



Webinar

National Association of Marine Laboratories (NAMML)

“Recruiting, Supporting, and Retaining Minorities in STEM”

- Sponsored by the NAMML Education Committee
- February 19, 2021
- Speaker: Aly Busse, Mote Marine Laboratory
- [Link to recording](#)



MarSci-LACE

Marine Science Laboratory Alliance Center of Excellence

Recruiting, Supporting, and Retaining Minorities in STEM

Aly Busse

Assistant Vice President of Education
Mote Marine Laboratory



NSF INCLUDES
Coordination Hub

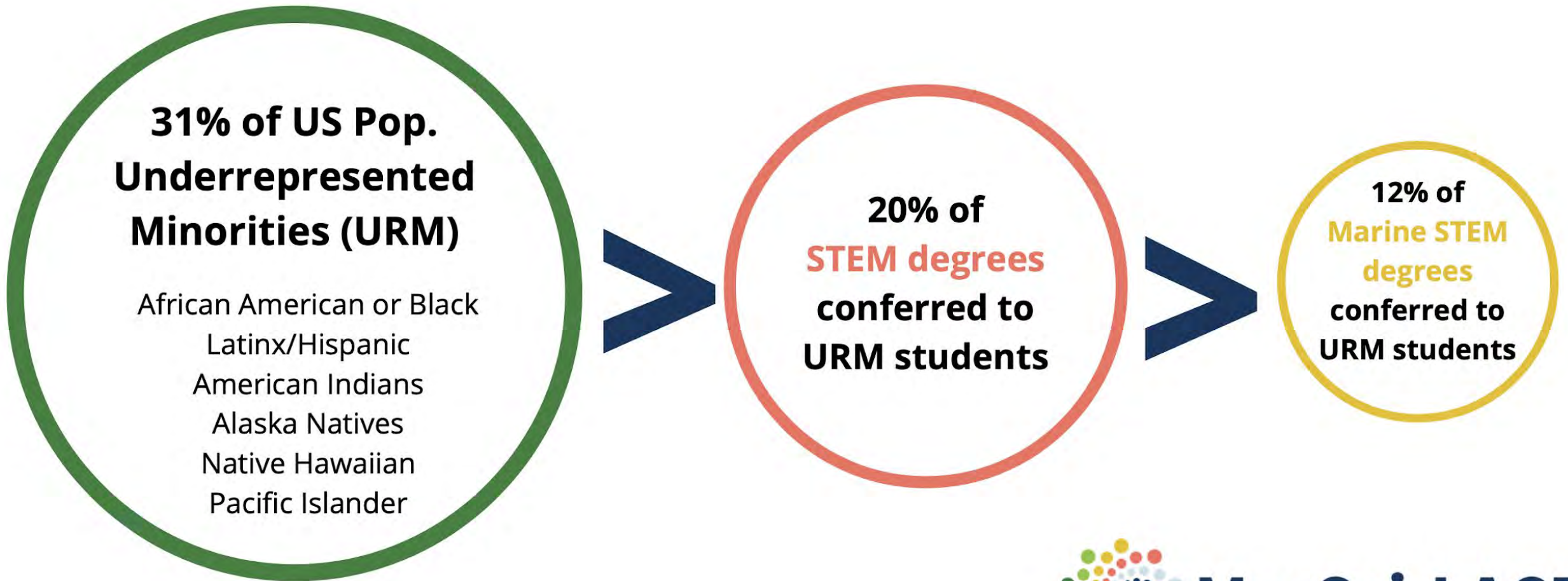


Mote Research Internship Experience

MarSci-LACE focuses on improving the experiences of underrepresented minorities.



The Need



Funding



MarSci-LACE

Marine Science Laboratory Alliance Center of Excellence

Louis Stokes Alliance for Minority Participation (LSAMP)



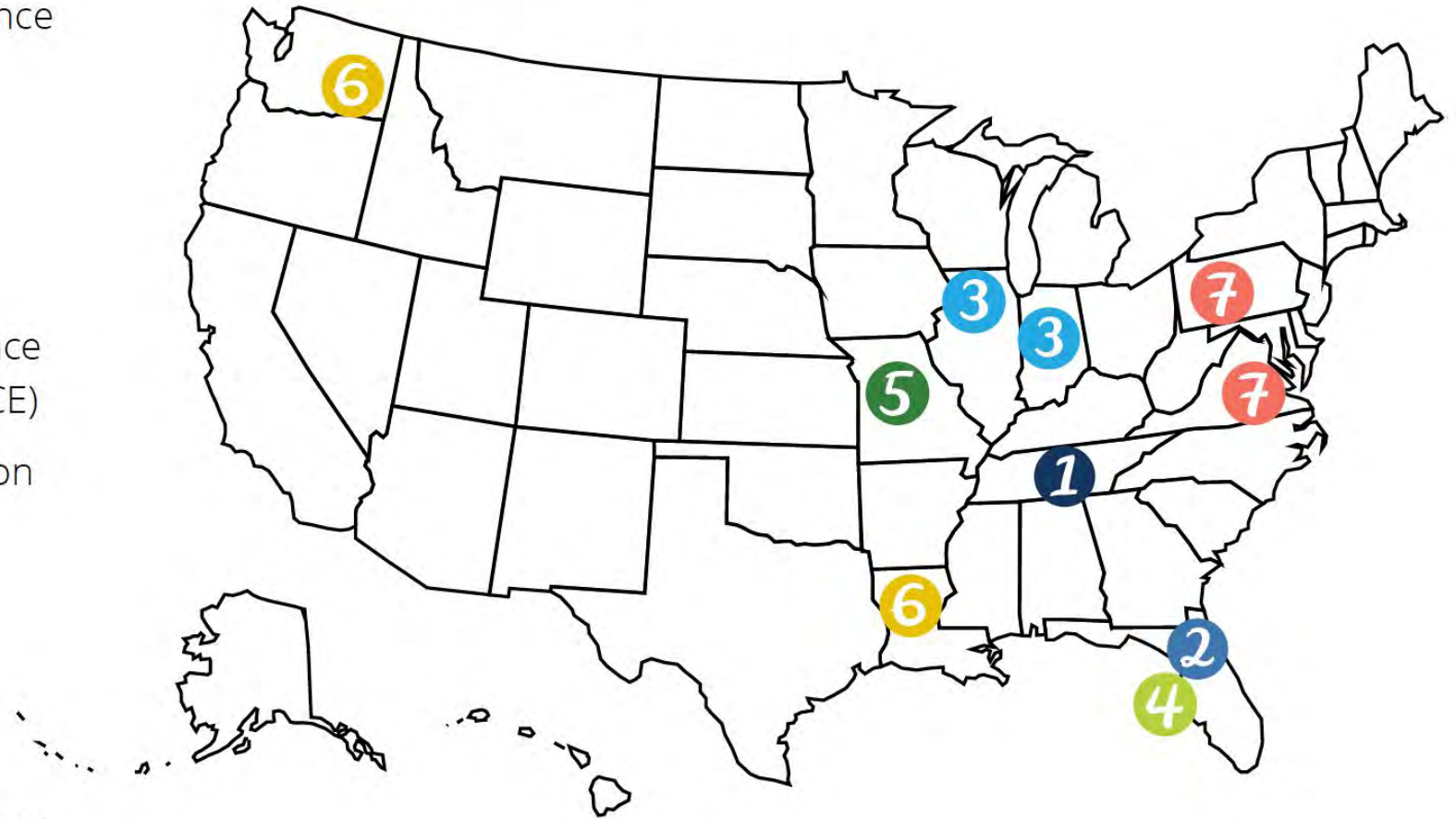
- Established in 1991
- Aims to increase minority participation in STEM fields
- Multi-level academic program
- Alliance-based program
 - 121 active awards nationwide
 - 7 Centers of Excellence for Broadening Participation



Hon. Louis Stokes

LSAMP Centers of Excellence broadly disseminate successful practices to ensure that students underrepresented in STEM can compete in today's job market.

- 1** Fisk-Vanderbilt Center of Excellence
- 2** Florida-Caribbean Center of Excellence (FL-C LSRCE)
- 3** Louis Stokes Midwest Regional Center of Excellence (LSMRCE)
- 4** Marine Science Laboratory Alliance Center of Excellence (MarSci-LACE)
- 5** Louis Stokes Center for Promotion of Academic Careers (LS-PAC)
- 6** NSF International Center of Excellence (NICE)
- 7** Southeastern Coalition for Engagement and Exchange in Nanotechnology Education (SCENE)



MarSci-LACE Grant

3 year grant for \$1.5M



Lead Institution



University
Partners



Smithsonian



Independent
Marine Research
Institution Partners

MarSci-LACE Grant

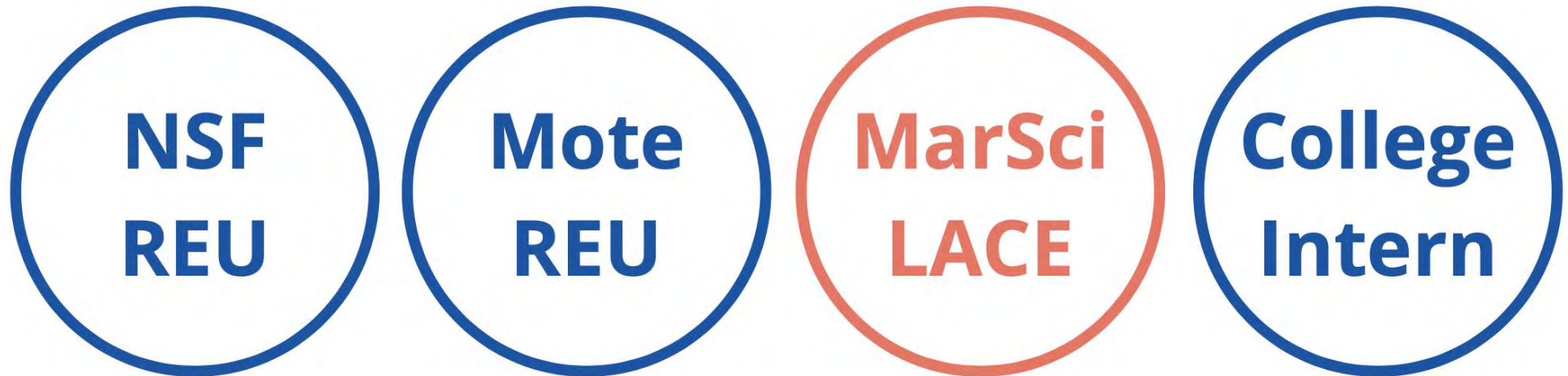
- Mote is the first non-academic LSAMP lead institution
- Only Center of Excellence award in 2019
- First marine science focused LSAMP program
- Includes support for 12-20 local interns yearly
- Building upon robust college intern program



Mote Research Internship Experience

200+ Research Interns Annually

Mote Internships offer hands-on experiences to college students in Marine science fields. Students have the opportunity to work with Mote scientists on active research projects.



REU = Research Experience Undergraduates

Our Team



Lead PI – Dr. Michael P. Crosby
President and CEO, MML



Co-PI/Project Director
Aly Busse, AVP, MML



Dr. Ashanti Johnson
Former LSAMP PI/Director



Dr. Todd Fritch
Executive VP and Provost, SCF



Dr. Jonathan Gueverra
President and CEO, CFK



Jasmin Graham
Program Coordinator

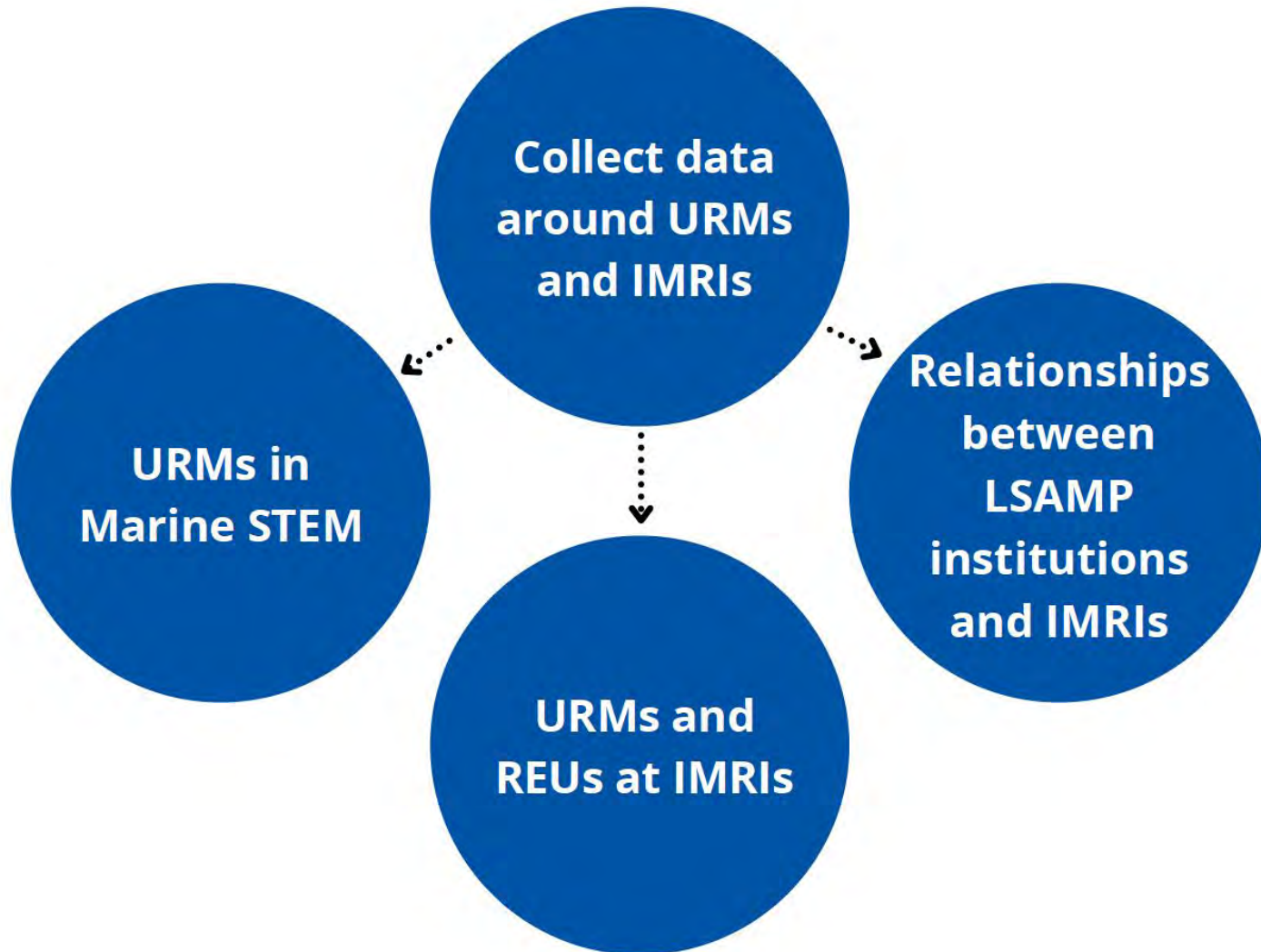


Rachel Buissereth
Information & Data Coordinator



Gina Hodsdon
Student Engagement Manager

The Big Picture

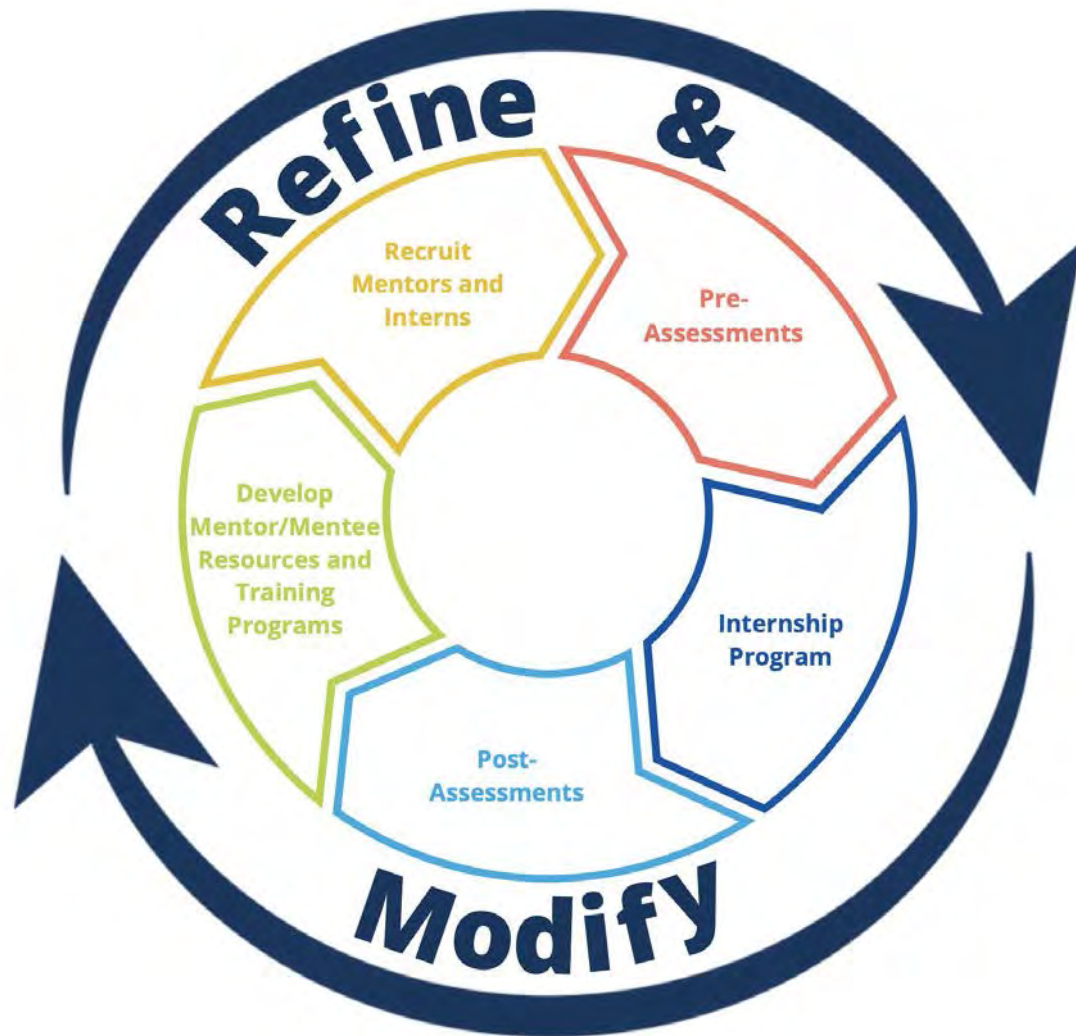


URM = Under-Represented Minority students
IMRI = Independent Marine Research Institutions
REU = Research Experiences for Undergraduates



MarSci-LACE
Marine Science Laboratory Alliance Center of Excellence

Our Methods



The program structure creates an iterative feedback-improvement cycle.

Building an Internship Experience

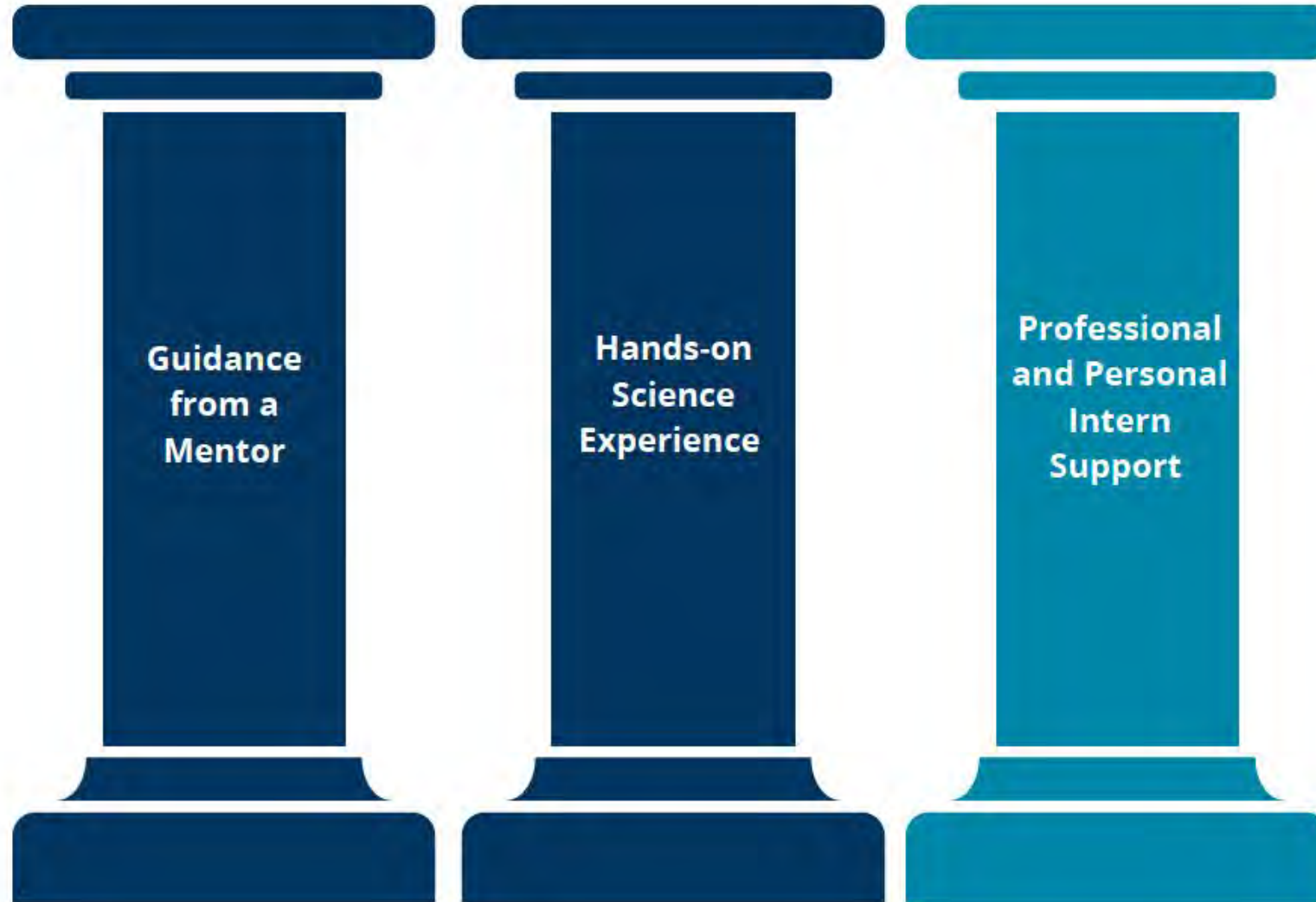
The image features three dark blue pillars standing on a white background. Each pillar is topped with a dark blue rectangular cap and has a dark blue base. The pillars are arranged in a row, and each contains white text. The first pillar on the left is labeled 'Guidance from a Mentor', the middle pillar is 'Hands-on Science Experience', and the rightmost pillar is 'Professional and Personal Intern Support'.

**Guidance
from a
Mentor**

**Hands-on
Science
Experience**

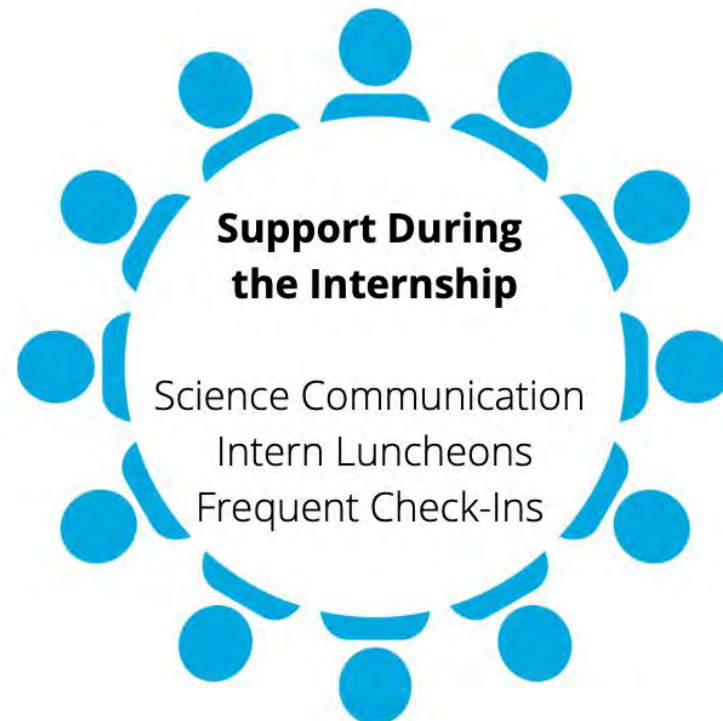
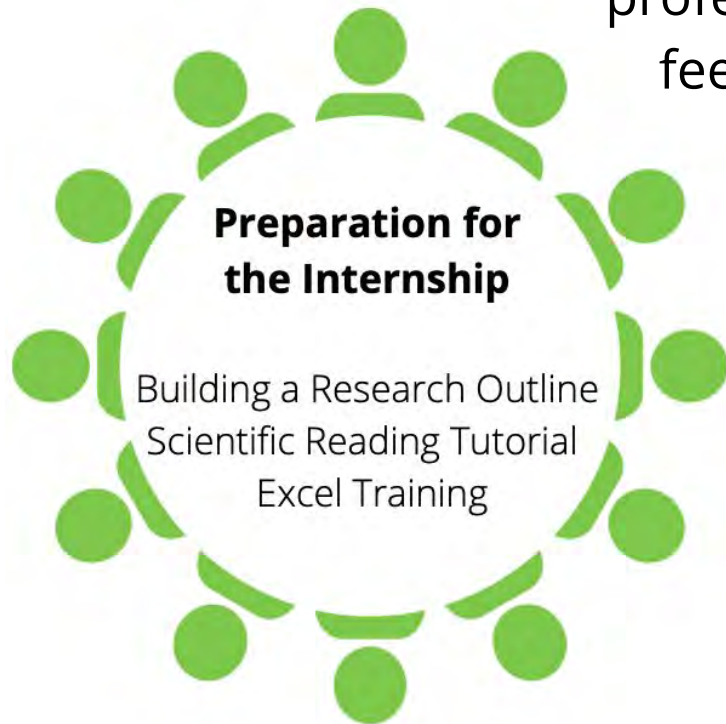
**Professional
and Personal
Intern
Support**

Intern Alliance



Intern Alliance

Intern Alliance provides the personal and professional support which interns need to feel comfortable during the internship.



Lessons Learned

- More structured approach
 - Individual Development Plan
 - Intern Resource Guide
 - Set check-ins
- Building the resource hub
- Flexibility
- Financial support
- New recruitment tools



Intern Resource Guide

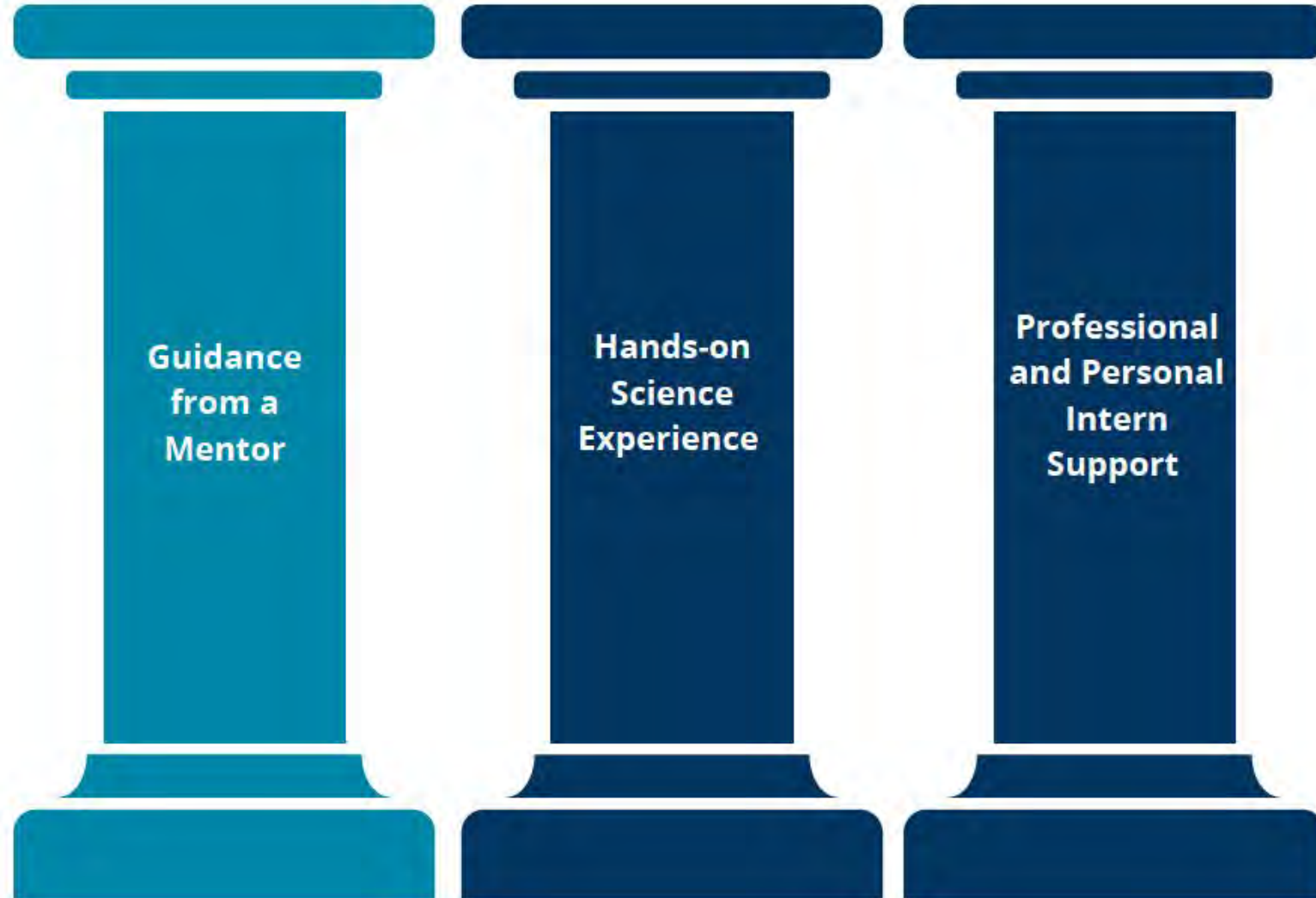
This project is supported by:



1600 Ken Thompson Pwky
Sarasota, FL, 34236
marsilace.org
(941) 388-4441 ext 449



Mentor Development



Mentor Development



Most research program directors have never attended a formal teaching or mentoring training.

The Entering Mentoring Curriculum provides a framework for mentors to set goals and build relationships with mentees.

Ally Skills Trainings

Allyship is defined as using privilege in a situation to support or amplify a person from a marginalized community. **Allyship workshops help create a supportive culture for MarSci-LACE students at marine science institutions.**

**Recognizing
Privilege**

**Micro-
Allyship**

**Being an
active
bystander**

**Bias
interrupting**

Lessons Learned

- Developing explicit mentor protocols
 - Mentor-Intern Agreement
 - Mentor Briefing
 - Mentor-Intern Check-Ins
- Increasing workshop accessibility (Virtual vs Hybrid)
- Creating mentor buy-in
- Changing the culture around internships

MarSci-LACE Data Collection

Interns

Pre Internship Survey
Post Internship Survey
Exit Interviews

Workshop Surveys
Post Internship Survey
Group Debrief

Mentors



MarSci-LACE

Marine Science Laboratory Alliance Center of Excellence

"I hope to **build a strong foundation of the fundamentals of research** that I carry with me to graduate school. I hope to use the current research I am working on now to allow me to **be successful when applying to graduate school.**"

"I hope to be able to **apply what I learn here to other science settings**. Not only how to use equipment or do different techniques, but **how to work and communicate with others.**"

"I hope to **learn as much as I can** and to be able to **feel more comfortable in a marine science setting.**"

Pre Internship Survey



MarSci-LACE

Marine Science Laboratory Alliance Center of Excellence

100%
of MarSci-LACE
Interns

felt **comfortable** at Mote.

felt **accepted** at Mote.

felt **supported** by their Mentor.

had a **positive experience overall.**

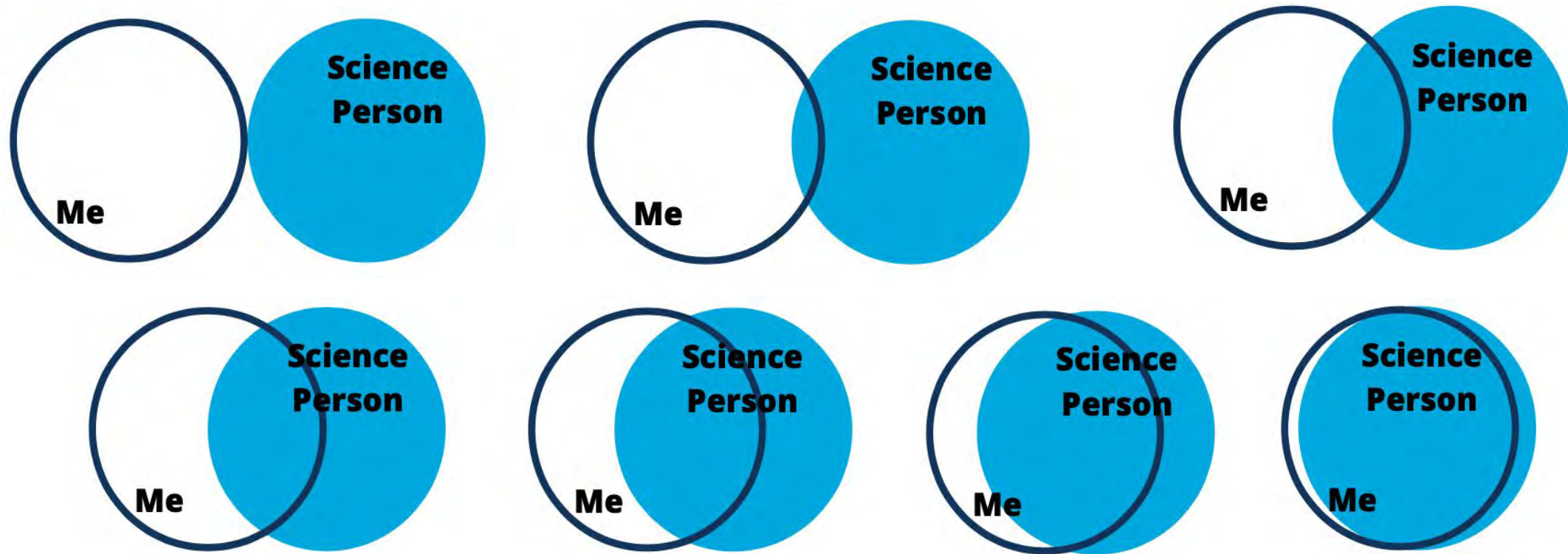
would describe their research experience as **transformative.**

Post Internship Survey



MarSci-LACE

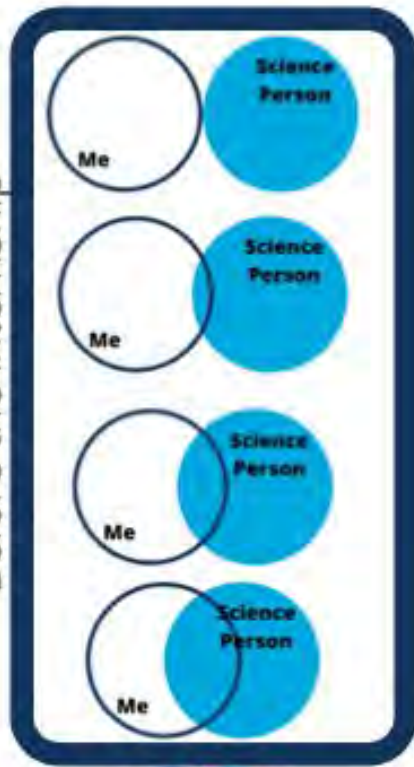
Marine Science Laboratory Alliance Center of Excellence



Science identity is described as the overlap between a person's image of themselves and their image of a science person.

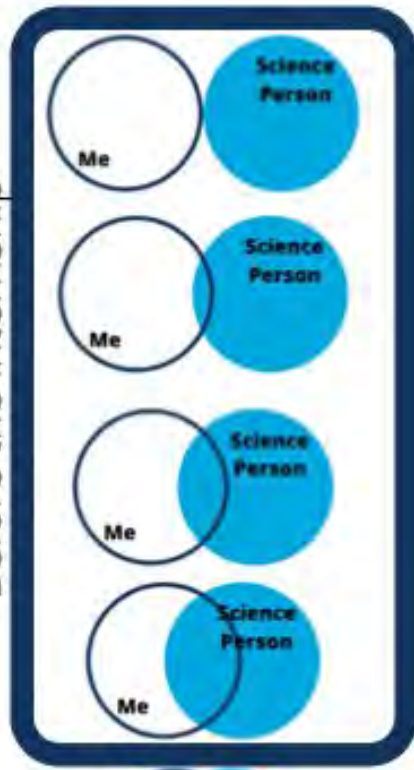
In Fall 2020, MarSci-
LACE interns **science
identity increased** over
the course of the
internship period.

Before the internship

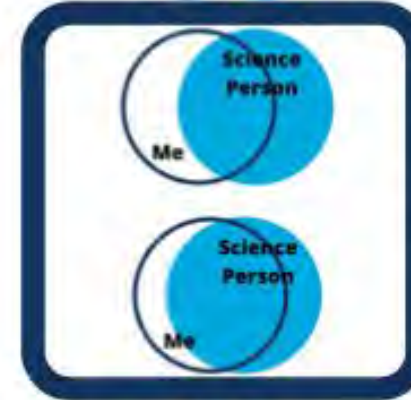
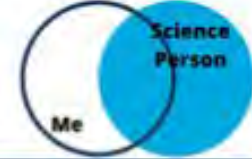
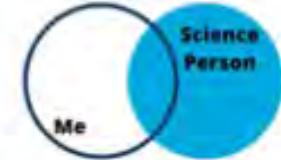
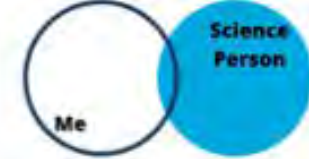


In Fall 2020, MarSci-LACE interns **science identity increased** over the course of the internship period.

Before the internship



In Fall 2020, MarSci-LACE interns **science identity increased** over the course of the internship period.



After the internship



"100 percent **above and beyond my expectations**. I was hands-on and learning every second I was in the lab."

"This has been **one of the most transformative learning experiences I have ever encountered**. Being a Freshman in college, this internship has **allowed me to jumpstart my career in research** by letting me open my first study."

"It gave me a real idea of what science looks like and **now I want to continue in this field.**"

Post Internship Survey



MarSci-LACE

Marine Science Laboratory Alliance Center of Excellence

An Intern's Journey

Before the Internship

"I would say growing up in like a black family, **I don't think they really see science, as much of a career**...I really didn't know what else there was except for computer science, having, you know, taking computer courses..."

Start of Summer 2020

"So I guess when I first got here...I was really grateful that I got in, but **I was kind of discouraged a little bit because I knew nothing about science** and everyone around me in my program, you know, they knew a lot about science because they had worked in it before"

End of Summer 2020

"I really liked it. And, you know, **I got a grip on what's done in a lab and a phytoplankton ecology lab**. And I really liked it. I'm here again. I got offered another internship."

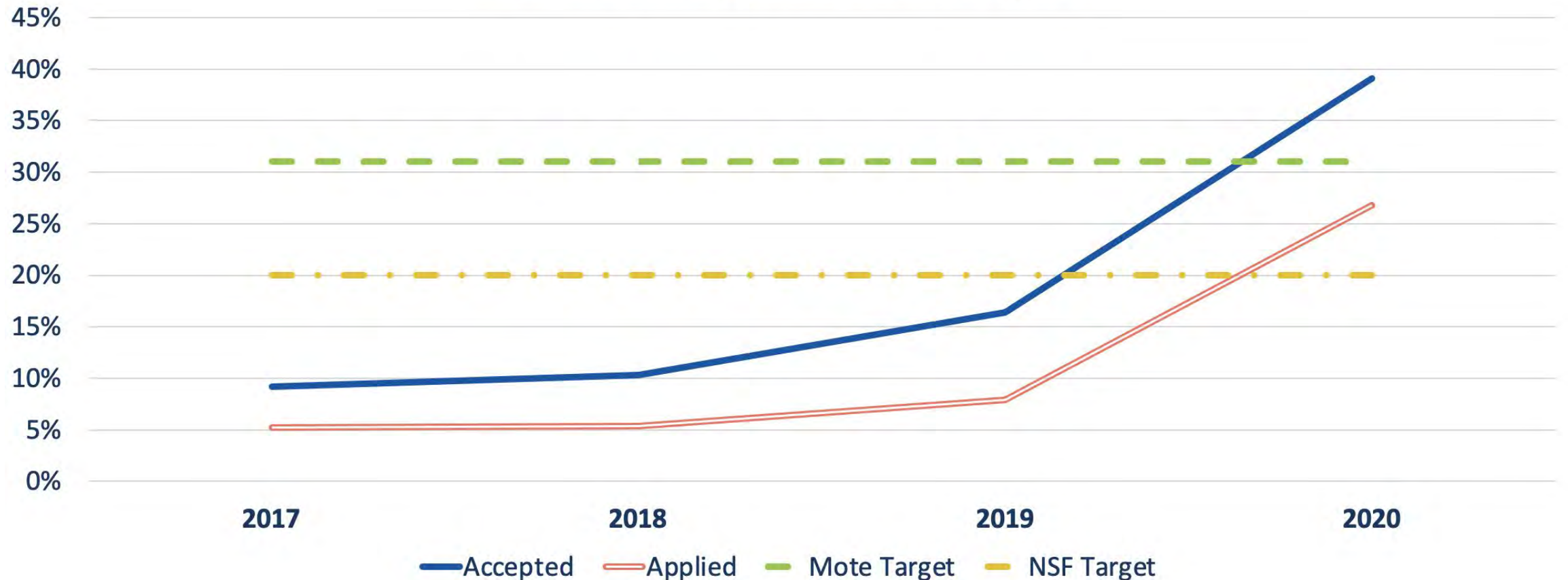
Fall 2020

"I'm really proud of myself, as to learning new things...learning how to take care and grow cultures, learning how to do cell counts...learning how to work a spectrometer, all these different things."

January 2021 - Offered a Staff Position as a Lab Technician

Increasing Intern Diversity

Percentage of Underrepresented Minority
REU Interns Applied and Accepted



40+

Staff Trained in Mentorship and Ally Skills

A word cloud graphic featuring various terms in blue and brown colors. The most prominent words are 'situations', 'studies', 'case', 'discussion', 'mentors', 'hearing', 'helpful', 'examples', and 'handling'. Other smaller words include 'relate', 'provide', 'open', 'talking', 'different', 'participants', 'real', and 'respond'.

All participants

would recommend the workshop to other Staff and mentors at Mote due to the **discussions, information, and resources.**

The majority of participants felt more confident in mentoring skills after the workshop

Building Intern Confidence

Enhancing Intern Skills

Helping Interns Meet Goals

Aligning Expectations with Interns

Active Listening

Accommodating Communication Styles

*"I loved **hearing real life examples** and how other mentors handled the situations. I would also be interested in hearing if other mentors have larger or smaller teams and **how that impacts HOW they mentor.**"*

What's Next

- Complete data collection and statistical analysis
- Expanded data collection
- Validate survey instruments and interview protocols
- Share results internally and externally existing and future networks





Visit marscilace.org to learn more!
alybusse@mote.org

