



Executive Summary: Community Listening Sessions for 2024 ECR PI Meeting

Purpose

Understanding, valuing, and responding to the diversity among NSF ECR PIs. The communities of NSF EDU Core Research (ECR) Principal Investigator (PIs) are highly diverse, with marked variation across career stage, disciplinary backgrounds, STEM education topics studied, institutional settings, ECR project type, and current stage in the ECR grant, just to name a few dimensions. To understand, value, and respond to this diversity, the ECR Hub invited active ECR PIs to four optional virtual community listening sessions in October 2023. These sessions engaged 91 PIs to inform the interactive activities and content for the 2024 ECR PI Meeting on May 28 –30 in Arlington, Virginia. For instance, one key theme was PIs wanting information before the meeting to inform making targeted new connections; we responded to this point by asking optional questions on the registration form to aid networking.

Major Themes from the Listening Sessions

Major insights from these listening sessions included the following:

- PIs want **to meet and build community with new connections** across cohorts and within similar groups of interests (e.g., institutions, content area, career stage, discipline, methods).
- PI want a **blend of structured and unstructured networking opportunities**, including having the agency to pick their own connections while also attending pre-organized activities in small groups.
- PIs emphasized the **benefits of small-group interactions and multiple breaks** at the meeting, warning to not be overscheduled with short breaks.
- Most PIs wanted **interactions, feedback, and relationship-building opportunities with program officers (POs)** that focused on how PIs can be successful in their grant career.
- Overall, PIs want a meeting that **builds authentic community, inspirational connections**, and produces **concrete useful information** to be used after the conference.

Listening Session Format and Attendance

The listening sessions were a way to hear and engage with the diverse voices of NSF-funded ECR PI communities. The ECR Hub team hosted the listening sessions virtually, using group-specific breakout room discussions using an online platform (Padlet.com), to allow for a high degree of participant interaction. Padlet allows participants to add written comments to a visual board, engaging 91 attendees (Table 1). PIs spoke candidly about their experiences with NSF Program Officers and offered ideas for PI meeting activities. We documented the comments, coded the feedback with descriptive qualitative codes, and are currently using the findings to inform the design and content of the PI meeting.

Table 1. Feedback Collected from the Listening Sessions

Listening Session Group	Attendance
BCSER Individual Investigator Development PIs	33
Pre-tenure and recently tenured* at R1 institutions	13
Tenured at R1 Institutions	24
Non-R1 Institutions and non-tenure-line researchers	21
Total	91

Note. BCSEER = Building Capacity in STEM Education Research.

*Recently tenured group are CAREER PIs that are currently tenured

We tailored discussion questions to address the distinct goals and needs of different segments of the ECR PI population, while also identifying variation within those segments (Table 2).

Table 2. Feedback Collected from the Listening Sessions

Group	Tailored Discussion Questions
BCSER Individual Investigator Development PIs	<ol style="list-style-type: none"> 1. What types of meeting activities might further your IID professional development plan? 2. What support might you want in translating the next phases of your IID project into a future NSF proposal?
Pre-Tenure and recently tenured at R1 Institutions	<ol style="list-style-type: none"> 1. Pre-Tenure: What meeting activities might support you in pursuing tenure (e.g., mentoring from tenured PIs)? 2. Recently Tenured: What lessons would you share with Pre-Tenure faculty? What would support your continued professional growth?
Tenured at R1 Institutions	<ol style="list-style-type: none"> 1. What lessons would you share with Pre-Tenure faculty new to an NSF PI role? 2. If you've attended an NSF PI meeting before, do you have any specific ideas on improving the meeting experience?
Non-R1 institutions and non-tenure-line researchers	<ol style="list-style-type: none"> 1. Non-R1 institution: Interested in forming (a) community with ECR PIs at other institutions like yours or (b) partnerships with R1 universities? 2. Non-tenure-track roles: What are unique considerations to supporting growth within your professional role?



Listening Session Themes by Group

BCSER Individual Investigator Development (IID) PIs wanted to...

- ...meet experienced/successful PIs and BCSEI IID alumni that could serve as mentors
- ...build new collaborations and relationships with different PIs across various categories (e.g., discipline, region, career stage)
- ...learn about annual report submission (for recently started projects) and understand funding pathways for scaling up their projects (for soon-to-be completed projects)

Pre-tenure faculty described...

- ...a need for project management exposure
- ...a need to build healthy relationships with program officers

Recently tenured PIs indicated...

- ...a desire for shared collaboration with fellow PIs
- ...a desire to build relationships with PI who have shared interest
- ...a key lesson to share with pre-tenure faculty is to learn project/team management skills
- wanting to learn about ways to fund and scale up large institutional grants

Question: Think about a memorable meeting experience. What made it so special?

“Small groups, time to connect individually/socially, people providing really meaningful feedback and having time to learn from each other”

– *Recently tenured PI*

Tenured PIs at R1 institutions discussed...

- ...project management as an important skill set to have to be successful faculty (e.g., budgeting, hiring, managing/supervising a team, adapting to challenges)
- ...the need to find good mentors
- ...the need for authentic networking at the PI meeting (structured and unstructured)
- wanting to meet people at the conference that open the possibility for collaborations and information sharing with ultimate goal of broadening the impact of their research, exposes them to various STEM content and opportunities for long-term institutional/department funding

“I would like to learn from folks who are conducting longitudinal work and have received multiple related grants.”

– *Tenured PI*



PIs at non-R1 institutions (including HBCUS, minority serving institutions, community/junior/city colleges, teaching institutions) discussed...

- ...a desire to connect within and outside of familiar circles of expertise (e.g., content, discipline, methodology, institution)
- ...the need to have one-on-one interactions with program officers at the PI meeting
- ...an interest in connecting with faculty at similar types of institutions that have faced similar grant administration challenges

“Grant management is most appealing to me as well as proposal development. It would be very helpful to have a proposal development workshop or some sort of mentoring.”

– PI at non-R1 institution

Researchers at non-academic institutions and non-tenure-line faculty discussed...

- ...the unique institutional context they work in
- ...a need to collaborate with various types of institutions and researchers
- ... problems of practice specific to their positions and institutions (e.g., institutional support for large grant proposals)
- ...a need for the PI meeting to have opportunities and spaces where small groups or one-one-one interactions with POs can occur or be formally organized

Responding and Next Steps

The ECR Hub is taking action to match PIs with other PIs likely to have complementary areas of expertise and interests. Beyond the registration form questions, we planning on multiple ways to respond to the feedback of making new connections and having structured networking opportunities. One such approach includes a peer-to-peer matching process that PIs can opt into on the registration form. For PIs who opt-in, we will use their award’s abstract and natural language processing (NLP) tools to recommend other researchers studying similar topics. The goal is to bridge the gap across silos. The NLP approach supports PIs in building community and potential collaboration with PIs within and outside their professional circles, all of which is grounded in the community listening session themes.

The ECR Hub team aims for transparency and inclusivity in our decision-making and planning processes for the PI meeting, prioritizing the voices of our PI community. The listening sessions were critical for ensuring that the PI meeting will meet the needs of different PI groups and provide a meaningful and valuable experience for attendees. The ECR Hub staff welcomes feedback and is dedicated to continuous improvement. If you have suggestions for improvement or questions about the listening sessions, please reach out to our PI 2024 ECR Hub community listening session lead Willie C.J. Harmon, Ph.D. (cjharmon@air.org).