Follow Up Survey for Past NSF CISE REU Mentors

1. Introductory Text

Thank you for your interest in this survey. This survey should take no more than 20 minutes of your time. For accessibility purposes, we recommend using either Chrome or Firefox web browsers for this survey.

Throughout this survey, we will use the terms "**computing**" and "**computing-related**".

"Computing" or "computing-related" includes the fields below and other similar fields:
- Computer Science
- Computer Engineering
- Software Engineering
- Electrical and Computer Engineering
- Systems Engineering
- Computer Hardware Engineering
- Computing Information Systems
- Information Systems, Information Science
- Informatics, Bioinformatics
- Cybersecurity
- Data Science/Data Analytics
- Machine Learning
- Robotics
- High Performance Computing
- Human-Computer Interaction
- Computational Science/Social Science
- Computational Biology
- Computational Economics
- Computational Mathematics
- Any other computing & technology field

2.   Academic History

Prompt: First, we would like to ask about your academic history.

1. What is your highest level of completed education?
    ☐   Bachelor's degree
    ☐   Master's degree
    ☐   Doctoral degree

Academic History: Highest degree is Bachelor's - details
[Displayed if selected Question 1.: Bachelor's degree]

2. What was your major in college for your most recent undergraduate degree?
    Note: If you were a double major, use the next drop-down menu to indicate your second major. If you have more than one undergraduate degree, answer these questions for the most recent one.
    [List of majors 1]

3. Use this drop-down menu to indicate your second undergraduate major. If you did not have a second major, simply leave this question blank.
    [List of majors 2]

4. In which year did you earn your most recent undergraduate degree?
    [Drop down list of years]

5. At which institution did you earn your most recent undergraduate degree? If you do not see your institution on the list, scroll to the bottom of the list and select 'Other'.
    [List of institutions]

[Displayed if selected Question 5.: Other]
6. At which institution did you earn your most recent undergraduate degree?

[ALL SKIP TO SECTION "CURRENT STATUS"]

Academic History: Highest degree is Master's degree - details
[Displayed if selected Question 1: Master's degree]

7. At which institution did you earn your most recent master's degree? If you do not see your institution on the list, scroll to the bottom of the list and select 'Other'.
    [List of institutions]

[Displayed if selected Question 7.: Other]
8. At which institution did you earn your most recent master's degree?

9. In which year did you earn your most recent master's degree?
    [Drop down list of years]

10. In which field did you earn your master's degree?
    [List of fields]

Academic Background: Highest degree is Doctoral degree - details

11. At which institution did you earn your most recent doctoral degree? If you do not see your institution on the list, scroll to the bottom of the list and select 'Other'.
    [List of institutions]

12. At which institution did you earn your most recent doctoral degree?

13. In which year did you earn your most recent doctoral degree?
    [Drop down list of years]

14. In which field did you earn your doctoral degree?
    [List of fields]

15. In total, how many postdocs have you completed since earning your doctoral degree?
    � 0
    � 1
    � 2
    � 3
    � 4 or more

3.   Current Status

16. What is your current employment status? Select all that apply.
    ❏ Employed full-time
    ❏ Employed part-time
    ❏ None of the above [Go to Question 28.]

Current Status: Currently employed full or part time

PROMPT: Now we would like to ask about your current employment situation.
17. Which career level best describes your current professional status?
    � Entry level
    � Mid level
    � Senior level
    � Executive level

18. In which field are you currently working? Choose up to 2 responses. Note: If you do not see your exact field, select the option(s) most closely related.

[list of computing-related fields]

19. Which of the following reasons below best explain why you do not currently work in a computing-related position? Choose up to 3 responses.
    - ❑ I do not have the required education/training for computing positions
    - ❑ There is nothing available in my geographic location
    - ❑ There is nothing available in the field I am interested in
    - ❑ I am not interested in working in computing
    - ❑ Jobs in computing are too stressful
    - ❑ I am experiencing a two-body problem
    - ❑ I do not see a place for myself in computing
    - ❑ I have had negative experiences in computing
    - ❑ I have a strong interest in a different field that is not related to computing
    - ❑ I did not earn a degree in computing
    - ❑ I applied for a computing position but did not get it
    - ❑ I am currently on the job market for a computing job
    - ❑ Other; please specify: _____

20. How long have you been working in [insert response from Q18.]?
    - ◆ Less than 1 year
    - ◆ 1 – 5 years
    - ◆ More than 5 years but less than 10 years
    - ◆ More than 10 years but less than 20 years
    - ◆ 20 or more years

21. What is your specialty area? Select all that apply.
    - ❑ No specialty
    - ❑ Artificial Intelligence
    - ❑ Computer-Supported Cooperative Work
    - ❑ Computing Education
    - ❑ Data Mining
    - ❑ Databases/Information Retrieval
    - ❑ Distributed Systems
    - ❑ Embedded Systems
    - ❑ Formal Methods/Verification
    - ❑ Graphics/Visualization
    - ❑ Hardware/Architecture
    - ❑ Human-Computer Interaction
    - ❑ High-Performance Computing
    - ❑ Informatics: Biomedical or Other Science
    - ❑ Information Science
    - ❑ Information Systems
    - ❑ Machine Learning
    - ❑ Natural Language Processing
    - ❑ Networks
    - ❑ Operating Systems
    - ❑ Operations Research
    - ❑ Programming Languages/Compilers
    - ❑ Robotics/Vision

- ❏ Scientific/Numerical Computing
- ❏ Security/Information Assurance
- ❏ Social Computing/Social Informatics
- ❏ Software Engineering
- ❏ Theory and Algorithms
- ❏ Other; please specify: _____

22. In which setting do you currently work?
- ◆ Academia, PhD granting institution [Answer questions 23.-24.]
- ◆ Academia, non-PhD granting institution [Answer questions 23.-24.]
- ◆ Academia, K-12 [Go to Question 25.]
- ◆ Industry [Go to Question 25.]
- ◆ Government lab [Go to Question 25.]
- ◆ Other [Go to Question 25.]

23. Are you tenured or tenure track?
- ◆ Yes, I am tenured
- ◆ Yes, I am tenure-track
- ◆ No, I am neither tenured nor tenure-track

24. What is your current position? If you do not see your exact title, please select the one that best fits your position.
- ◆ Technical staff
- ◆ Administrative staff
- ◆ Postdoc
- ◆ Lecturer/Instructor/Adjunct faculty
- ◆ Assistant Professor
- ◆ Associate Professor
- ◆ Full Professor
- ◆ Professor of the Practice
- ◆ Emeritus
- ◆ Administration/Leadership level position
- ◆ Other

25. What is your job title? _____

26. What is the primary focus of your current position? Choose up to 3 responses that best describe the focus of your position.
- ❏ Research
- ❏ Teaching
- ❏ Administration
- ❏ Administrative
- ❏ Advising
- ❏ Technical
- ❏ Analytical
- ❏ Management
- ❏ Skilled labor

❑ Developer
❑ Operations
❑ Other

27. How committed are you to remaining in your current position at this time?
◆ Not at all committed
◆ Slightly committed
◆ Moderately committed
◆ Quite committed
◆ Extremely committed

Current status: Not employed

PROMPT: In this survey, you indicated you are not currently employed.

28. Which of the following below best explains why you are not employed at the moment?
❑ I am a full-time student
❑ There is nothing available in my geographic location
❑ There is nothing available in my field of interest
❑ I am underqualified for the positions I am interested in
❑ I am overqualified for the positions I am interested in
❑ I am experiencing a two-body problem
❑ I am taking a break
❑ I have personal and/or family obligations
❑ I have a health-related issue
❑ I am not interested in working
❑ I am retired
❑ I have been laid off/furloughed
❑ Other; please specify: _____-

4. Structure of REU Projects

PROMPT: In this section, we would like to ask you questions about the REU projects you have previously and/or currently run.

29. Approximately how many years of experience do you have running REU programs, whether at your current institution or a previous institution?
   - Less than 1 year
   - 1 – 5 years
   - More than 5 years but less than 10 years
   - More than 10 years but less than 20 years
   - 20 or more years

30. Approximately how many REUs have you worked on as a PI, co-PI, or in a supervisory/mentoring role?
   - 1-5
   - 6-10
   - 11-20
   - 21 or more

31. Which of the following apply to the REU projects that you ran in the past (or are currently running)?
   - CISE REU Site
   - CISE REU Supplement (summer)
   - CISE REU Supplement (academic year)
   - Other summer REU
   - Other academic year REU

[SKIP if < 1 year]
32. For your REU programs, how often do you have a co-mentor? This is typically another faculty member who is also helping to lead the project in some way.
   - Never
   - Sometimes
   - About half the time
   - Most of the time
   - Always

33. Approximately how many students do you typically have in one of your REU projects?
   - 1
   - 2-5
   - 6-10
   - 11-20
   - More than 20

34. How many REU projects do you typically run at one time?
   - 1
   - 2
   - 3
   - 4
   - More than 4

35. How important is it to you to select REU students who could potentially be your future graduate students?
- ◆ Not at all important
- ◆ Slightly important
- ◆ Moderately important
- ◆ Very important
- ◆ Extremely important

PROMPT: For the upcoming questions, please think about a typical CISE REU Site or Supplement you have led.

36. Which of the following apply to your REU? Select all that apply.
- ❑ Graduate students and/or lab assistants help mentor students
- ❑ Summer REU students can extend their research into the academic year
- ❑ Academic year REU students can extend their research into the summer
- ❑ Your department provides resources to support the REU (e.g., equipment, lab space, etc.)
- ❑ Multiple faculty members collaborate on the project
- ❑ REU students collaborate with other REU students on the project
- ❑ None of the above

37. Which of the following reasons were most important to helping you decide the focus of your REU? Choose up to 3 answers:
- ❑ The work was on a current research trend that would appeal to students
- ❑ There was no one else to do the work, and the project would have been dormant without the REU
- ❑ The work was closely related to my graduate student's research topic
- ❑ The work was closely related to my own research interests
- ❑ The work was closely related to REU students' interests and abilities
- ❑ The work was critical to the success of the larger project it was part of
- ❑ I don't remember
- ❑ None of the above

38. For your typical REU project, who is the person that REU students work with the most?
- ◆ The PI and/or co-PI
- ◆ Another faculty advisor, not the PI
- ◆ Postdoc(s)
- ◆ Graduate student(s) and/or lab assistants
- ◆ Someone else

39. On average, how often were you able to work directly with your REU students?
- ◆ Every day
- ◆ A few times a week
- ◆ Once a week
- ◆ Once every 2 weeks
- ◆ A few times across the summer period
- ◆ I never worked directly with the REU students

40. Thinking about how often you were able to work directly with your REU students, how does that compare to

how much time you <u>expected</u> to work with your REU students?

◆ Much less than I expected
◆ Somewhat less than I expected
◆ As much as I expected
◆ Somewhat more than I expected
◆ Much more than I expected

41. Who is the person who ran, or runs, the mentoring component for your REU projects? Select all that apply.

☐ The PI and/or co-PI
☐ Another faculty advisor, not the PI
☐ Postdoc(s)
☐ Graduate student(s) and/or lab assistants
☐ Someone else

42. What other **structural/operational components** of your REU projects do you include that we haven't already asked about?

5. Perceived impact of REU for participants

PROMPT: For the upcoming questions, please think about a typical CISE REU Site or Supplement you have led.

43. Approximately how much time was dedicated to helping your REU students build the following skills:
    (None at all; A little; A moderate amount; Quite a bit; A great deal; Don't remember)

    ● Programming skills
    ● Other technical skills
    ● Research methods skills
    ● Scientific writing skills
    ● Career development skills
    ● Communication skills
    ● Problem-solving skills

44. To what extent does your REU project give students the opportunity to do the following:
    (None at all; A little; A moderate amount; Quite a bit; A great deal; Don't remember)

    ● Define a research problem
    ● Generate hypotheses
    ● Use scientific methods to test a hypothesis
    ● Collaborate with colleagues
    ● Collect data or conducting experiments
    ● Analyze data with statistics or other tools
    ● Work on open-ended theoretical/mathematical problems
    ● Decide what to do next (e.g., follow-up studies)

45. Which of the following have you done in the past for your REU students?
    ☐ Served as a research advisor after the REU ended
    ☐ Served as a mentor after the REU ended
    ☐ Co-wrote a research paper, which was later published
    ☐ Helped them find opportunities to present their work at showcases or conferences
    ☐ Provided one-on-one support for their graduate school or job applications
    ☐ Written a recommendation letter for their graduate school applications
    ☐ Served as a reference for their job applications
    ☐ Became their graduate school advisor
    ☐ None of the above

46. Which of the following topics did you incorporate into the mentoring components of your REU?
    ☐ Applying to grad school (e.g., application process, preparing materials, etc.)
    ☐ Life as a graduate student
    ☐ Life in a research career
    ☐ Work/life balance
    ☐ The REU student's future career interests
    ☐ Overcoming personal and professional obstacles
    ☐ Issues of underrepresentation in computing
    ☐ My REU did not include a mentoring component

☐ None of the above

47. To what extent do you think the REU helped your student get an accurate preview of **graduate school**?
   ◆ Not at all
   ◆ A little
   ◆ A moderate amount
   ◆ Quite a bit
   ◆ Very much

48. To what extent do you think the REU helped your student get an accurate preview of a **research career in computing**?
   ◆ Not at all
   ◆ A little
   ◆ A moderate amount
   ◆ Quite a bit
   ◆ Very much

49. To what extent do you think the REU helped your student get an accurate preview of **academia**?
   ◆ Not at all
   ◆ A little
   ◆ A moderate amount
   ◆ Quite a bit
   ◆ Very much

50. Please take a moment to think about your REU students' experiences working in your project. How would you describe the experience your REU provides to students?

6.   Motivations for and perceived impact of REU for personal career development

Now, we would like to ask about what motivated your decision to run an REU and its impact on your career development.

51. To what extent did the following contribute to your decision to run an REU project?
     [Not at all; a little; a moderate amount; Quite a bit, a great deal; I don't remember]

- I wanted to help develop a new generation of researchers in my field
- I wanted to give students impactful research experience
- I needed to make progress with my research projects
- I wanted the additional funding
- I wanted to encourage students to purse graduate school
- I wanted to find potential graduate students for my department
- I wanted to experiment with different research techniques
- I believed it would be helpful for my own career
- I wanted to develop my mentorship skills

52. In what ways has running REU projects impacted your career? Select all that apply.
- ☐ I was able to use this as part of my tenure application
- ☐ I was able to add this to my CV
- ☐ It opened new collaborations with faculty at my institution
- ☐ It opened new collaborations with faculty at other institutions
- ☐ It gave me the resources to expand my lab
- ☐ It taught me how to be a better mentor for students' research
- ☐ It taught me how to be a better mentor for students' career development
- ☐ It led to future research with some REU students
- ☐ It led to more publications
- ☐ I was able to patent some of my work
- ☐ I don't remember
- ☐ None of the above

53. How would you rate your proficiency to mentor students **on their research**?
- ◆ Highly deficient
- ◆ Deficient
- ◆ Average
- ◆ Proficient
- ◆ Highly proficient

54. How would you rate your proficiency to mentor students **on their academic development**?
- ◆ Highly deficient
- ◆ Deficient
- ◆ Average
- ◆ Proficient
- ◆ Highly proficient

55. How would you rate your proficiency to mentor students **on their career development**?
- ◆ Highly deficient
- ◆ Deficient

- ❖ Average
- ❖ Proficient
- ❖ Highly proficient

56. What other ways has running an REU program impacted your career or skills, either positively or negatively?

[   ]

57. Approximately how many of your former REU students are you able to stay in touch with for at least a few years after the REU concludes?
- ❖ None of my students
- ❖ Some of my students
- ❖ About half of my students
- ❖ Most of my students
- ❖ All of my students

58. Approximately how many of your former REU students are you able to recruit for your graduate program?
- ❖ None of my students
- ❖ Some of my students
- ❖ About half of my students
- ❖ Most of my students
- ❖ All of my students

59. Which of the following statements do you believe to be true? Please select all that apply.
- ❑ REUs serve as opportunities for departments to easily recruit graduate school applicants
- ❑ Some REUs are better than others at preparing students for research careers
- ❑ Department intentionally have certain REU programs just so they can recruit students for their graduate program
- ❑ Some REUs are more prestigious than other REUs
- ❑ None of the above

60. To what degree do you think having an REU makes a graduate school applicant more competitive than an applicant without an REU?
- ❖ Not more competitive
- ❖ Somewhat more competitive
- ❖ Absolutely more competitive
- ❖ I don't know

61. In your opinion, how effective are REUs in encouraging students into graduate school and research careers?
- ❖ Not at all effective
- ❖ A little effective
- ❖ Moderately effective
- ❖ Very effective
- ❖ Extremely effective

7.   Demographics

PROMPT: Thank you for answering all of those questions! We are almost finished. These last questions will help us better understand our respondents. You may skip any question you do not wish to answer.

62. What is your gender identity?
   - ◆ Man
   - ◆ Woman
   - ◆ Gender-queer/non-conforming/non-binary
   - ◆ Agender
   - ◆ Something else

63. Are you transgender?
   - ◆ Yes
   - ◆ No

64. What is your ethnicity? Select all that apply.
   - ☐ Not of Hispanic, Latinx, or Spanish origin
   - ☐ Mexican, Mexican American, Chicanx
   - ☐ Puerto Rican
   - ☐ Cuban
   - ☐ Another Hispanic, Latinx, or Spanish origin

65. What is your race? Please select all that apply.
   - ☐ African American/African/Black
   - ☐ American Indian/Alaska Native
   - ☐ Indigenous or First Nations
   - ☐ Arab/Middle Eastern
   - ☐ Caucasian/European/White
   - ☐ East Asian (e.g., Chinese, Japanese, Korean)
   - ☐ Southeast Asian (e.g., Cambodian, Vietnamese, Hmong, Filipino)
   - ☐ South Asian (e.g., Indian, Pakistani, Nepalese, Sri Lankan)
   - ☐ Other Asian
   - ☐ Native Hawaiian/Pacific Islander
   - ☐ Something else

66. Have you ever served on active duty in the U.S. Armed Forces, Reserves, or National Guard?
   - ❍ Never served in the military
   - ❍ Only on active duty for training in the Reserves or National Guard
   - ❍ Now on active duty
   - ❍ On active duty in the past, but not now

67. What is your citizenship status?
   - ☐ U.S. citizen or permanent resident (includes dual-citizenship)
   - ☐ Non-U.S. citizen with temporary visa
   - ☐ Other non-U.S. citizen

[If Q67. is NOT "U.S. citizen or permanent resident (includes dual-citizenship)"]

68. Of which country are you a citizen?
    [Drop down list of countries]

69. In which year were you born?
       [Drop down list of years]

70. Which of the following best describes your sexual orientation?
    ◆ Heterosexual
    ◆ Homosexual
    ◆ Bisexual
    ◆ Asexual
    ◆ Something else

71. What type of disability do you have? Select all that apply.
    ❑ I do not have a disability
    ❑ Attention deficit
    ❑ Auditory disability
    ❑ Autism spectrum disorder
    ❑ Blind or visually impaired (does not include near/far sightedness)
    ❑ Health-related disability
    ❑ Learning disability
    ❑ Mental health disability
    ❑ Mobility or orthopedic disability
    ❑ Speech or language disorder
    ❑ Something else

72. What is the highest level of education attained by your any of your parent(s)/guardian(s)?
    ◆ Less than high school
    ◆ High school graduate or GED
    ◆ Some college (no degree earned)
    ◆ Associate's degree
    ◆ Bachelor's degree
    ◆ Master's degree
    ◆ Doctoral degree
    ◆ I don't know

73. Do any of your parent(s)/guardian(s) currently have, or have held, a career related to the following fields:
    ● Computer science/Information Technology
    ● Engineering
    ● Mathematics
    ● Any other STEM fields
    ◆ Yes
    ◆ No
    ◆ I don't know

8. Raffle Opt-in

If you are interested in being entered in a raffle for [TBD], please provide your email address. The email you provide will only be used to contact you if your name is drawn for the prize; it will not be used for any other purpose.

If you are not interested in entering the raffle, please click next.

Raffle email address:

9.   Update Contact Information

Thank you for completing our survey!

We contacted you with this email address: [INSERT EMAIL ADDRESS]. Is this still your primary email address?

If not, please consider updating your email address with us below. If your email address is current, please click next.

Update primary email address:

10.   Follow-up Permission

We would like to follow up with you in the future regarding your career progression. You would receive an online survey similar to this one. If you are interested in completing future surveys, please provide us with your email address so that we can contact you in the future. Your participation will help inform the computing community about how people make decisions regarding computing careers.

For information on how we will protect your privacy, please read our privacy policy.
[Privacy policy linked in-text].

We would prefer a primary email address and a secondary email address as a backup.

Primary email address that you expect to stay active long-term:

Secondary email address:

[end survey]