

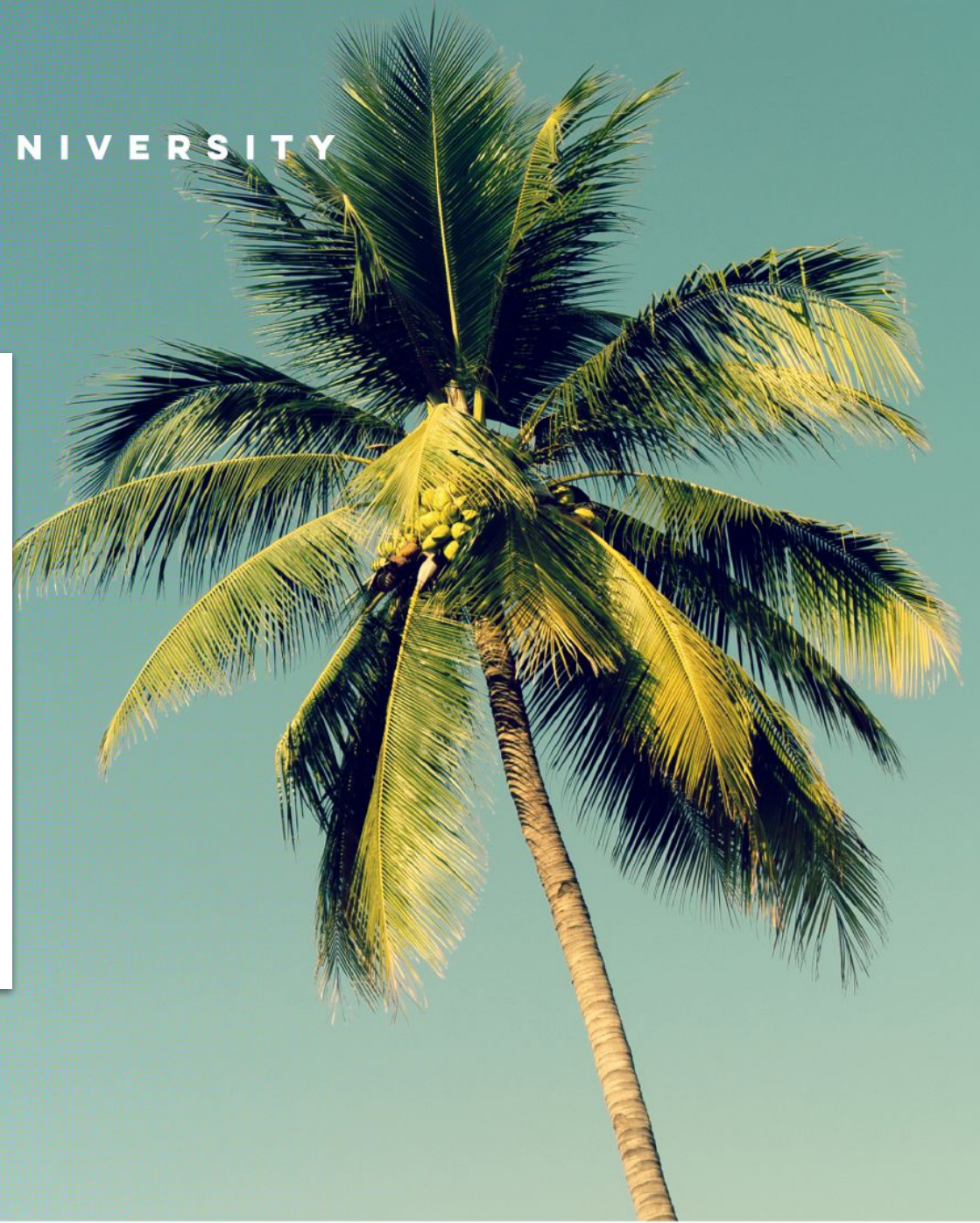


FLORIDA ATLANTIC UNIVERSITY

Supporting Faculty During a Pandemic

Creating Collaborations to Support
Undergraduate Research

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ABOUT FAU

30,000+
students

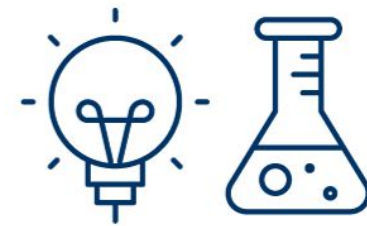


170+
degree
programs

6 campuses
across 110 miles of coastline



171,000+
alumni



award-winning
undergraduate research

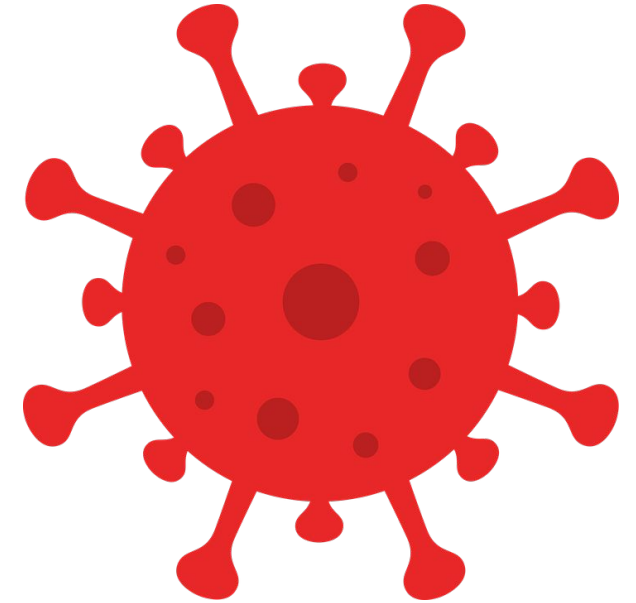
#1 most diverse
public university
in Florida



Anticipating the Issues

March 16, 2020 - FAU transitioned to remote instruction and work (3/18)

- No students on campus
- Division of Research guidance
 - Encouraged transition to remote work
 - Paused in-person human subjects research
 - Some in-person research, employees only
 - PIs submitted plans for CDC/FAU guideline adherence
 - Vast majority moved their research to fully remote work



August 21,22, 2020 – FAU reopened w/ hybrid courses, DoR issued reopening plan

- PIs prioritized key in-person data collection, graduate student thesis/dissertation work, paid research employees
- Challenge in converting research and mentorship with undergraduates



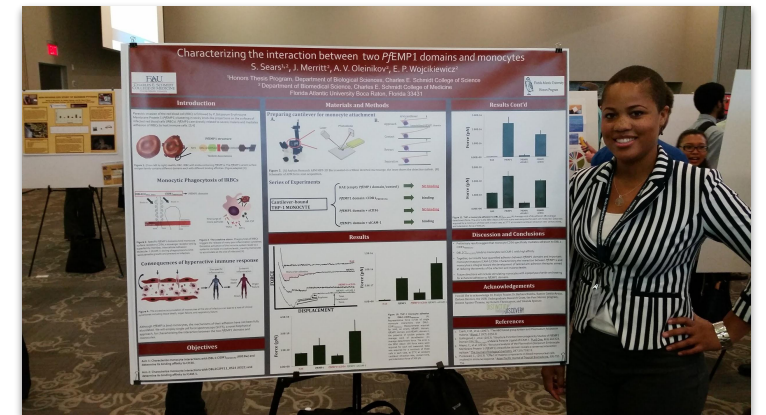
Documenting the Challenges: Faculty Survey

Institutional Survey:

- Distributed to all faculty across the university
- Total no. of faculty respondents: $n = 191$ (~20%)
- Questions related to the impact of going virtual on research and teaching

Major findings:

- 75.5% indicated they were not mentoring students in summer
- Method of mentorship: Majority of research has gone virtual ($n = 56$) with few mixed methods ($n = 5$) and very limited in-person ($n = 2$)
- The majority of respondents indicated significant impacts on their research and teaching
- Trends were observed in the specific challenges noted by faculty, which were categorized



Survey Results: *Impact on Teaching*

1. **Workload, setup, and additional time required to prep, convert and teach online resulted in a reduction of research time:** sentiments of feeling overwhelmed, stressed, and working significantly harder/more hours
2. **Technology/Lab Challenges:** technology/software uses, being able to offer hands on classes in a virtual environment
3. **Teaching effectiveness:** perception of negative impact on teaching effectiveness
4. **Concern re. Interactions/Engagements with students:** difficulties in engaging students and decreased discussions and interactions with students.
 - a. Expressed sentiments of less joy and fun in this new environment and a sense of feeling less connected to their students
5. **Concern for student well-being:** sentiments of concern regarding student hardships and how they were feeling
6. **Other:** other confounding factors (childcare, etc...)



Survey Results: *Impact on Research*

1. **Pace:** A few faculty indicated entire halts, while others (the majority) suggested that it has significantly slowed the pace down.
2. **Data Collection/Lab/Field Work:** difficulty completing field or lab work, data-collection, and research involving human subjects.
3. **Presentation/Exhibitions and Publication Delays:** cancelled events/conferences, delay in feedback from submitted materials.
4. **Travel related impediments:** international related research, Fulbright Scholarships
5. **Technology/specific equipment and access to on campus materials:** e.g. specific instrumentation, library
6. **Student concerns/motivation:** less fun, less connection with students, more challenging
7. **Other priorities, requiring more time, affecting research:** teaching, conversion to online, family, childcare, grants, etc...



Faculty Suggestions: Ways in which We Could Assist

- Communication of Research Opportunities
- Additional student and Faculty Virtual Workshops
- Technology Assistance/Access
- Resources for Conducting research online
- Resources for connecting with students and faculty
- Advocacy
- Adjust process for virtual research in Fall



Addressing the Concerns: Collaborative Effort to Brainstorm Solutions

- Established an ad-hoc working group
 - FAU Libraries, Office of Undergraduate Research and Inquiry, eLearning, Division of Research and FAU High School
- Met to look at the survey data and suggestions from faculty of ways in which we could assist
- **Action Items**
 1. Hosted *Faculty Panel Discussion* “Mentoring Students in Research: Creative Ways to Mentor during a Pandemic”
 2. Develop a *Resource Document* for faculty of best practices to facilitate faculty mentoring undergraduates in research during a pandemic.
 3. Create an *Updated Announcement* to Faculty specific to re-engaging undergraduates in research



1. Faculty Panel Discussion - the setup

- Hosted “Mentoring Students in Research: Creative Ways to Mentor during a Pandemic”
- **Goal:** assist faculty whose research and mentorship of undergraduates were impacted by going virtual
- Panelists from Arts & Letters, Social Work & Criminal Justice, Science, Medicine
- Discussion topics:
 1. How have you engaged undergraduate students in **virtual research projects** this past summer?
 2. What **barriers** do you see, or have you experienced to creating/mentoring undergraduate students on virtual projects?
 3. What **resources** have you found most helpful in making the transition to virtual projects?



1. Faculty Panel Discussion - the outcomes

- 54 attendees
- Attendee questions for panelists
 - How to efficiently manage teams in a virtual environment
 - Apps/software to facilitate engagement
 - How are other faculty managing the situation
- Take-homes from discussion
 - Faculty assessed what portion of projects can be done at home
 - Data analysis, ceramics glaze testing
 - Support students going through a difficult time first
 - Leverage technology - research & communication



2. Resource document

- Collaboratively developed resources document
- Shared with all webinar participants

Included:

- Open-source datasets
- FAU-generated datasets
- Citizen research projects
- Secure data sharing tools
- Tips on creating a community of inquiry
- Software to support remote engagement
 - TeamViewer, SPSS
- Virtual student research training resources
 - Ethics, safety, coding
- Remote engagement tools
 - science simulations, online polling
- Library services
- Suggestions for alternative research projects



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Resources to facilitate faculty-mentored undergraduate research during COVID-19

FAU's Office of Undergraduate Research and Inquiry (OURI), in collaboration with the Division of Research, E-Learning, University Libraries, FAU High School and the OURI Faculty Liaisons have teamed up to provide resources to faculty whose research and mentorship of undergraduates have been impacted by going virtual during COVID-19. Below you will find resources organized by categories.

Open-source data-sets

1. [Pew Research Center's](#) datasets available for secondary analysis
2. [National Institutes of Health-National Library of Medicine](#) supported domain-specific data repositories
3. [National Science Foundation's](#) open data sets
4. NASA: <https://nasa.github.io/data-nasa-gov-frontpage/>
5. Data.gov: <https://www.data.gov/>
6. Morphosource: <https://www.morphosource.org/>
7. NOAA: <https://www.ncdc.noaa.gov/cdo-web/datasets>
8. Recreational fishing datasets from NMFS: <https://www.fisheries.noaa.gov/recreational-fishing-data/recreational-fishing-data-downloads>
9. Google to find more datasets from almost any governmental organization!
10. [National Center for Educational Statistics](#)
11. [JMP statistical analysis program](#), there is a free student version with datasets
12. [Wolfram Data Repository](#), public resource of an expanding collection of computable datasets across domains
13. [OpenData CERN](#), open data on particle physics

FAU-generated datasets

1. [FAUHS Owls Imaging Lab](#) datasets - access already collected data OR have your specimens scanned/imaged, contact owlsimaginglab@fau.edu for more information
 - a. Micro-CT scans (3D x-rays) of reptiles, amphibians, fishes
 - b. Scanning Electron Microscopy image datasets of plants, fish, and more

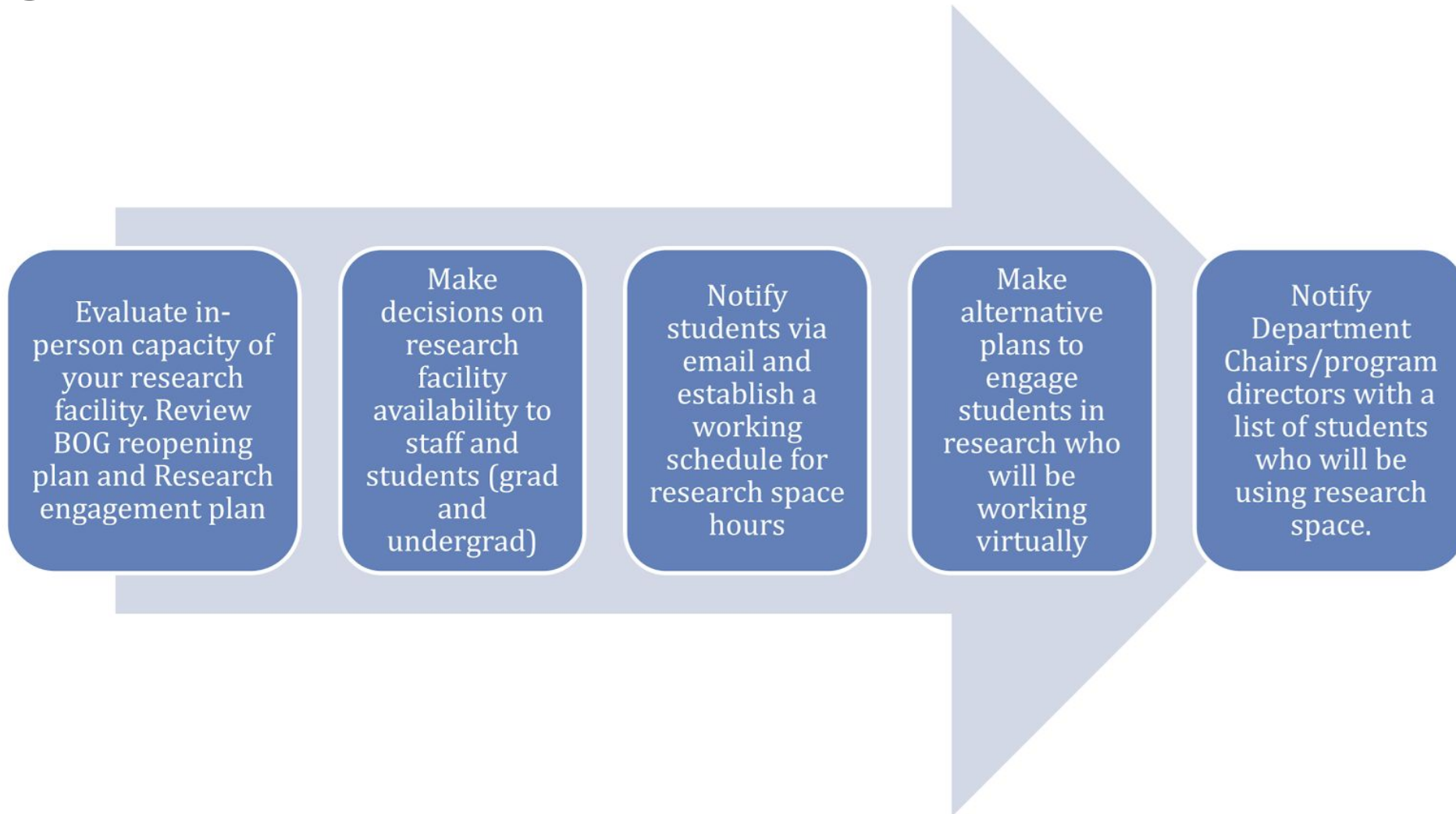
Citizen Science Projects

1. [SciStarter](#) - for projects. You can "Find Projects" by age group or topic
2. [NASA Citizen Science Projects](#)
3. [Zooniverse Projects](#) - people powered research projects

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3. Updated Announcement: Steps for Faculty to Re-engage Undergraduates in Research



Take Home Ideas

- **Identify the Need:** Reach out to your Faculty and Students
- **Prioritize the Needs and Identify Limitations:** What can we do feasibly
- **Leveraging Resources:** Collaborate to identify solutions (e.g. eLearning)
- **Communications specific to Undergraduate Research**



** Our resources document will be shared



Acknowledgements

- FAU OURI
 - Jennie Soberon, Tracy Baker, Jordan Merritt, Patricia Sampedro
- FAUHS Research Program
 - Jasmine Coyle, Alexandra Lolavar, Jennifer Krill
- FAU Division of Research
 - Karin Scarpinato
- FAU Libraries
 - Maris Hayashi, Victoria Thur
- FAU Center for E-learning
 - Julie Golden-Botti, Abigail Perkins



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