

NATIONAL HIGH

# MAGNETIC FIELD LABORATORY

## Diversifying Innovation in STEM Through Mentored Experiences

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# Magnetic Momentum Scholars Program: *Diversifying Innovation in STEM*

BROADENING  
PARTICIPATION



## Inaugural Spring 2022 Program Highlights

- Six-week partnership between the MagLab and Florida A&M University (FAMU) designed to expose a diverse student population to STEM careers at the Lab
- Students are paired with STEM mentors who will guide them in expanding their knowledge in science while developing professional skills designed to build confidence and prepare them for future success in the STEM workforce.
- Mentors help to create structures to support the student's ability to gain at least 1 new skill by the end of the program.
- On the last day of the program, students showcase their work during a culminating presentation.
- Program consists of 14 FAMU STEM students (*freshman – senior year/9 female & 5 male*), 14 volunteer mentors, and 5 scientists and engineers serving as volunteer tour coordinators.

BUILDING A STEM  
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MENTORING

DIVERSITY

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# The Facts

*According to the National Center for Science and Engineering Statistics (2020), African American workers represent only 9% of STEM professionals in the U.S. workforce.*

While the numbers are low, they represent a great opportunity to increase representation through effective approaches that include mentoring underrepresented students.



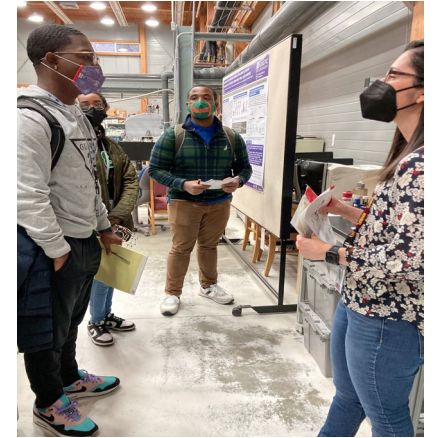
# Importance of Mentoring Across the Lab

## BROADENING PARTICIPATION



The 2019 National Academies of Science, Engineering and Medicine report on the Science of Effective Mentorship in STEMM recommends that institutions support quality mentorship through evidenced-based approaches. In 2021, the MagLab introduced the **Center for the Improvement of Mentored Experiences in Research (CIMER)** mentorship education curriculum. Six MagLab faculty and staff have since been trained in the curriculum and have facilitated mentoring sessions for leadership, faculty, postdocs, and graduate students. As a result, a formal MagLab mentoring program will launch in fall 2022.

The **Summer 2022 REU Program** welcomed 25 students from 10 states to conduct research alongside MagLab scientist and engineering. This was the first in-person REU cohort since the start of the COVID-19 pandemic.



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# Conclusion

Research shows that mentoring programs can foster scientific identity and help shape career pathways for underrepresented minority students in STEM  
*(Akins et al, 2020; Summers & Hrabowski, 2006; Tsui, 2007).*



# References

- Atkins, K., Dougan, B.M., Dromgold-Sermen, M. S., Potter, H., Sathy, V., Panter, A. T. (2020). Looking at Myself in the Future: How mentoring shapes scientific identity for STEM students from underrepresented groups. *International Journal of STEM Education*, 42(7), 1-15. <https://doi.org/10.1186/s40594-020-00242-3>
- National Center for Science and Engineering Statistics (2020). *The STEM labor force of today: Scientists, engineers, and skilled technical workers*. <https://nces.nsf.gov/pubs/nsb20212/participation-of-demographic-groups-in-stem>