Table of Contents

I. Introduction ................................................................................................................................. 1
  Program Overview ....................................................................................................................... 1
  Evaluation Overview .................................................................................................................. 1
II. Workshop Post-Survey Findings ............................................................................................ 2
  Participant Profile ...................................................................................................................... 2
  Participant Satisfaction .............................................................................................................. 2
  Value of Workshop Sessions ...................................................................................................... 4
  Workshop Outcomes ................................................................................................................. 5
  Feedback and Recommendations ............................................................................................... 7
IV. Summary and Recommendations ......................................................................................... 10
  Summary of Findings ............................................................................................................... 10
  Recommendations ................................................................................................................... 10
V. Appendix: Workshop Post-Survey ....................................................................................... 12
I. Introduction

Program Overview
This report summarizes key findings from the evaluation of the 2023 National Science Foundation (NSF) Computer and Information Science and Engineering (CISE) Research Experiences for Undergraduates (REU) Principal Investigator (PI) Workshop. The workshop was organized by a committee of six experienced CISE REU Site PIs who planned the workshop agenda and guided the discussions. The University of Texas at Austin (UT) Texas Advanced Computing Center (TACC) hosted the workshop on April 19-21, 2023 in Austin, Texas with 101 attendees. The workshop was designed to support current, new, and prospective PIs in effectively implementing REU sites and to facilitate discussions on challenges of post-pandemic transitions, industry demands, and broadening participation in computing (BPC).

The 2023 NSF CISE REU PI Workshop had four main goals:
• Provide opportunities for new and existing NSF CISE REU PIs and Co-PIs to share experiences directing undergraduate research programs and offer suggestions for improving all sites,
• Discuss best practices and challenges associated with the administration of an undergraduate research program,
• Provide networking and community-building opportunities for REU PIs, recognizing individual and group dedication to the importance of undergraduate research beyond home institutions, and
• Discuss the transfer of lessons learned from virtual to in-person REUs.

Evaluation Overview
The Expanding Pathways in Computing (EPIC) STEM Evaluation Services at UT TACC designed and conducted an evaluation of the NSF CISE REU PI Workshop to assess the extent to which the workshop met its goals. Using a participatory evaluation approach, EPIC evaluators collaborated with the workshop organizer to customize the evaluation design and methods and received feedback from the workshop planning committee on the survey items (see Appendix for the Workshop Participant Post-Survey).

The quantitative and qualitative evaluation methods included the following:
• Reviews of Documents and Data including prior workshop reports, the workshop facilitation proposal, workshop participant registration data, and workshop materials.
• Observations of the workshop to assess participant engagement and inform recommendations.
• Workshop Post-Survey conducted with participants to evaluate the workshop outcomes, assess CISE REU community needs, and guide future directions.

Evaluators observed the Welcome and Introduction session, the PI Site Introductions session, the four panel sessions, and the Networking and Best Practices Dinner. Observations showed that the sessions were well-attended, and participants appeared engaged and interactive. During the observed sessions, tables were mostly full, and participants seemed attentive (e.g., clapping and laughing when appropriate). At the end of sessions, participants used all the time allocated to ask questions. The session time often ran out before all participants’ questions could be answered, and several people went up to the speakers afterward to talk with them. While there were limited opportunities for participation during the panels, the evaluators observed active, lively discussions between participants during meals and breaks.

The survey findings are summarized in the subsequent report sections. Open-ended survey responses were coded and are reported by themes with representative quotes. Because some responses fell under multiple themes, the sum of the percentages exceeds 100% for some survey items.
II. Workshop Post-Survey Findings

Participant Profile
All 101 participants were asked to complete an online post-survey, including five workshop organizers who are also PIs. Of those individuals, 77 took the post-survey for a response rate of 77%. Most (85%) of the respondents were PIs or Co-PIs, 5% were prospective PIs, 8% were senior personnel, and 3% did not specify their role in their CISE REU site (see Table 1). Almost all (92%) respondents were faculty at their institution, while 6% were staff and one selected Other and specified that they were a PhD student.

Table 1. Participant Role (N=77)

<table>
<thead>
<tr>
<th>Role in CISE REU Site</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI (Principal Investigator)</td>
<td>53</td>
<td>69%</td>
</tr>
<tr>
<td>Co-PI</td>
<td>12</td>
<td>16%</td>
</tr>
<tr>
<td>Senior personnel</td>
<td>6</td>
<td>8%</td>
</tr>
<tr>
<td>Prospective PI</td>
<td>4</td>
<td>5%</td>
</tr>
<tr>
<td>Not specified</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Role at Institution</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Faculty</td>
<td>71</td>
<td>92%</td>
</tr>
<tr>
<td>Staff</td>
<td>5</td>
<td>6%</td>
</tr>
<tr>
<td>PhD student</td>
<td>1</td>
<td>1%</td>
</tr>
</tbody>
</table>

Nearly half (45%) of the respondents had planned and ran a CISE REU site for at least three previous summers, another 16% for two prior summers, and 9% for one summer (see Figure 1). Nearly a quarter (23%) had no prior experience planning or running a site. The remaining 7% of respondents indicated that the question was not applicable to them. Figure 2 shows that less than a fifth (18%) of respondents indicated they had ever participated in an REU program themselves.

Satisfaction
All (100%) of the respondents agreed or strongly agreed that they were satisfied with the workshop overall (see Figure 3). Additionally, all (100%) of the respondents agreed or strongly agreed that the workshop speakers were high quality, the workshop was well-organized, and that they were satisfied with communications about the workshop. Nearly all respondents agreed or strongly agreed the workshop was relevant to their work (98%), well worth their time (97%), and an inclusive experience for all attendees (99%), and that they would recommend the workshop to other CISE REU PIs (99%).
II. Workshop Post-Survey Findings

If you would like to explain any of your responses to the above items, please do so here. (N=8)

When given the opportunity to explain their responses to satisfaction items, the most commonly mentioned topic was the workshop booklet, which received the lowest satisfaction ratings.

- **Workshop booklet** (N=38%): “The program booklet should have been printed and copies made available at the registration,” “The schedule was more useful than the booklet,” and “It would be really, really helpful to include PIs’ email addresses in the program booklet.”

- **Workshop location/scheduling** (N=25%): “Having the workshop in a mall, as well as having the schedule fully packed, was less than ideal” and “It would have been nice to provide room for participants to visit the local area and meet informally for dinner.”

- **Positive comments** (N=25%): “It’s always nice to meet other PIs and learn from them. The organization did a superb job with the workshop, especially since we have not met in person in five years. It was great!!”

- **Speakers** (N=13%): “Some speakers have strong accents and are hard to understand.”

![Figure 3. Participant Satisfaction (N=73)](image)

- I was satisfied with the workshop overall: 32% Strongly Disagree, 68% Disagree, 60% Agree, 68% Strongly Agree
- The workshop was relevant to my work: 38% Strongly Disagree, 62% Disagree, 60% Agree, 40% Strongly Agree
- The workshop was well organized: 21% Strongly Disagree, 79% Disagree, 79% Agree, 79% Strongly Agree
- I was satisfied with the communication about the workshop: 21% Strongly Disagree, 79% Disagree, 79% Agree, 79% Strongly Agree
- I was satisfied with the workshop location and venue accommodations: 33% Strongly Disagree, 64% Disagree, 64% Agree, 64% Strongly Agree
- The workshop was an inclusive experience for all attendees: 29% Strongly Disagree, 70% Disagree, 70% Agree, 70% Strongly Agree
- The speakers were high quality: 36% Strongly Disagree, 64% Disagree, 64% Agree, 64% Strongly Agree
- The workshop booklet was useful: 7% Strongly Disagree, 37% Disagree, 55% Agree, 55% Strongly Agree
- This workshop was well worth my time: 34% Strongly Disagree, 63% Disagree, 63% Agree, 63% Strongly Agree
- I would recommend the workshop to other CISE REU PIs: 29% Strongly Disagree, 70% Disagree, 70% Agree, 70% Strongly Agree

"One of the most worthwhile meetings that I have attended in the last year.
- Principal Investigator

"I wished I would have learned a lot more about how other REUs operate and how people address certain challenges, but the structure of the workshop did not afford the structure to truly get that information out.
- Principal Investigator
**Value of Workshop Sessions**

Respondents were asked to rate the value of each workshop session that they attended. **Figure 4** shows that across the sessions, most (82%-100%) of the respondents rated them as *moderately* or *very valuable*. All or nearly all (98%-100%) of the respondents rated the four panels as *moderately* or *very valuable*, with the panel on writing a competitive renewal receiving the greatest share of *very valuable* ratings (85%).

**Figure 4. Value of Panels and Non-Breakout Sessions**

<table>
<thead>
<tr>
<th>Session</th>
<th>Not at all valuable</th>
<th>Slightly valuable</th>
<th>Moderately valuable</th>
<th>Very valuable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome and Introduction (N=67)</td>
<td>9%</td>
<td>24%</td>
<td>67%</td>
<td></td>
</tr>
<tr>
<td>PI Site Introductions (N=73)</td>
<td>4%</td>
<td>14%</td>
<td>37%</td>
<td>45%</td>
</tr>
<tr>
<td>Networking and Best Practices Dinner (N=72)</td>
<td>14%</td>
<td>26%</td>
<td>56%</td>
<td></td>
</tr>
<tr>
<td>Panel 1: Transferring Lessons Learned (N=72)</td>
<td>26%</td>
<td>56%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panel 2: Evaluation/Reporting/Tracking/Dissemination of Longitudinal REU Outcomes (N=67)</td>
<td>22%</td>
<td>76%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panel 3: Writing a Highly Competitive Renewal (N=65)</td>
<td>14%</td>
<td>85%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panel 4: Broadening Participation in Computing (N=57)</td>
<td>32%</td>
<td>67%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tour of TACC and Networking Meeting (N=31)</td>
<td>23%</td>
<td>71%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For the six breakout sessions, all or nearly all (96%-100%) of the respondents rated them as *moderately* or *very valuable* (see **Figure 5**). The breakouts on **Pre-Planning for REU Sites** and **Meet with Your Program Officer** received the most ratings of *very valuable* (87% and 86% respectively).

**Figure 5. Value of Breakout Sessions**

<table>
<thead>
<tr>
<th>Session</th>
<th>Not at all valuable</th>
<th>Slightly valuable</th>
<th>Moderately valuable</th>
<th>Very valuable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 2: Pre-planning for REU Sites (N=67)</td>
<td>12%</td>
<td>87%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 2: REU Student Success (N=49)</td>
<td>24%</td>
<td>73%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 2: Keeping Things Fresh (N=44)</td>
<td>23%</td>
<td>77%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 3: Meet with Your Program Officer (N=66)</td>
<td>12%</td>
<td>86%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 3: REU Alumni Panel (N=47)</td>
<td>4%</td>
<td>36%</td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>Day 3: Planning/Executing PI Workshops (N=43)</td>
<td>26%</td>
<td>74%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
If you would like to explain any of your responses to the session valuations, please do so here. (N=9)

When given the option to explain their ratings, most of the nine responses were either positive comments and/or about networking and collaboration. A few respondents offered suggestions for improvement or for additional sessions.

- **Positive feedback** (N=56%): “It was a great workshop” and “Thank you for organizing the event. [It was] very informative and helpful!”

- **Networking and collaboration** (N=22%): “More networking opportunities for sites that are in the same geographic area would have been useful to network and collaborate” and “Every conversation - in or outside of a session - was noteworthy and helpful!”

- **Feedback for facilitators** (N=22%): “It would be better to have a more engaging ice breaker” and “[One facilitator] wasn’t particularly responsive to several of us who asked for qualitative evaluation questions as well as the current quantitative ones.”

- **TACC tour** (N=22%): “Did not attend the last session (TACC Networking meeting) due to travel” and “Planning to attend the TACC Data Center, and looking forward to it very much!!!”

- **Data content** (N=11%): “The session on ‘evaluation, reporting, tracking - REU outcomes’ or BPC on Day 3 should have included aggregated data from all REU sites on diversity [and underrepresented minority] participation.”

- **Suggestions for additional sessions** (N=11%): “A matching session where under-represented minority institutions could be invited to connect with REU sites to create partnerships” and “There should have been a session by seasoned REU sites on how they evolve their site over time. Concrete examples would be useful.”

**Outcomes**

All or nearly all respondents agreed or strongly agreed that the workshop provided them with useful knowledge and skills (98%), a better understanding of the NSF’s expectations (97%), and strategies to effectively implement at their own REU site (100%; see Figure 6). Nearly all respondents also agreed or strongly agreed that they had opportunities to discuss best practices and challenges (98%), share their experiences (98%), network and build community (97%), and share suggestions for improving sites (95%). There was less agreement about learning how to transfer the lessons learned from virtual to in-person REUs (83% agreed or strongly agreed). Still, nearly all (98%) of the respondents agreed or strongly agreed that they received the information and resources they needed.
What aspects of the workshop were most useful/valuable to you? (N=45)

Most respondents said that networking and exchanging ideas with other PIs were the most useful/valuable aspects of the workshop. Other respondents mentioned meeting NSF staff, learning strategies and best practices, the panels, and particular topics.

- **Networking and exchanging ideas** (N=64%): “The networking dinner ... [and] break time conversations,” “Talking with those who have done this before and getting my questions answered,” and “Hearing about the experiences of other sites running virtual REUs was also great.”

- **Meeting with NSF staff** (N=16%): “Meeting the new program managers,” “Meeting with NSF directors,” and “Having a venue for interacting with NSF.”

- **Everything** (N=11%): “It was all very useful” and “Everything was valuable being a brand new PI.”

- **Learning strategies/best practices** (N=7%): “Best practices,” “Learning activities and strategies for helping students,” and “Learnings various challenges/issues in running a successful REU site.”

- **Panels** (N=7%): “Panels,” “Panel discussion,” and “Panels on recruitment, evaluation, and planning.”

- **Specific topics** (N=1 each): “ETAP [Education and Training Application] and survey talks,” “Learning about NSF expectations,” “PI introductions,” and “Project presentations.”
What are the greatest benefits of participating in the workshop? (N=44)

Respondents reported that the greatest benefits of participating in the workshop were networking with and learning from each other, meeting NSF staff, and learning best practices and strategies. Respondents also mentioned specific topics they learned about (particularly renewal).

- **Networking and meeting other PIs** (N=43%): “Learning from other PIs,” “Networking and sharing experiences with other PIs,” and “Meeting other PIs.”
- **Exchanging ideas/learning from others** (N=32%): “Sharing experiences and learning from others,” “Learning from other REU PIs about what works well in their site,” and “[There was] tons of expertise and knowledge to share among PIs.”
- **Meeting NSF program officers/directors** (N=16%): “Learning more about the project and meet the program officers,” “Meeting with the program director,” and “Having a venue for interacting with NSF.”
- **Learning best practices/strategies** (N=11%): “Learning about challenges of running an REU program and possible solutions” and “Learning strategies for my site.”
- **Renewal** (N=9%): “Preparing for successful renewal proposals” and “Learning NSF’s requirements and tips on writing a competitive renewal.”
- **Community** (N=7%): “Being welcomed into a community.”
- **Other specific topics** (N=5%): “Insight into NSF review and reporting criteria” and “Finding out more about the common application, finding out whether we would have access to the Cloudbank resource.”

**Feedback and Recommendations**

When asked how frequently they thought the CISE REU PI Workshop should be held, almost half (46%) of the respondents said *once a year*, half (50%) said *once every two years*, and just 3% said *once every three years*. One respondent selected *Other* and explained that “it should happen every year for new PIs, but should be mandatory only every two years or so for recurrent PIs.” When asked their preferred mode of attending the next CISE REU Site PI Workshop, three-quarters (75%) of the respondents said *in-person*, while 7% said *virtual* and 18% said *either format*.
What would you recommend to improve the workshop? (N=41)
The most frequently mentioned recommendations respondents provided were about streamlining and/or changing the format of the site introductions. Respondents also suggested spending more or less time on particular sessions, providing more networking/social activities, building in more unstructured time, and changing the timing of the workshop. Several suggested topics for additional sessions and a few provided feedback on the facilitators, presentations, and/or program booklet.

- **Site introductions** (N=24%): “Put all the introductions into 5-6 person breakout groups rather than having folks present to the entire meeting,” “Less time with site introductions - perhaps a poster session, or a one paragraph read-ahead in the booklet,” and “[There were many and not very high-quality introductions; a more interactive opportunity to meet folks without necessarily seeing everyone’s project would have been a little more useful.”

- **Allocation of time** (N=15%): “[Have] one less panel, and one more [session with] breakout topics,” “More time with program managers,” “More time on DEI [diversity, equity and inclusion] and recruiting,” “[Make it] one night and two days,” “Perhaps a one-day meeting vs two days,” and “Shorten some of the sessions, and start later in the morning; [it] started to feel repetitive.”

- **Suggestions for additional sessions** (N=15%): “[Have] a separate session for all newly awarded REU sites,” “[Have] a meetup session for those seeking collaboration opportunities,” “Keep the past REUs panel ... this is a helpful opportunity for new PIs to obtain some insight about what REU participants think about their participation first-hand,” and “[Have] breakouts on known problems and focus on solutions instead of reiterating the issues; REU proposal writing workshop.”

- **More networking/social activities** (N= 12%): “More social activities,” “More opportunities to hear challenges and best practices from REU PIs,” and “The first night could be a bit more relaxed and fun. For example, we can randomly assign the table at the beginning (with old PIs mixed with new PIs).”

- **More unstructured time/breaks** (N=10%): “Add more breaks” and “[Have] a little more free time for organic conversations, preferably in small groups/1:1.”

- **Positive feedback** (N=10%): “It's amazing,” “This was my first [REU workshop] and it was wonderfully well organized,” and “It was a great meeting. Thank you for organizing it!”

- **N/A or nothing** (N=10%): “N/A,” “None,” and “Nothing in particular.”

- **Timing of the workshop** (N=7%): “Have it earlier in the spring,” “Not in the middle of a semester,” and “The timing is so challenging with our spring semester calendar, and I wish it was perhaps a one-day meeting vs two days.”

- **Facilitator/presentation feedback** (N=7%): “I felt some presentations were just reciting text from solicitations” and “Have a professional facilitator organize at least some of the sessions.”

- **Program booklet** (N=5%): “Print the workshop program to have on the tables” and “[Include] email addresses in the program booklet.”

- **Other** (N=7%): “Ask if anyone would be interested to organize/participate in the organization,” “Any to-do list to improve all REU sites from the meeting,” and “I did not learn about the dates for the workshop until after the start of the spring semester, after teaching plans for the semester were laid out. This made it challenging to attend.”

What topics would you like to see covered at the next CISE REU PI Workshop? (N=30)
The most frequently mentioned topics respondents suggested for future workshops related to recruiting students and attending to DEI, including engaging underrepresented minorities (URMs). Other commonly requested topics included mentoring, networking, and collaboration across REU sites, and publishing/disseminating REU work.
II. Workshop Post-Survey Findings

- **Recruitment (N=17%)**: “Recruitment strategy,” “More of an emphasis on venues for recruiting students,” “How to interview applicants,” and “Learn more about the student recruitment process.”

- **Additional topics (N=17%)**: See call-out box.

- **DEI and engaging URMs (N=13%)**: “Improving under-represented populations,” “More time for discussing DEI and student support,” and “A deeper discussion of broadening participation. I feel the message from this workshop was ‘it’s tough and that’s why we hope that some of you will have good ideas,’ whereas there are things that can probably be done at a [national] scale ... that would benefit all programs.”

- **Mentoring (N=10%)**: “Faculty mentoring” and “More skill building/techniques for inclusive mentoring.”

- **Networking and collaboration (N=10%)**: “Ways to encourage cross-REU collaboration,” “Networking among REUs,” and “Centralization of the things that we all have trouble doing.”

- **Disseminating work (10%)**: “Venue to publishing REU work,” “Opportunities for REU work dissemination,” and “REU student publication examples.”

- **No change (N=10%)**: “N/A” and “Same as this year.”

- **Student engagement/activities (N=7%)**: “Student engagement” and “More on student activities and experiences.”

- **Building support for REU sites (N=7%)**: “How to convince university admins to support more REU programs.”

- **Other feedback (N=13%)**: “Have an invited speaker,” “Not sure,” “Most of them,” and “(Specific lessons learned (not generic that are common knowledge).”

### Additional Topics (N=1 each)
- Effective schedule for an entire site
- Non-R1 experiences
- Deeper dives into curriculum for getting students started
- How to deal with issues
- Planning any and all aspects of running a site
- Reporting for first timers
- Poster sessions
- Typical REU site outcomes
- Reflections from program managers

---

If you have any additional comments that you would like to share, please do so below. (N=16)

At the end of the survey, respondents were asked if they had any additional comments. Most provided either general positive feedback or positive comments on the workshop’s organization and networking opportunities. Two provided suggestions for improvement, and one offered context for their critiques.

- **Positive feedback (N=50%)**: “Excellent meeting, very well done,” “MANY THANKS,” and “[Organizing Committee Member] was a rock star! [They] were incredibly helpful, full of useful information and engaging.”

- **Well-organized (N=44%)**: “The organizing committee was AMAZING. In addition to everything else, I feel like I learned from them about how to organize and run a workshop. GREAT JOB!!”

- **Good networking opportunities (N=13%)**: “Thank you... to the NSF for providing opportunities to share and meet with other PIs and program managers.”

- **Suggestions for improvement (N=19%)**: “It will be helpful to have statistics of paper publications for the entire REU program” and “Please include larger text fields in surveys.”

- **Other (N=1 each)**: “Including future potential PIs” and “Workshop was good; negative comments about learning reflect that we’ve already been doing this for 10 years, and have seen some of this stuff before.”

---

“I really appreciated that we have plenty of time to talk to each other. You always learn the best by sharing your experiences and just talking.”
- Principal Investigator

“I think insight from people who study [sociological] issues deeply can really ground our efforts in recruitment and retention of [underrepresented] students.”
- Senior Personnel
IV. Summary and Recommendations

Summary of Findings
This report summarized findings from the evaluation of the 2023 National Science Foundation (NSF) Computer and Information Science and Engineering (CISE) Research Experiences for Undergraduates (REU) Principal Investigator (PI) Workshop using data collected from observations of workshop sessions and a Workshop Post-Survey.

Participant Characteristics
Of the 101 individuals who attended the REU PI Workshop, 77 took the post-survey for a response rate of 77%. Most (85%) of the respondents were PIs or Co-PIs, 8% were senior personnel, and 5% were prospective PIs. Almost all (92%) of the respondents were faculty at their institution, while 6% were staff. Nearly half (45%) had planned and ran an REU site for at least three previous summers, while just under a quarter (23%) did not have any prior experience leading an REU site. Almost one fifth (18%) of the respondents had participated in an REU program themselves.

Satisfaction, Value, and Outcomes
The EPIC evaluators observed that participants were engaged during the workshop sessions and communicated enthusiastically with each other. Post-survey data showed that respondents were highly satisfied with the workshop overall, and nearly all respondents said they would recommend the workshop to other PIs. All or nearly all respondents indicated that the workshop was well-organized, relevant to their work, well worth their time, and an inclusive experience. Respondents said that the most useful/valuable aspects of the workshop were networking and exchanging ideas with other PIs, meeting NSF staff, the panels, and learning about REU site strategies and best practices.

All or nearly all respondents reported that they gained useful knowledge and skills, information and resources they needed, strategies to implement at their own REU site, and a better understanding of the NSF’s expectations through participating in the workshop. Nearly all respondents also indicated that they had opportunities to discuss best practices and challenges, share their experiences, network and build community, and share suggestions for improving sites. These opportunities were very valuable as respondents said the greatest benefits of participating in the workshop were networking with and learning from each other, meeting NSF staff, learning best practices and strategies, and learning about renewal.

Recommendations
Based on observation and survey data, the evaluators recommend either providing a printed program or posting the technical program URL on the tables along with the Wi-Fi code for easy access. Nearly all survey respondents thought the CISE REU PI Workshop should be held either annually or once every two years, and three-quarters said they preferred that it be in-person. When asked how the workshop could be improved, the most frequently mentioned recommendations related to streamlining the site introductions and/or changing the format of that session, spending more or less time on particular sessions, building in more opportunities for networking/collaboration/socialization (such as unstructured time), changing the dates that the workshop is held, and making the program booklet more accessible and useful (such as providing paper copies and including PIs’ email addresses). Respondents also suggested topics for future workshop sessions, including engaging underrepresented students, REU recruitment and mentoring, networking and collaboration across REUs, and publishing/disseminating REU work.
Overall, both observation and survey data showed that participants were highly satisfied with the workshop. The workshop met its goals of providing opportunities for new and existing PIs and Co-PIs to share their experiences directing REU sites and to offer suggestions for improving all sites, discussing best practices and challenges associated with the administration of an REU site, providing networking and community-building opportunities for REU PIs, and discussing the transfer of lessons learned from virtual to in-person REU programs. The evaluators recommend that organizers of future workshops consider the suggestions respondents made in order to further enhance future workshops.
CISE REU PI Workshop Post-Survey 2023

The purpose of this survey is to learn about participants’ experiences in the CISE REU PI Workshop to help improve future workshops and support. Your responses will be kept confidential by our evaluation team and reported in aggregate across all respondents. We appreciate your participation.

Attendee Background

1. Before this year, how many summers have you planned/run a CISE REU site?
   • This summer will be my first
   • One summer
   • Two summers
   • Three or more summers
   • Not applicable

2. Did you ever participate in an REU yourself?
   • Yes
   • No

3. What is your role in the CISE REU site?
   • PI (Principal Investigator)
   • Co-PI
   • Prospective PI
   • Senior personnel
   • Evaluator
   • Other (please specify): ____

4. Are you a faculty member or staff?
   • Faculty
   • Staff
   • Other (please specify): ____
### Attendee Experience

5. Please rate how valuable you found each of the following workshop sessions you attended on **Wednesday and Thursday (Days 1 and 2)**.

<table>
<thead>
<tr>
<th>Session</th>
<th>Not at valuable</th>
<th>Slightly valuable</th>
<th>Moderately valuable</th>
<th>Very valuable</th>
<th>N/A (did not attend)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1: Welcome and Introduction Session</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Day 2: PI Site Introductions</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Day 2: Panel 1: Transferring Lessons Learned from Virtual to In-person REU Sites</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Day 2: Networking and Best Practices Discussion Dinner</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

6. Please rate how valuable you found the breakout session you attended on **Thursday morning (Day 2)**.

<table>
<thead>
<tr>
<th>Session</th>
<th>Not at valuable</th>
<th>Slightly valuable</th>
<th>Moderately valuable</th>
<th>Very valuable</th>
<th>N/A (did not attend)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-planning for REU Sites</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>REU Student Success Onsite</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

7. Please rate how valuable you found the breakout session you attended on **Thursday afternoon (Day 2)**.

<table>
<thead>
<tr>
<th>Session</th>
<th>Not at valuable</th>
<th>Slightly valuable</th>
<th>Moderately valuable</th>
<th>Very valuable</th>
<th>N/A (did not attend)</th>
</tr>
</thead>
<tbody>
<tr>
<td>REU Alumni Panel</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Top Ingredients in Planning and Executing CISE REU PI Workshops</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
8. Please rate how valuable you found each of the following workshop sessions you attended on Friday (Day 3).

<table>
<thead>
<tr>
<th>Session</th>
<th>Not at all valuable</th>
<th>Slightly valuable</th>
<th>Moderately valuable</th>
<th>Very valuable</th>
<th>N/A (did not attend)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel 2: Evaluation, Reporting, Tracking, and Dissemination of Longitudinal REU Outcomes</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Breakout session: Meet with Your Program Officer</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Panel 3: Writing a Highly Competitive Renewal and New NSF Funding Opportunities</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Panel 4: Broadening Participation in Computing</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Tour of TACC Data Center and Networking Meeting</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
</tbody>
</table>

9. If you would like to explain any of your responses to the session valuations, please do so here.

**Satisfaction**

10. Please rate your level of agreement with the following statements about the workshop.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was satisfied with the workshop overall.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>The workshop was relevant to my work.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>The workshop was well organized.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>I was satisfied with the communication about the workshop.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>I was satisfied with the workshop location and venue accommodations.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>The workshop was an inclusive experience for all attendees.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>The speakers were high quality.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>The workshop booklet was useful.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>This workshop was well worth my time.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>I would recommend the workshop to other CISE REU PIs.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
</tbody>
</table>

11. If you would like to explain any of your responses to the above items, please do so here.
Outcomes

12. Please rate your level of agreement with the following statements about the workshop.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I gained useful knowledge and skills.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>I learned strategies to effectively implement my REU Site.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>I learned strategies to help broaden participation in my REU site.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>I gained resources to support the implementation of my REU Site.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>I gained a better understanding of the NSF’s expectations for REU Sites.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>I learned how to transfer the lessons learned from virtual REUs to in-person REUs.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>I received the information and resources I need to implement my REU site award.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
</tbody>
</table>

13. Please rate your level of agreement with the following statements about the opportunities provided in the workshop.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I had opportunities to share my experiences running undergraduate research programs.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>I had opportunities to share suggestions for improving all sites.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>I had opportunities for networking and building community with others.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>I had opportunities to discuss best practices and challenges associated with the administration of an undergraduate research program.</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
</tbody>
</table>

14. What would be the optimal timing for the CISE REU PI Workshop?
   - Once a year
   - Once every two years
   - Once every three years
   - Other

15. How would you prefer to attend the next CISE REU Site PI Workshop?
• Virtual
• In-person
• Either format

16. What aspects of the workshop were most useful/valuable to you?

17. What are the greatest benefits of participating in the workshop?

18. What would you recommend to improve the workshop?

19. What topics would you like to see covered at the next CISE REU PI Workshop?

20. If you are interested in hosting or helping with the next CISE REU PI Workshop, please enter your name and email address.

21. If you have any additional comments that you would like to share, please do so below.