# National Mentoring Community
## Supporting Diversity in Undergrad Physics

APS physics™

# Changing the Topography of Physics:
## Supporting Marginalized Physics Students by Enhancing the NMC Match System

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# National Mentoring Community (NMC)

- Created in 2015
- Builds and maintains mentoring relationships between Black/African, Latinx, and Indigenous physics students and professional mentors
- To expand the demographics of students completing undergraduate physics degrees by supporting historically marginalized communities
- 235 total mentees and 385 total mentors, only 97 mentees and 104 mentors were matched with at least one mentor or mentee respectively
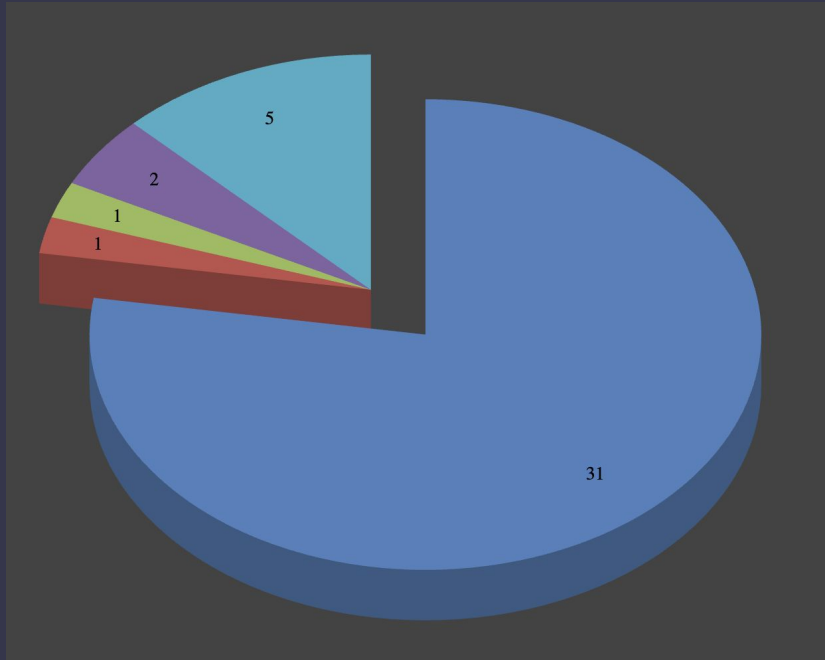- APS has decided to adjust the program's match algorithm

# NMC Unmatched Survey

- Survey sent to unmatched NMC participants (both mentors and mentees)
- To gauge what obstacles currently exist in the matching process and to assess whether more match criteria is needed
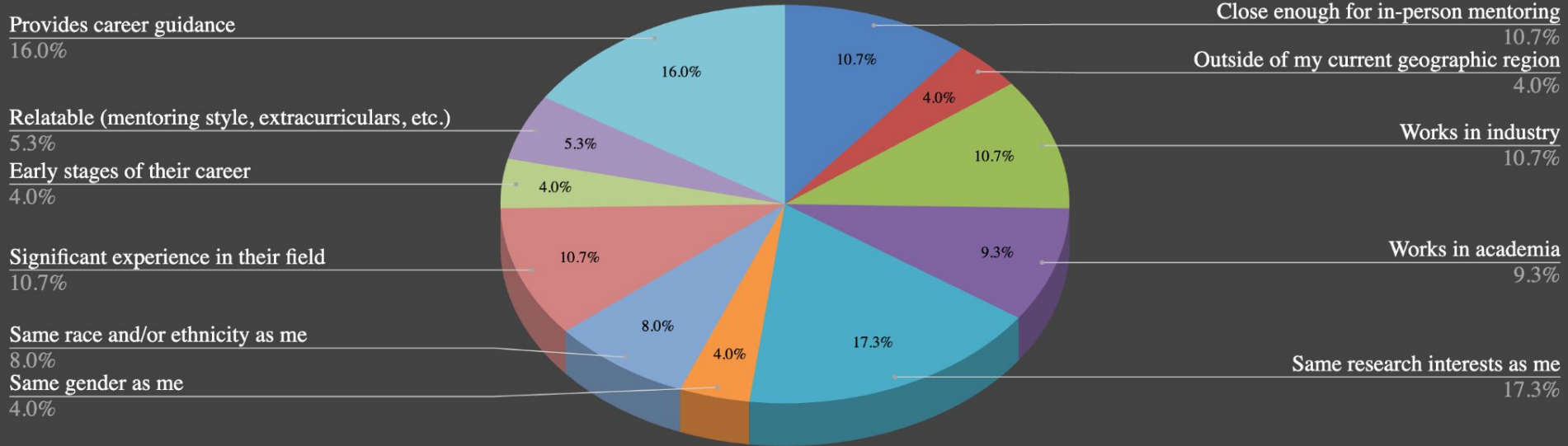- 48 total respondents: 40 mentors and 8 mentees
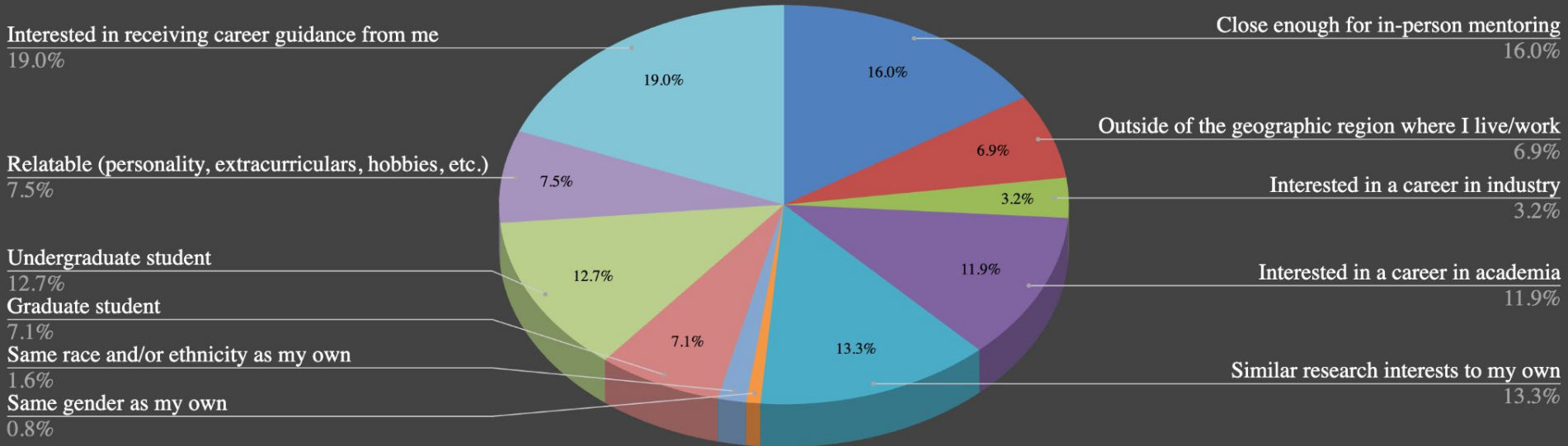
# Mentor Employment Sectors

# Mentee Criteria Ranking



Provides career guidance
16.0%

Relatable (mentoring style, extracurriculars, etc.)
5.3%

Early stages of their career
4.0%

Significant experience in their field
10.7%

Same race and/or ethnicity as me
8.0%

Same gender as me
4.0%

Close enough for in-person mentoring
10.7%

Outside of my current geographic region
4.0%

Works in industry
10.7%

Works in academia
9.3%

Same research interests as me
17.3%

16.0%

10.7%

4.0%

10.7%

5.3%

4.0%

10.7%

8.0%

4.0%

17.3%

9.3%

# Mentor Criteria Ranking



- Interested in receiving career guidance from me — 19.0%
- Relatable (personality, extracurriculars, hobbies, etc.) — 7.5%
- Undergraduate student — 12.7%
- Graduate student — 7.1%
- Same race and/or ethnicity as my own — 1.6%
- Same gender as my own — 0.8%
- Close enough for in-person mentoring — 16.0%
- Outside of the geographic region where I live/work — 6.9%
- Interested in a career in industry — 3.2%
- Interested in a career in academia — 11.9%
- Similar research interests to my own — 13.3%

# Survey Results

Career Guidance:

- Many students want to receive career advice and direction
- Mentors are eager to share their perspective

Employment Sector:

- Students want curated experiences based on their employment sector interest
- Mentors are interested in discussing their specific sector

Research Interests:

- Similar research direction

Location:

- Determines in-person v. virtual

# WestEd External Evaluation

- Nonpartisan, nonprofit agency
- Develops evidence-based solutions to problems related to education and improving equity
- In June 2023, they completed an external appraisal of the NMC
- Includes recommendations for improving the NMC match system and user experience

# Match Update Suggestions

WestEd gave nine formalized recommendations for the NMC program to be improved by. Of the nine, fixing the match algorithm was second.

Inclusion of search filters:

- areas of interest in physics,
- career aspirations (i.e., academia, industry)
- demographics of the mentors (i.e., gender, racial/ethnic identity)

Importantly, WestEd highlighted employment sector (academia, industry, etc.), similarly to the NMC Unmatched survey.

# Xinspire Transition

The National Mentoring Community is in the process of transitioning from its current online host, Salesforce, to a new platform: Xinspire, which is specifically designed with mentoring programs in mind.

Added functionality coming with Xinspire includes:

- Ability to search with filters
- Expanded profiles
- Improved browsing
- User friendly interface
- A connect feature for mentors

# Creating an Easy User Experience

- Creating a manual match staff workflow
- Providing a student perspective for the marketing and user interface teams
- Composing tips for navigating Xinspire
- Updating email templates and automatic triggers
- Integrating Xinspire's report feature into APS staff usage
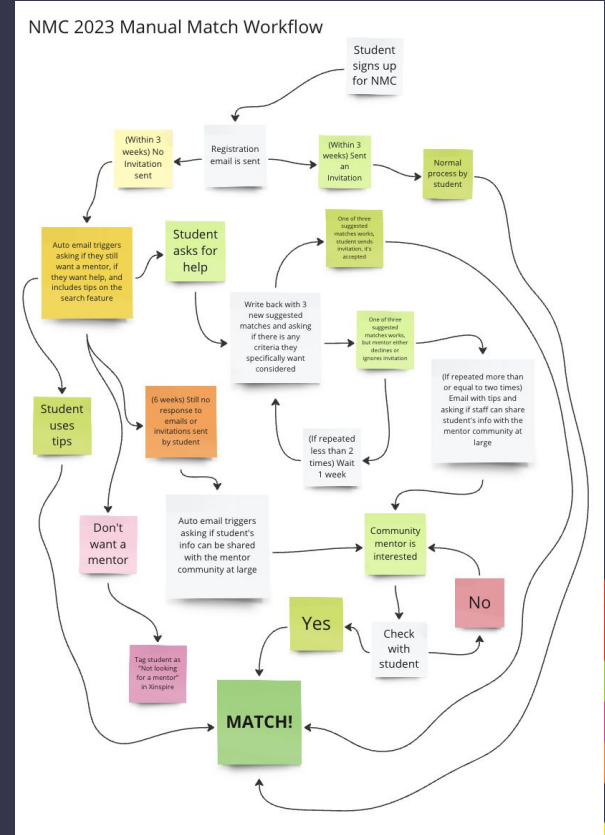
# Expanding Criteria

**Old Algorithm:**

- Location

**New Algorithm:**

- ?

NMC Unmatched Survey, WestEd evaluation, and low match yield all signal that a new algorithm is needed

# New Match Algorithm

- Employment Sector - **28%** (Very Important)
- Research Interests - **28%** (Very Important) [Fuzzy]
- Location - **17%** (Important)
- Major - **11%** (Moderately Important) [Fuzzy]
- Career Guidance - **11%** (Moderately Important)
- Ethnicity - **4%** (Somewhat Important)
- Gender - **1%** (Not Very Important)

[Fuzzy] is a feature within Xinspire where rather than one-to-one pairing of criteria, certain factors can be roughly matched up

# Effects

"NMC has given me a sense of belonging during a time when it felt like it was challenging or difficult to be a part of the physics community".

Student response from WestEd interviews

Through the proposed updated match algorithm and the soon to be operational Xinspire platform, the NMC has the potential to reach more students and to do so more efficiently.

# Thank you!

Questions?

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