2020 Physics REU Workshop Summary
November 12-14, Virtual
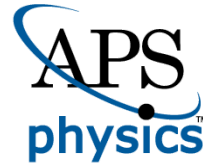
Summary content:
- **Pre-workshop Surveys**
- **Session 1 - Potential REU Sites: Intro to the NPRLG and Discussion**
- **Session 2 - Lightning Intros**
- **Session 3 - Recruiting and Supporting for Diversity**
- **Session 4 - Common Assessment**
- **Session 5 - Planning for 2021 (+ end-of-workshop survey)**
- **List of Attendees**

Pre-workshop surveys

A survey was sent ahead of the event to determine attendee interest in the workshop themes. Below are common themes seen in the responses.

Support and Recruitment for Diversity
- What are strategies with evidence of having worked in the past?
- We should think outside the box beyond usual recruitment strategies; many of them don't work
- What activities should the PI undertake to both gain applicants, and once they receive an offer, what are strategies to convince them to choose your program?
- How to prepare minoritized students to continue in the field and be successful?
- What are strategies to ensure an offer is accepted?

Common Assessment
- Do we have a goal? We should define our common assessment goals.
- What are the logistics of common assessment?
- How can we best use common assessment results to improve programs?

Planning for 2021
- Improving on the 2020 virtual professional development efforts
- How to deal with COVID-19 in REUs?

Supporting potential REU sites

<u>Barriers to starting an REU program</u>
- What events or tools exist to learn from existing programs?
- Sites at locations with higher costs: How to budget compared to sites in other areas?
- How to budget for time commitment needed to run a program?
- What do reviewers look for in a proposal?
- How to obtain internal support from their institution (e.g.: to help with total program budget like housing)?
- How to develop collaborations with nearby institutions (e.g. to increase mentor pool)?
- How to get support from faculty mentors to participate in summer activities?

<u>Useful support</u>
- Strategies and support for recruiting students and tracking afterwards
- What are common flaws in proposals that lead to "not funded" decisions?
- Learn about collaborations between small undergrad programs and larger institutions."
- Proposal examples and/or templates
- Being able to support faculty and student mentor salaries

<u>Questions for existing REU sites</u>
- Which sites have been successful in recruiting and supporting minority students? How have they achieved it?
- How do you recruit students? Review applications? Assess the program?
- How did you adapt to COVID-19?
- How many faculty mentors are needed for a program to work?
- What would you have done differently if you could start over?
- What is a good balance between research and enriching activities?

<u>Questions for NSF</u>
- What's the timeline between proposal submission and decision?
- Does program research focus (diverse versus niche) affect how they're viewed?
- What are common budget costs of program evaluation?
- What flexibility exists in case COVID-19 affects plans?

Session 1 - Potential REU Sites: Intro to the NPRLG and Discussion

Facilitator: Daniel Serrano
[Session recording](#) | [Session slides](#)

This session introduced organizations interested in starting an REU site to the NPRLG, its past and current efforts, and its resources. See [recording](#) and [slides](#).

Then, there was discussion to identify the support needs of potential REU sites, how NPRLG can become a community inclusive to non-REU sites, and how potential REU site needs could be addressed by NPRLG. The main points from this discussion were:

- How do we recruit in the virtual setting?
- How do you track students long term?
- What makes a successful student? It was mentioned that learning you don't like physics is fine too.
- What does program/student success mean and how is this conveyed to NSF?
- There are so many students that are turned down each year due to a lack of space in REU programs. How many students are being missed because this opportunity is not available to all?
- Would like information about: Professional development, employment opportunities, etc.
- Would like more information about: Mentor training

Session 2 - Lightning Intros

Facilitator: Aaron Geller
[Session recording](#)

This session provided a brief description of NPRLG goals. See [recording](#).

Then, there were breakout room intro sessions where attendees compiled their strengths, needs, and questions. The main points from this discussion were:

- Some sites' strengths are their close relationships with other local institutions
- Interest in discussing how to run remote programs in case COVID-19 affects plans
- Interest in common applications or sharing application information to optimize students reaching their REU programs of interest
- Interest in developing shared online professional development trainings in future years
- Interest in talking about global REU applicant numbers vs. available slots. Are we not providing enough opportunities?
- How does geographic location affect recruitment success, applicant pool, etc.?
- Challenge: Having a small department. How to collaborate with other nearby institutions to help with this?
- How do you track students long term?
- What makes a successful student? It was mentioned that learning you don't like physics is fine too.

- What does program/student success mean and how is this conveyed to NSF?
- There are so many students that are turned down each year due to a lack of space in REU programs. How many students are being missed because this opportunity is not available to all?
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Session 3 - Recruiting and Supporting for Diversity

Panel moderator: Brianna Mount

Panelists: Arlene Knowles, Ramón Lopez, Alex Rudolph

[Session recording](#) | [Knowles slides](#) | [Lopez slides](#)

In this session, panelists gave 15-minute presentations on advice for recruitment and support of students from underrepresented groups.

Arlene Knowles, AIP TEAM UP Project Manager, presented on the TEAM-UP Report and the priorities of African American REU applicants.

Ramón Lopez, Prof. of Physics at U. Texas Arlington and NSHP President, presented on the priorities of REU applicants of Hispanic/Latin American backgrounds.

Alex Rudolph, Prof. of Physics at Cal Poly Pomona, represented the Cal-Bridge program and presented on the priorities of REU applicants from community colleges.

See [recording](#) and slides ([Knowles](#) | [Lopez](#)).

Three common messages were:

1. Underrepresented groups are not uniform. There are commonalities, as well as different interests and needs. These must be identified and understood.
2. Recruitment begins by making programs welcoming and supportive based on (1).
3. Successful recruitment involves developing genuine relationships with students, faculty, and administrators at other institutions.

Resources shared in the chat:

- [Cal-Bridge Summer (CAMPARE)](#) – Research program with focus on community college students
- National Academies - [The Science of Effective Mentoring in STEMM](#) ([Culturally Responsive Mentorship section](#))
- APS [EP3 (Effective Practices for Physics Programs)](#)
- [Emerging Researchers National Conference in STEM](#) – Conference opportunity for students
- [What do students really get out of REU's?](#) - Tenure, She Wrote
- AIP [TEAM UP report](#) - Report on the reasons for the persistent underrepresentation of African Americans in physics and astronomy + recommendations to make change
- AIP [TEAM UP workshops](#)

Session 4 - Common Assessment

Facilitator: Daniel Serrano
Speaker: Janet Branchaw

Serrano slides | Branchaw slides

In this session, Daniel Serrano introduced the history of NPRLG's efforts to identify and implement common assessment tools for program educational goals.

Janet Branchaw, Prof. of Kinesiology at U. Wisconsin-Madison and Director of WISCIENCE, presented Biology REU community common assessment efforts, the CIMER assessment platform, and the ERLA assessment tool. See slides (Serrano | Branchaw).

Then, there was discussion about common assessment questions and needs. The main points from this discussion were:

- ERLA Equity and Inclusion questions are of interest
- Need: Matching multiple mentors to one student when doing mentor/student assessment surveys (CIMER has this feature)
- Need: Including non-REU students in assessment surveys (CIMER has this feature)
- Need: Being able to get rid of some survey questions
- A good strategy for participants to take survey is to dedicate 20 min near end of program for this
- ERLA assessment tool allows for removing entire question sections by topic
- One assessment survey is not enough. In-person interviews, long-term tracking, etc. are important
- Need: Pre-surveys and follow-up surveys in addition to end-of-summer survey
- NSF is working on participant long-term tracking
- Concern: Convincing faculty mentors to take assessment surveys

Session 5 - Planning for 2021

Facilitator: Daniel Serrano

This session summarized the common themes that came up during all previous sessions:

- Recruitment and Support: Building meaningful connections -students, faculty, alumni-
- Recruitment and Support: Improving site-specific practices
- Recruitment and Support: Developing better collaborative practices
- Equitable financial support for participants - Can we have a survey of how sites pay stipends (how much $), housing / board support, travel?
- Including non-REU institutions in the community
- Understanding REU opportunity supply and demand
- Building a culturally sensitive mentor community
- What does participant success mean?
- REU proposal insight, examples, resources

- Common assessment - what specific benefits are there from having professional assessment researchers process the info (as opposed to a bunch of physicists)?
- Common applications
- Common professional development (online)
- COVID planning
- Support for nationwide webinars to benefit students, as APS (Brian) did this past summer. Eg, networking for future positions to further student careers. (Important to get these announced early, before sites have planned their own equivalent events.)

We did a live survey to determine level of interest in these topics (reach out to Daniel if you'd like more legible results):

DISCUSSION - From these topics, choose the three (3) most important ones to you for near-future discussion (regardless of collaborative effort vs. just learning more about it)

26 responses
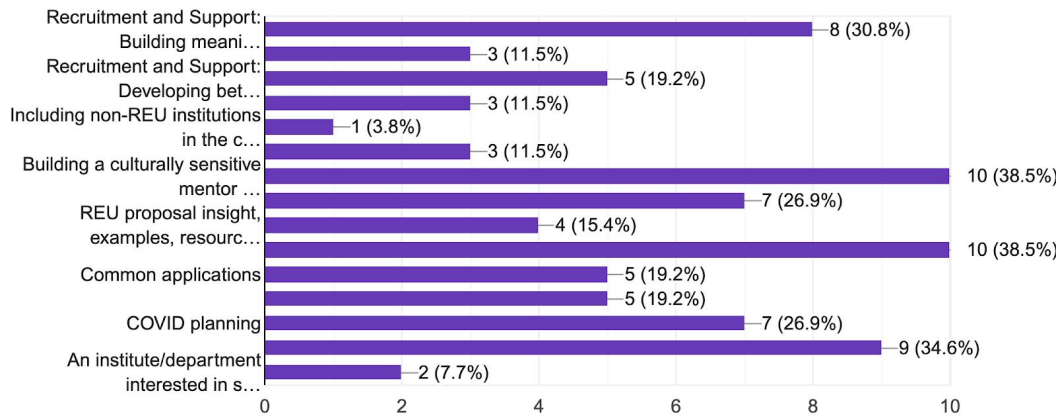
ACTION - From these topics, choose the one (1) most important to you for the community to work towards (i.e. If we were to institute an NPRGL sub...mittee, which topic would be the most important?)
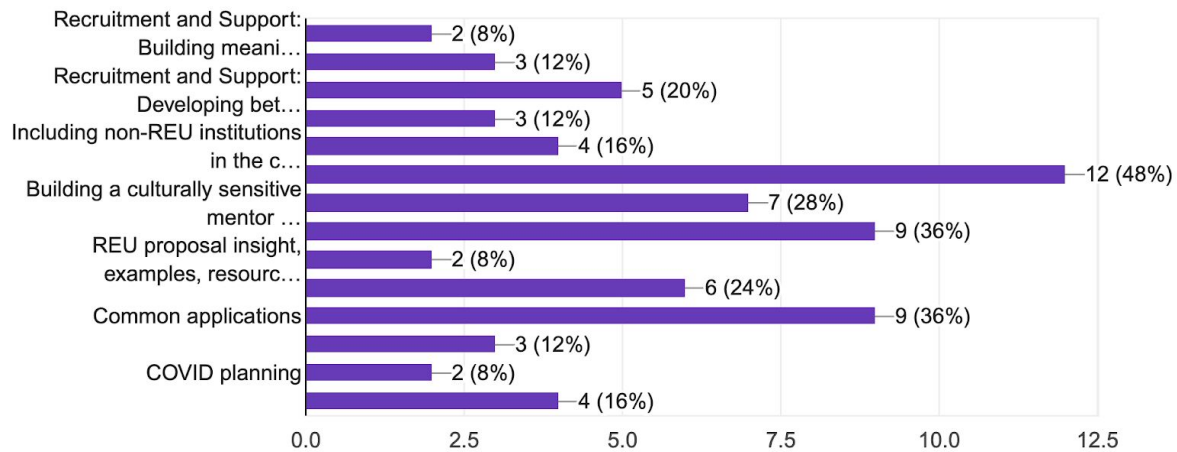
26 responses

LONG-TERM - From these topics, choose 3 that are important but can wait till Fall 2021

25 responses

Topic	Value
Recruitment and Support: Building meani…	2 (8%)
	3 (12%)
Recruitment and Support: Developing bet…	5 (20%)
	3 (12%)
Including non-REU institutions in the c…	4 (16%)
	12 (48%)
Building a culturally sensitive mentor …	7 (28%)
	9 (36%)
REU proposal insight, examples, resourc…	2 (8%)
	6 (24%)
Common applications	9 (36%)
	3 (12%)
COVID planning	2 (8%)
	4 (16%)

Questions that came up:
- Do we have funding for everyone to use CIMER in 2021?
  - Yes, but since CIMER fee is flat, we should as a community discuss if it makes sense to use the funds in 2021 (if too many sites cancel due to COVID-19, it might be best to delay)
- Can we do a webinar for recruitment purposes for 2021? Sites could present slides, students could present about their successes, etc. Could we partner with APS, NSBP, NSHP to advertise?
  - Positive feedback on this
- Are there ways for collaborating with non-REU sites, and how could non-REU sites join in?
  - This wasn't a big part of the discussion so far, but it is important. NPRLG should work on opportunities to make connections, e.g., REU + non-REU sites partner for recruitment or field trips or professional development

List of Attendees

* Indicates an existing REU site

- Mario Affatigato - Coe College*
- Nishant Agarwal - U. Massachusetts Lowell
- Cristian Bahrim - Lamar U.
- Brian Batell - U. of Pittsburgh
- Amlan Biswas - U. of Florida*
- Arie Bodek - U. of Rochester*
- Hacene Boukari - Delaware State U.
- Julia Brazas - U. of Chicago
- John Carini - Indiana U. Bloomington*
- TeYu Chien - U. of Wyoming
- Partha Chowdhury - U. Massachusetts Lowell

- Beth Clark Joseph - Ithaca College
- Geraldine Cochran - Rutgers U.
- Brian Collins - Washington State U.
- Gary Collins - Washington State U.
- Christopher Crawford - U. of Kentucky*
- Alexander Crowell - Duke U.*
- Juliet Crowell - U. of Chicago
- Volkmar Dierolf - Lehigh U.y*
- Lifeng Dong - Hamline U.
- Michael Eads - Northern Illinois U.*
- Harald Edens - New Mexico Tech
- Daniel Fologea - Boise State U.

- Paul Fulda - U. of Florida*
- Ori Ganor - U. of California, Berkeley
- Umesh Garg - U. of Notre Dame*
- Aaron Geller - Northwestern U.*
- Ronald Gilman - Rutgers
- PADMAJA GUGGILLA - AAMU
- Sathya Guruswamy - U. of California, Santa Barbara*
- Humberto Gutierrez - U. of South Florida*
- Phillip Gutierrez - U. of Oklahoma*
- Wick Haxton - UC Berkeley
- Karsten Heeger - Yale U.
- Selman Hershfield - U. of Florida*
- Richard Irving Jr - U. of Toledo*
- Rongying Jin - Louisiana State U.*
- Connie Jones - U. of Rochester*
- William Kaden - U. of Central Florida
- Kishor Kapale - Western Illinois U.
- Georgia Karagiorgi - Columbia U.*
- Rajeswari Kolagani - Towson U.y
- Ralf Kotulla - U. of Wisconsin-Madison*
- Silas Laycock - UMass Lowell
- Cody Leary - The College of Wooster*
- Shelly Lesher - U. of Wisconsin La Crosse/Yale Univ.
- Linghong Li - SUNY Potsdam
- Wei Li - Rice U.
- Amy Liu - Georgetown U.*
- Camillo Mariani - Virginia Tech*
- Mark Masters - Purdue U. Fort Wayne
- Victoria Misenti - Yale U.
- Prabhakar Misra - Howard University*
- Brianna Mount - LZ (BHSU)*
- James Nikkel - Yale University
- Tino Nyawelo - U. of Utah*
- Mark Pederson - U. of Texas at El Paso
- Andrea Pocar - UMass Amherst
- Rafael Ramos - U. of Puerto Rico - Mayaguez
- Willie Rockward - Morgan State U.
- Gray Rybka - U. of Washington*
- Firouzeh Sabri - UoM*
- Richard Schnee - South Dakota Mines
- Daniel Serrano - U. of Maryland College Park*
- Eileen Sheu - U. of Chicago*
- Natalia Sidorovskaia - Louisiana U.
- Marianne Takamiya - U. of Hawaii at Hilo
- Balsa Terzic - Old Dominion U.*
- Shubha Tewari - UMass Amherst
- James Thomas - U. of New Mexico*
- Jingbo Wang - South Dakota School of Mines and Technology
- Alan Weinstein - California Institute of Technology*
- Michael Wood - Canisius College
- Kathryne Woodle - American Physical Society
- Jason Wyenberg - Dordt U.
- Steve Yalisove - U. of Michigan*
- Mike Youngs - Texas A&M U.*
- Rena Zieve - UC Davis*
- Rajendra Zope - U. of Texas at El Paso