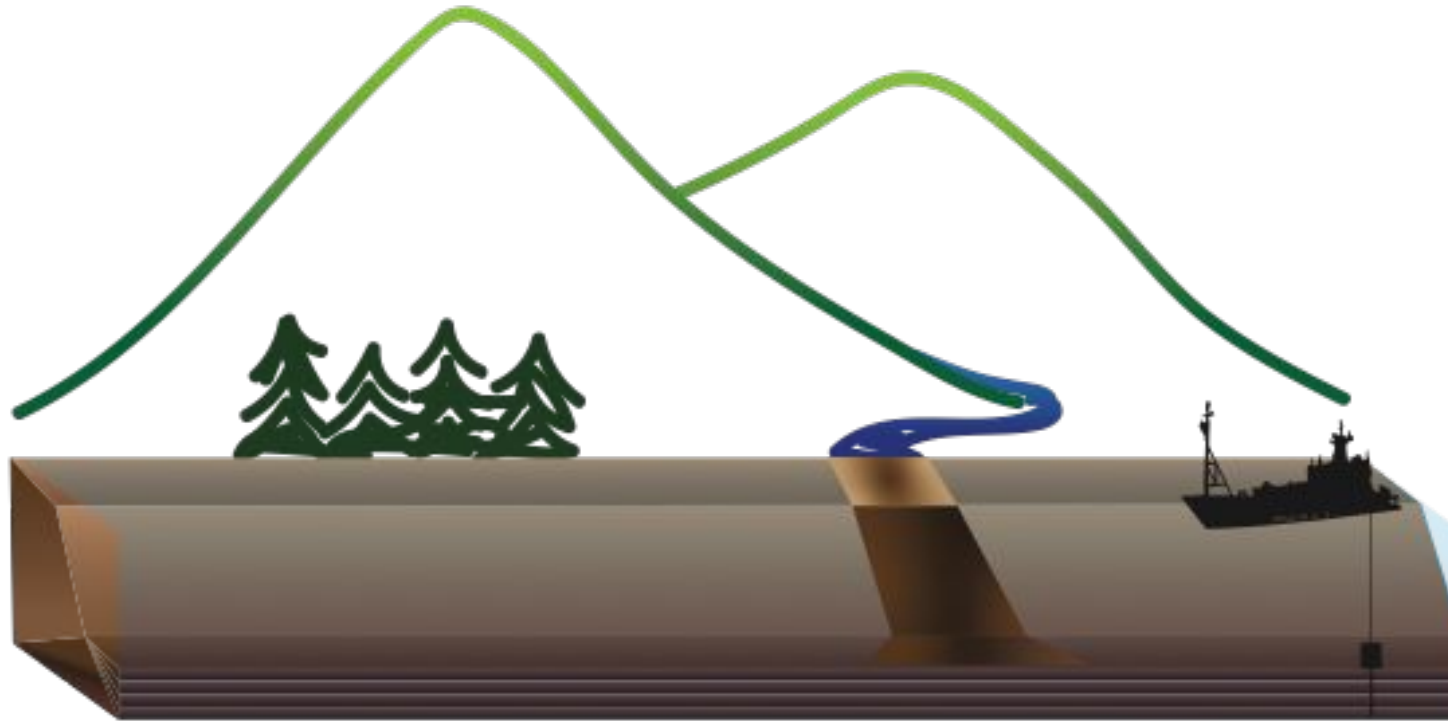


# RR2208

## Coring Principle Investigator Training Workshop and Cruise



**Oregon Cascadia Margin, R/V Roger Revelle August 2022**

### Hosts:

Maureen Walczak, OSU/MARSSAM  
Mitch Lyle, OSU/MARSSAM  
Chris Goldfinger, OSU/MARSSAM  
OSU Marine and Geology Repository

### Mentors:

Liz Sikes, Rutgers  
Ross Parnell-Turner, SIO  
Jeff Beeson, OSU  
Evan Solomon, UW  
Niall Slowey, TAMU  
Lloyd Keigwin, WHOI  
Jerry McManus, LDEO



# How do we prepare NSF PI's to capitalize on UNOLS Oceanographic Facilities?

- **Training format:**

- 7-day workshop at OSU MGR
- 10-day cruise aboard R/V Roger Revelle
- 3-day cruise post-mortem at OSU MGR

**24 participants from 22 institutions**

- **Representation:** 44% of participants were women, 36% were demographic minorities underrepresented in ocean geoscience

- **Applications:** advertised through UNOLS, Twitter, and professional listservs

- **Career stage of selected applicants:**

- 11 Early/mid career faculty (Assistant or Associate Professor)
- 11 Post-docs or transitioning to post-doc positions
- 2 graduate students with leadership roles in upcoming cruises

**PARTICIPANTS**



Sajjad Abdullajinlakam  
Iowa State University



Chandranath Basak  
University of Delaware



Ashley BurkeLL  
Oklahoma State University



Matthew Costa  
Scripps Institute of Oceanography



Robert Hatfield  
University of Florida



Lisa Herbert  
Rutgers University



Andrew Montgomery  
Montana State University



Margarel Morris  
Scripps Institute of Oceanography



Jonathan Obrist  
Missouri University of Science and Technology



Davide Oppo  
University of Louisiana



Gerard Oriniano  
University of Toronto



Summer Praetorius  
U.S. Geological Survey



Brendan Reilly  
Scripps Institute of Oceanography



Valerie Sahakian  
University of Oregon



Weimin Si  
Brown University



Andrew Steen  
University of Tennessee



Allyson Tessin  
Kent State University



Amy Wagner  
California State University Sacramento



Elizabeth Wallace  
Rice University



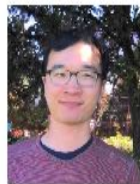
Yi Wang  
Woods Hole Oceanographic Institution



Carol Wilson  
Louisiana State University



Adam Woodhouse  
University of Texas



Yuxin Zhou  
Lamont-Duherly Earth Observatory

# Workshop Organization

## Mon 8/15 - Introduction to training and facilities

Intro to UNOLS - *Doyle*

Facilities: MARSSAM - *Pisias*

Visual seafloor imaging/MISO - *Fornari*

Imaging with sound - *Goldfinger*

ARF ships and systems - *Walczak*

## Tues 8/16 - Site survey and selection

GeoMapApp - *Lyle*

QGIS, Lamont Seismic Database - *Parnell-Turner*

Legacy bathymetric data access and processing - *Goldfinger/Beeson*

## Weds 8/17 - Repositories and non-destructive analyses

Coring data sheets and shipboard metadata curation - *Cheseby/Fritz/Stanley*

Shipboard core processing (splitting, describing, archiving) - *Cheseby/Fritz*

Non-destructive measurements: MSCL systems - *Slowey*

Non-destructive measurements: XRF - *Lyle*

Non-destructive measurements: CT scanning - *Goldfinger*

Non-destructive measurements: Coring artifacts and deformation - *Walczak*

Online databases/repositories - *Cheseby/Fritz/Stanley*

## Thurs 8/18 - Basic core processing

Core curation and the utility of legacy cores - *Lyle*

Science intro to TT1811 - *Slowey*

Core description and curation training - *All mentors/curators*

## Fri 8/19 - Cruise planning

Practical considerations of cruise planning - *Sikes*

UNOLS MFP - *Doyle*

Pre-cruise meeting preparation - *Durham*

Present and review RR2208 cruise plan - *Goldfinger*

## Saturday 8/20 - Putting it all together

Work in small groups, design and present a cruise plan

## In-person and virtual presentations



## Useful software exposure



## Hands-on training



## Participant-led proposal development



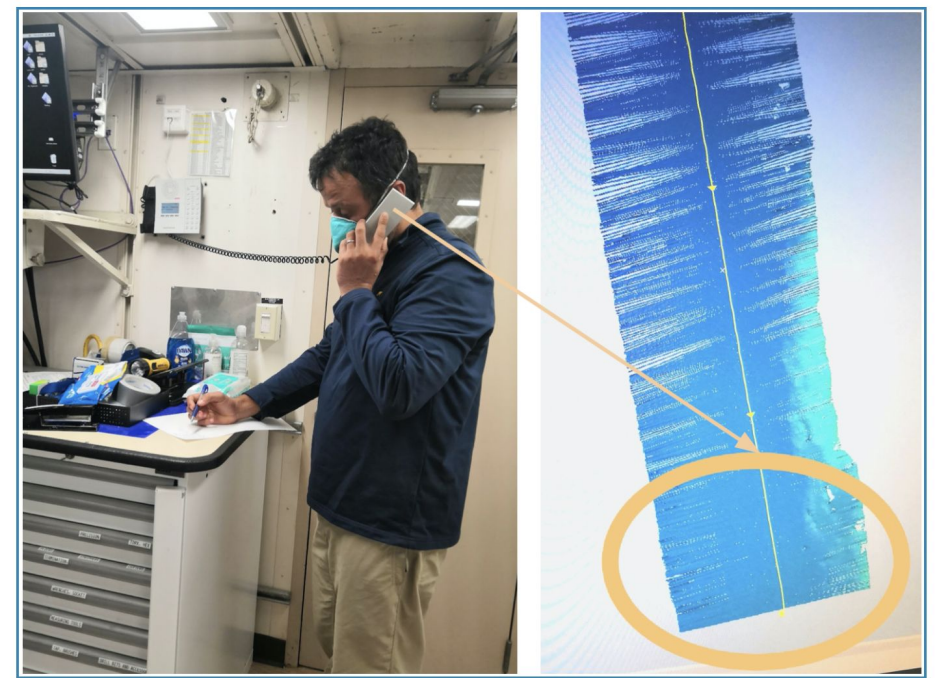
# RR2208 – 10-day Coring Cruise

<https://atquake.wordpress.com/2022/08/23/coring-cruise-training-on-the-rv-roger-revelle/>

*Good Morning!*  
Dark and early in the morning, Watch 3 is up at 3am, ready to survey as we approach our first coring target.

An interesting lesson was learned in the early morning. [Jeff Beeson](#), our geophysical lead and expert noticed that the bathymetry data we had been recording was quite patchy. [Chris Goldfinger](#), the chief scientist, suggested two possible causes: (i) The ship's autopilot mode can be set to aggressively stick to its path, causing the boat to constantly readjust its heading in a way that affects the quality and continuity of multibeam data acquisition and/or (ii) Sensitivity settings could use some changes.

Once he had explained the situation to us, Chris suggested that our Watch 3 Lead, Jonathan, communicate with the captain's deck to request an autopilot mode adjustment. We adjusted the multibeam sensitivity as well.



*Communication is Key*  
Jonathan calls the bridge to request a change in autopilot settings. Once the settings are adjusted, gaps in the bathymetry data decreased significantly.

Within just a few minutes, voila!, we could see the difference. The data became much better and continuous! This was an awesome lesson about how effective communication between the scientists on board and the bridge crew can make a big difference.



# Post-workshop Feedback



Improved awareness of UNOLS Facilities?



**“This workshop allowed me to see new opportunities and avenues of research in marine geosciences.”**

Improved ability to access legacy data?



Improved understanding of coring equipment?



**“I wish I could take it again. Not because I need it for training, or that something wasn't covered/explained, but because it was such a good experience.”**

**“I have already started to work on new projects which will lead to future collaborations as a direct result of this workshop.”**

Improved understanding of geophysical tools?



Improved confidence using multibeam + chirp?



Improved awareness of NSF core repositories?



**“Hard to describe how much I learned in this training, and how glad I am to have had it before Chief Sci-ing coring cruises.”**

Network expansion and collaboration building?



Increased confidence in coring cruise leadership?



Would you recommend this training?



**“All budding PIs should take this**

