning for the third in May 2026. Are there lessons you've learned that might be adaptable to other fields, especially those facing similar public engagement challenges?

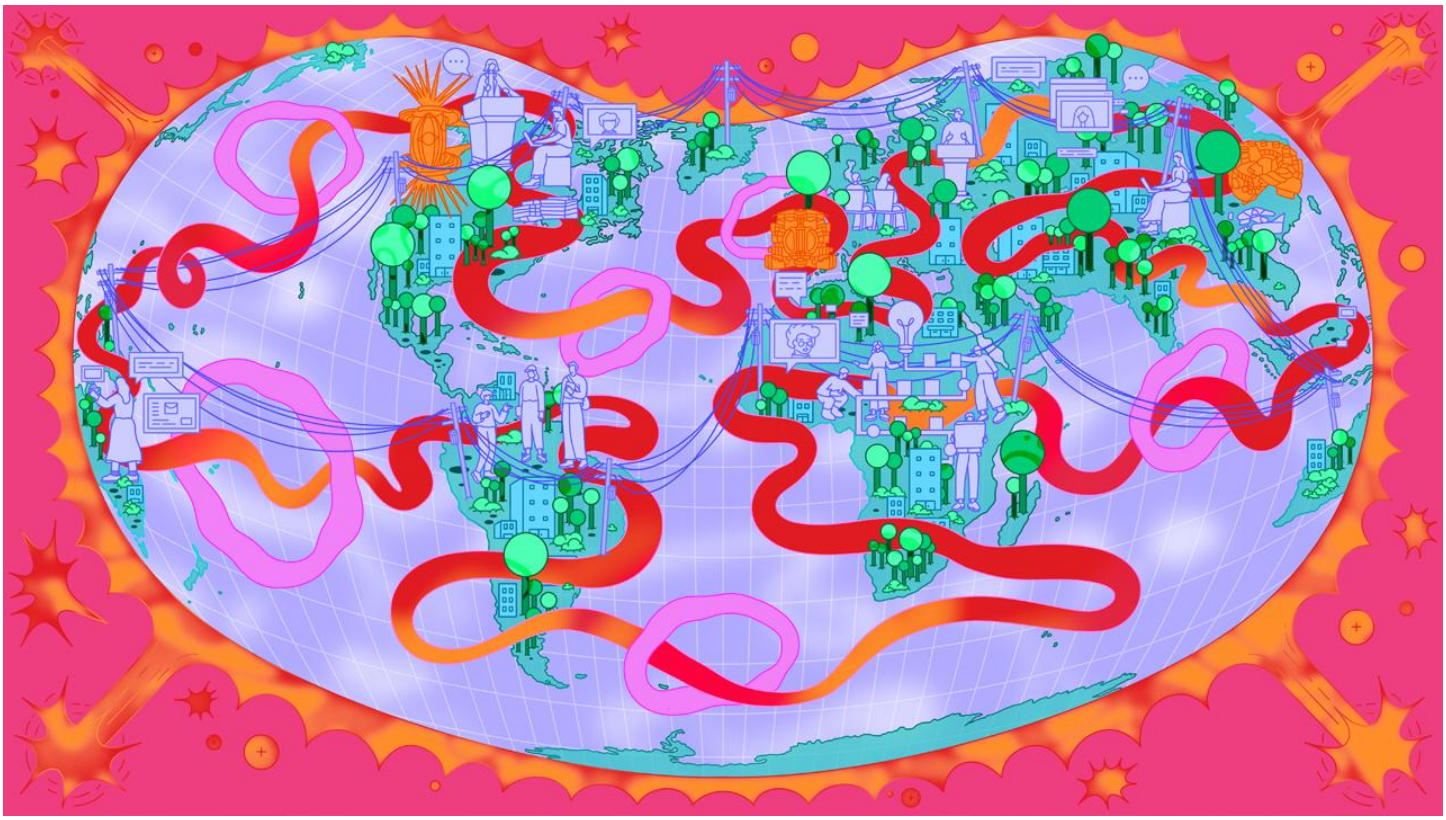
For one, the initial group you lean on is busy scientists who don't have a lot of time for public outreach. That's why creating resources has been so important—to enable scientists and interested people to host events even if they don't have much bandwidth. The event planning toolkit we developed is useful here. It includes resources with examples of what events could look like, from small gatherings to large panels. The decentralized nature of this approach has really helped us grow faster and reach more places than we otherwise could.

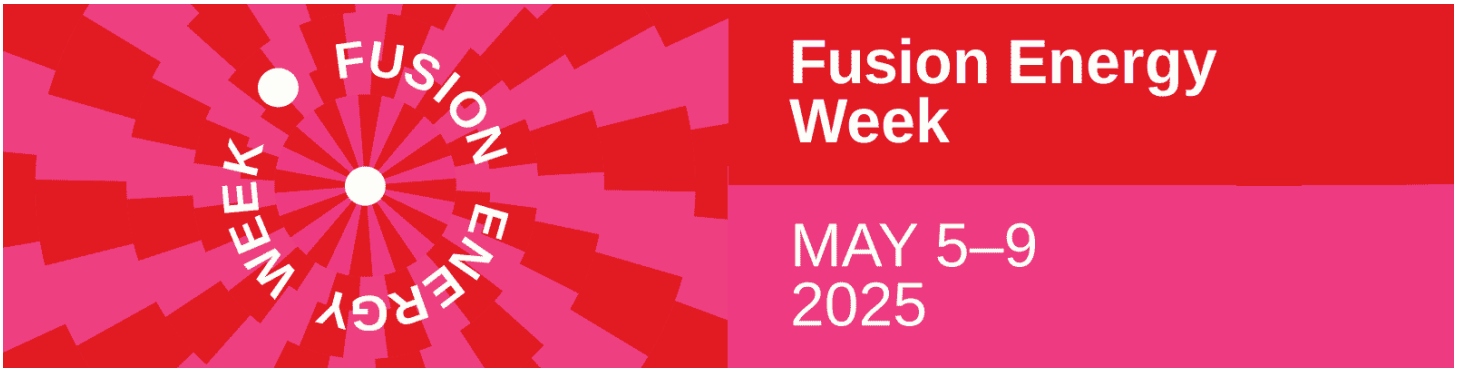
Another big lesson is that many people abroad assumed that Fusion Energy Week was only happening in the US; they didn't realize they could get involved. Now we emphasize clearer messaging that Fusion Energy Week is international. The goal is to not get bogged down in one region.

Anything else about the upcoming events, or where people should find more information?

We'd love to see more people outside of fusion hosting events like this and collaborating. Even if you're not a fusion scientist, you can still have an impact. For example, we have a set of trivia questions that anyone could provide to a local trivia night. Events don't have to be exclusive to the fusion community.

Check out the website for more information, and stay tuned for lots of events in May 2026!





Fusion Energy Week
Event Resource Kit

Resources and tips to help plan your own Fusion Energy Week event

May 5–9, 2025

Illustration by Thume Phan for U.S. Fusion Outreach

Examples of Events

Showcase Lab Tour

Fusion Energy Demo Day

Fusion for the Future —Youth Innovation Challenge

Virtual "Ask a Fusion Expert" Webinar

Community Science Night —Plasma Physics in Action

Art Meets Fusion —Interactive Exhibit

Fusion Energy Networking Mixer

Fusion & Sustainability Workshop

Fusion Film Night & Panel Discussion

Fusion Trivia Night

Fusion Energy Week

Fusion Energy Week is a series of events May 5–9th when we will come together with our communities to celebrate the energy solution of tomorrow. Events are hosted by volunteers all around the world—we hope you will consider hosting one of your own!

Promote Your Event

1. **Submit Your Event:** Submit your event using the online event submission form.
2. **Promote Your Event:** Consider promoting the event by notifying the local media and community groups, posting flyers, posting about it on social media, etc. Visual assets and templates are available on our Fusion Energy Week Downloads Page.
3. **Use Hashtags:** Be a part of the Fusion Energy Week online conversation by using #FusionEnergyWeek on all social media platforms.

Tool Kit for Events

Visual assets, educational materials, and Google Docs Templates are available at the Fusion Energy Week Downloads Page.

For more info visit the following sites:

Fusion Energy Week

Event Resources Kit

Promotional Downloads

Event Submission Form

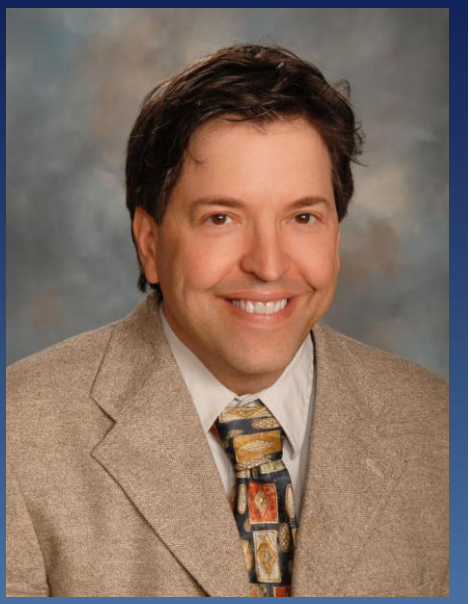
Science Transports Us Beyond the Mundane to a Place of Imagination and Hope

Contributed by Paul Halpern, FOEP Member-at-Large

As a child, one of my favorite activities was venturing to the local science museum, the Franklin Institute. It offered a welcome escape from the mundane duties and concerns of ordinary life. Beyond its columned façade was a wondrous place, full of fantastic push-button displays, the goal for which seemed to be activating as many flashing panels as quickly as possible. Sparks would fly, wheels would whirl, and automata would come to life. All this was enormously exciting—a lesson that there was more to life than just eating, sleeping, and navigating the nuances of schoolyard banter. The astronomy exhibits, in particular, helped put ephemeral concerns in perspective. To my great relief, I came to realize that my low marks in handwriting would one day be forgotten—all records erased—when the Sun became a red giant and decimated Earth.

Though many years have passed, I have yet to outgrow my childhood wonder. Science has advanced at an incredible pace. It is miraculous to think that denizens of our tiny planet have the ability to map out conditions from the earliest stages of the universe, chart the velocities of enormously distant galaxies, and predict the behavior of astronomical objects thousands of millions of years hence. Progress in charting inner space has advanced just as spectacularly as that of outer space. Less than a century and a half since Darwin's bold proposal, our knowledge of genetics, proteomics, and related fields has grown at a staggering pace.

Even those uninterested in the details of scientific progress can appreciate the prospects it has brought for an improved quality of life. Innovations in biology, chemistry, and other fields have offered effective treatments for once-deadly diseases, artificial materials that improve upon nature, methods for collecting and utilizing renewable forms of energy, and tools for environmental improvement. These require an ethical use of science and accountability to the general public. As the 21st century progresses, science education will be the key to fantastic new discoveries harnessed for the benefit of all.



Paul Halpern

Saint Joseph's University

Website: https://www.nasw.org/users/Halpern/index.html

Bluesky: @phalpern.bsky.social

Wiki Course Feedback

For the past several years, FOEP has been sponsoring seats in the APS Wiki Scientist course. Participants in this summertime series learn how to add scientific content to Wikipedia in a way that broadens accessibility to the wider world.

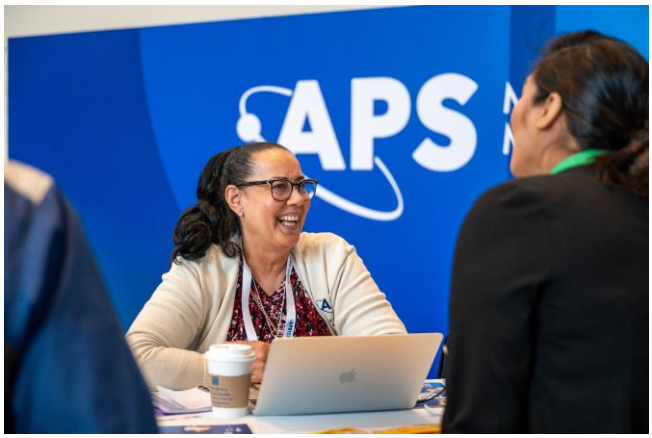
Here's what this year's participants had to say about the program:

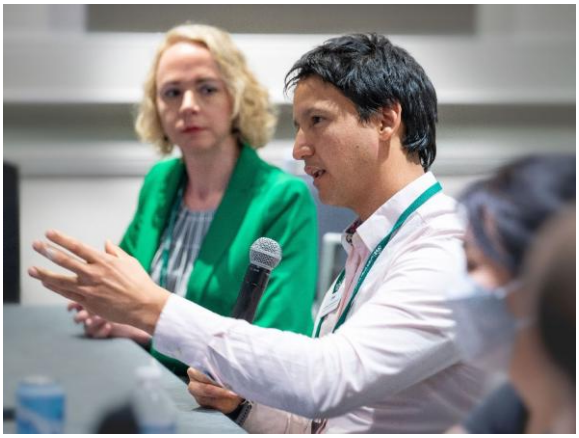
> Through this experience, I learned how to translate complex quantum concepts into clear, neutral, and well-referenced content. The course enhanced my science communication skills and inspired me to continue sharing knowledge at the interface of quantum physics and public understanding of science.
>
> Adiba Adiba, grad student at Aligarh Muslim University in India

> Participating in the APS Wiki Scientists Course was a valuable experience that highlighted the importance of ensuring accuracy and accessibility in STEM communication. I worked on improving the Quantum memristor and Quantum information science articles, learning how to identify and fill knowledge gaps on Wikipedia, the necessity of citing reliable sources, and the value of collaborating with fellow contributors. I especially appreciated the cohort-style structure, which fostered a sense of community while still allowing flexibility for independent learning. The expert guidance provided throughout the course was also instrumental in building confidence and sharpening my skills as a science communicator.
>
> Harshit Agarwal, undergrad at Missouri University of Science and Technology

> The APS Wiki Scientist Course is a great experience if you want to understand what is happening 'under the hood' at Wikipedia. Apart from the practical skills (editing an article, or creating one from scratch), you get to know about the whole Wikipedia community and projects (which are much more from an online encyclopedia), and the inner workings of a huge, open-source project. I'm hoping to use the skills I learned in my own science communication efforts, but also as educational activities for physics students!
>
> Marios Kalomenopoulos, postdoc at University of Nevada, Las Vegas

The 2026 Wiki Scientist course has not been finalized, but you can stay in touch with the program by signing up for their mailing list: https://info.aps.org/l/640833/2023-05-05/2plvw3





FOEP Travel Grants

The American Physical Society (APS) Forum on Outreach and Engaging the Public, or FOEP, recognizes that graduate students are some of our best science communicators. To best support graduate students in their science communication endeavors, the FOEP travel award will provide up to $1000 in travel assistance to attend the APS Global Physics Summit.

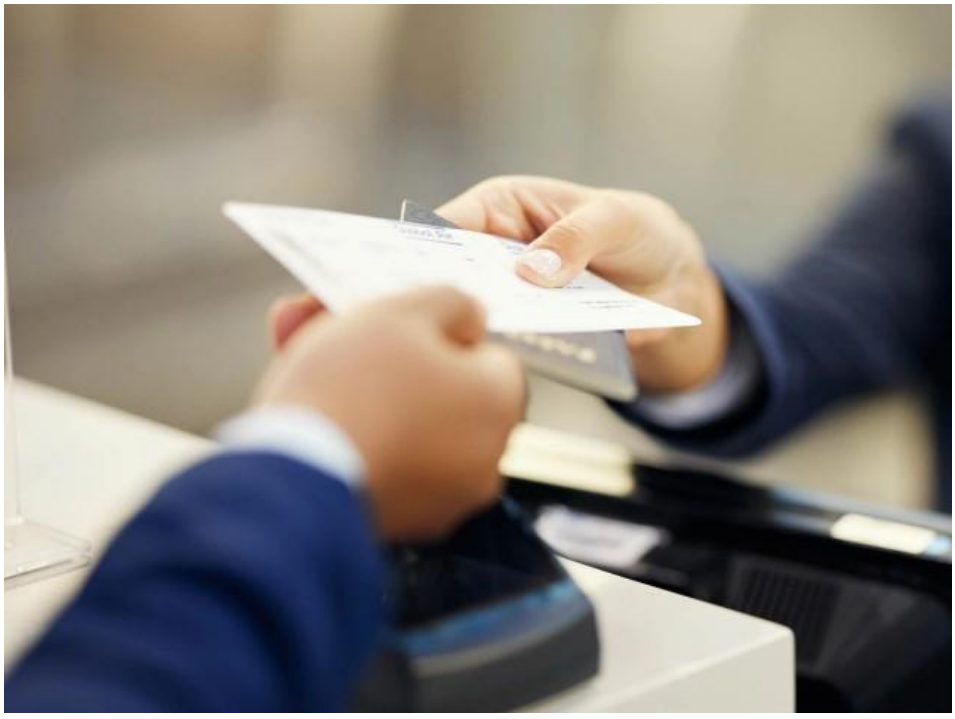
Any student who will be presenting at the APS meeting on topics related to FOEP's goal or students who are actively partaking in a physics public engagement event during the meeting are eligible for the travel grant. FOEP's goal is to increase the public's awareness of physics. Examples of public engagement and outreach efforts include: blogging, multimedia, video, pop culture, popularizations, press relations, politics, "amateur" and distributed science, science cafes, and public shows and lectures.

Any graduate student who will be presenting an abstract directly related to outreach or the engagement of the public, or who is actively partaking in a physics public engagement event during the meeting, is welcome to apply for the FOEP travel grant.

Preference will be given to those contributing a presentation on public engagement.

Applications for the FOEP travel grant are now open and will close on January 4, 2026 at 11:59 PM ET. Applicants will be notified of their status by the second week of February 2026.

Apply on the APS Awards platform.



FOEP Mini-Grants

The Forum on Outreach & Engaging the Public of the American Physical Society (APS) supports APS members who broaden and deepen physics awareness and understanding. To this end, we invite applications for 2026 APS Forum on Outreach & Engaging the Public Mini-Grants.

The FOEP mini-grants are designed for individuals or groups who are working on projects and/or resources to bring physics awareness and engagement to their communities. We request that if funded you share your project, your experiences, and the outcomes through a live or virtual presentation with the forum (at APS Global Physics Summit in the forum's contributed session) or by submitting a virtual presentation that can be shared with the forum. The mini-grants have a maximum award amount of $2,500 and a total funding available of about $15,000. All proposals will be considered. Extra consideration will be given to those projects which seek to support students/groups that are traditionally marginalized in physics.

Selection criteria for the mini-grants include the following:

• **Membership in APS Forum on Outreach and Engaging the Public (FOEP).** Applicants should be members of the FOEP by the application deadline. APS members can join the Forum at no additional cost. For students (undergraduate and graduate), the first year of APS membership is free. If you are already an APS member, you can join the Forum on Outreach and Engaging the Public for free here.
• **Broader impact**. For projects, applicants should demonstrate how this support will impact the community. Extra consideration will be given to those projects which seek to support students/groups that are traditionally marginalized in physics. Applicants should describe the immediate effects these funds could provide.
• **Additional considerations**. Extra consideration will be given to applicants who may not have access to other types of support. These include, but are not limited to: undergraduate students, graduate students, post-docs, adjunct faculty, and instructors at academic institutions. In addition, we strongly encourage under-represented identities to apply. FOEP mini-grants will be funded by disbursing funds to the individual creating the application, not to institutions. Please make sure you consider this in your budgetary decisions.

To apply for a FOEP mini-grant, you will be required to submit a completed application. The application includes items such as:

1. Budget and corresponding justification of the budget.
2. What will this mini-grant enable you to do, and on what timescale? (Timeliness criterion).
3. What is the larger impact of your work or project? (Broader impact criterion).
4. What else would you like the selection committee to know about your project? (Additional consideration criterion)

The name, title, and affiliation of project awardees will be published on the FOEP website.

The application for the 2026 Mini-Grant Cycle is not yet available. We anticipate the application going live in early December 2026. Please check your email and the FOEP APS Engage website at that time for more information.

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PHYSICS OUTREACH & ENGAGEMENT

Executive Committee

FOEP Membership – Join Today

To join FOEP at no cost prior to renewing your APS membership, you can get your ID badge scanned at a meeting, send an email to membership@aps.org with your request to add FOEP to your membership, or send a letter requesting membership to APS membership department.