

Introduction to High-Performance Computing Bootcamp Kick-Off

August 7, 2023

Mary Ann Leung, Ph.D.

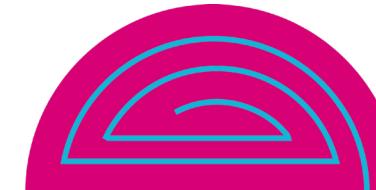
Sustainable Horizons Institute



U.S. DEPARTMENT OF
ENERGY

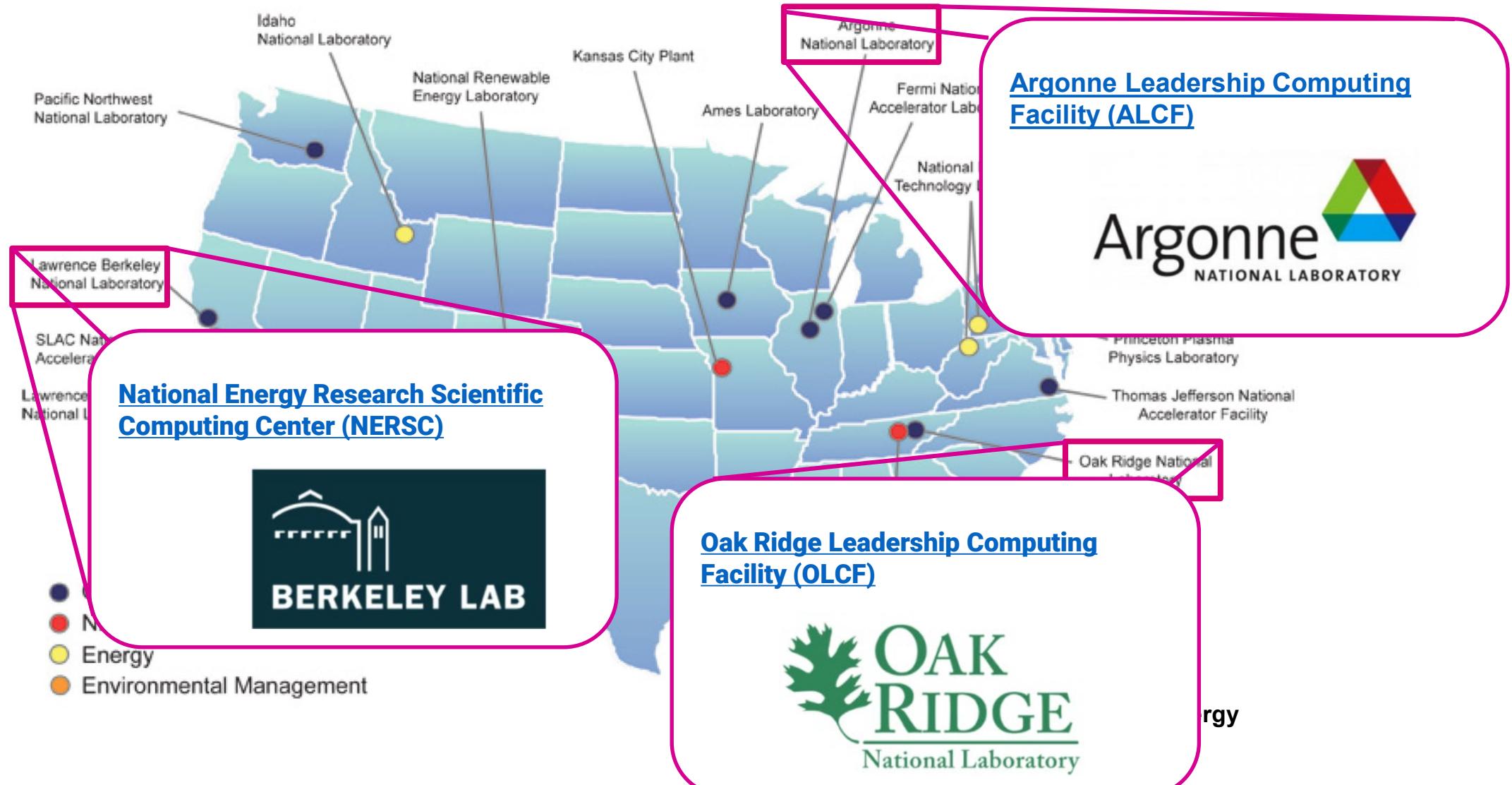


EXASCALE
COMPUTING
PROJECT



SUSTAINABLE HORIZONS INSTITUTE

Intro to HPC Organizers, Project Leaders, and Trainers



Getting to know each other

- Poll:
<https://pollev.com/maryanneung407>

Note: information you share through this poll will remain anonymous and will not be shared or stored



Introduction to HPC Bootcamp

- Goals
- How the bootcamp was designed/organized
- The week at a glance
- Bootcamp resources
- Who we are
- The opportunities

Today

1)

2)

3)

4)

Intro to HPC Goals

1

Raise general awareness of the value, benefits, and rewards of work in high-performance computing (HPC), especially at DOE labs.

2

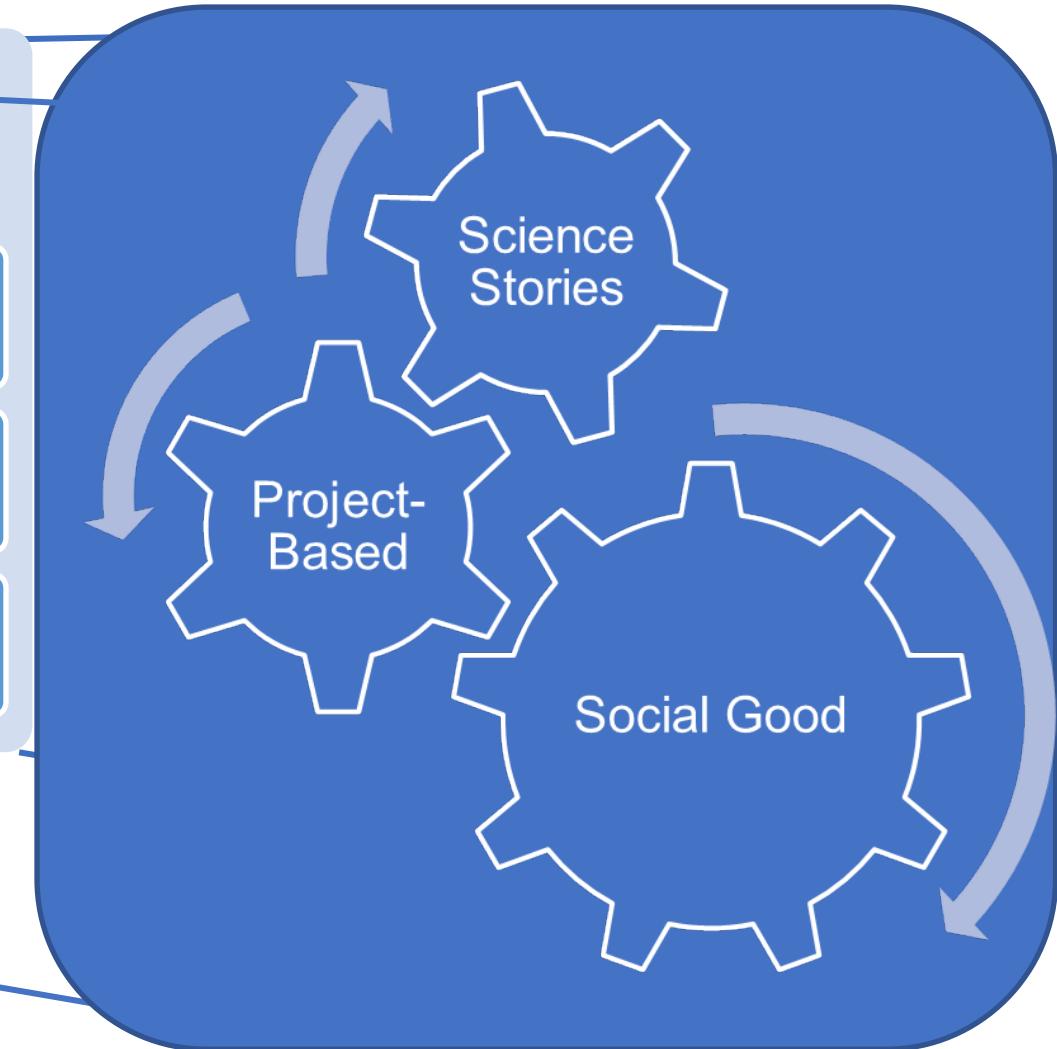
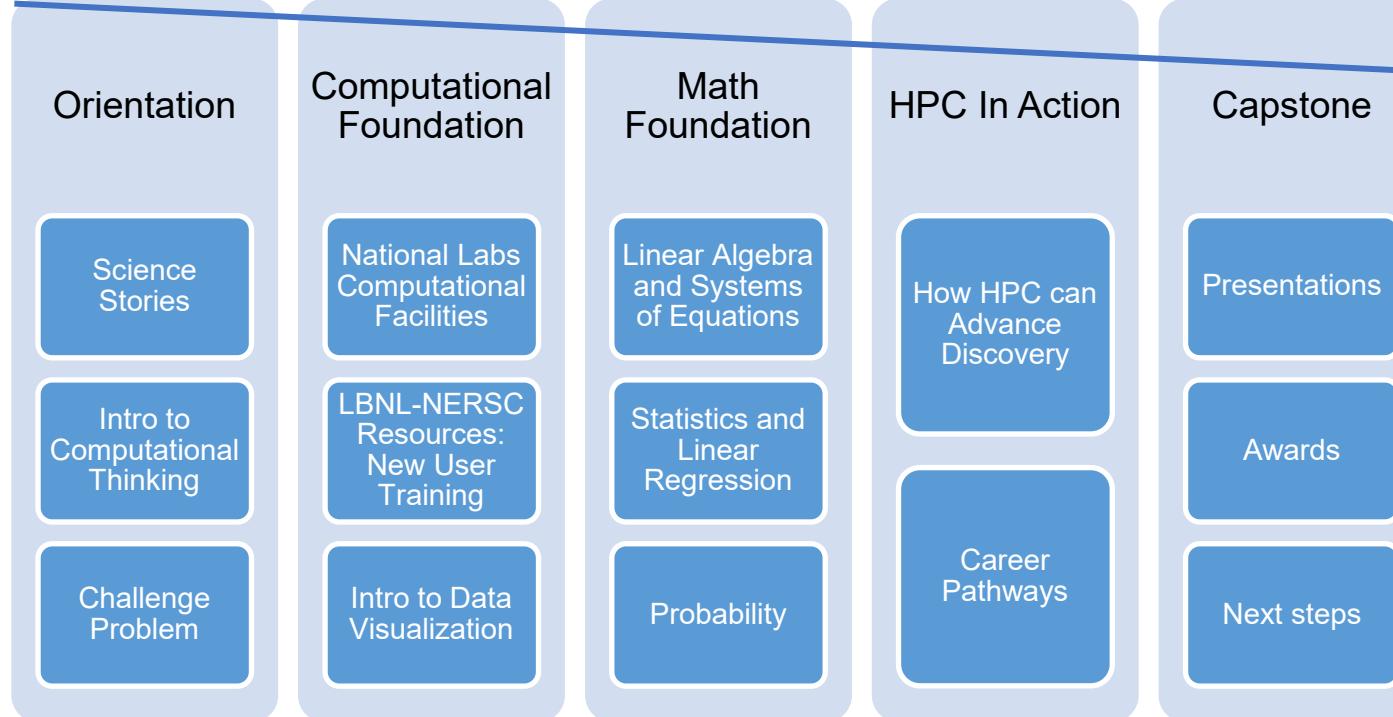
Engage more people from historically underrepresented groups, including those with no (or limited) HPC exposure; include a broader set of disciplines in the HPC community.

3

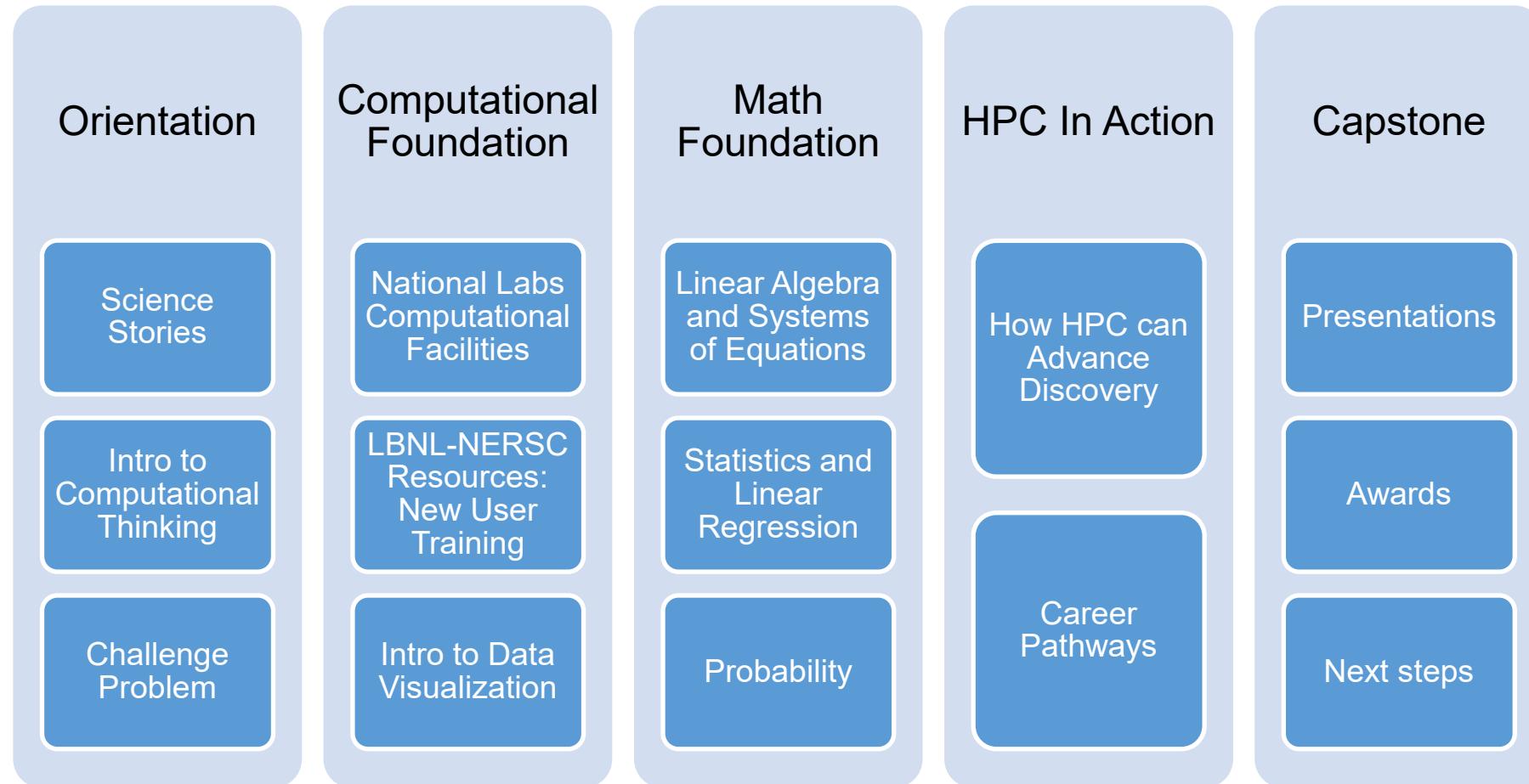
Increase the available talent to do work in HPC and computing sciences overall, including skilled researchers, software developers, systems administrators, and more.

Designed for students new to high-performance computing & prepare for internships

Solving problems with positive social impact: Energy Justice Project Based Learning



Week at a Glance/Highlights



Intro to HPC Bootcamp

<https://shinstitute.org/energy-justice-bootcamp-2023/>

- 7 Energy Justice Projects
- 14 Project Leaders & Trainers
- 60 Students from 22 states
- 10 Peer Mentors
- >20 Organizers & Guest Speakers

Intro to HPC Bootcamp Central Resource Site

Welcome to the Introduction to High-Performance Computing Bootcamp (Intro to HPC Bootcamp) Website!

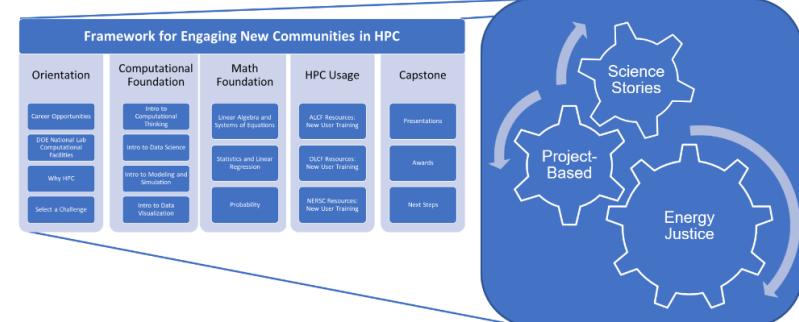
Intro to HPC Bootcamp is an immersive program designed to provide students in STEM with hands-on experience working on energy justice projects using state-of-the-art computational and data science tools and techniques. Through this bootcamp, students examine and explore issues related to the social impacts of topics such as: climate risk and resilience, solar power, sustainable cities, energy usage.

This page provides Intro to HPC Bootcamp participants (staff and students), with the information needed for a successful Bootcamp experience.

The bootcamp hosted by the Department of Energy (DOE) Advanced Scientific Computing Research (ASCR) Computing Facilities at Argonne National Lab (ALCF), Lawrence Berkeley National Lab (NERSC), and Oak Ridge National Lab (OLCF) and organized by Sustainable Horizons Institute will take place on August 7-11, 2023.



Framework for Engaging New Communities in HPC: Solving problems with positive social impact



[Intro to HPC: Energy Justice Projects](#)

[Intro to HPC: Project Leaders and Trainers](#)

[Intro to HPC: Speakers, Organizers, and Other Leaders](#)

[Participant List](#)

[Peer Mentor List](#)

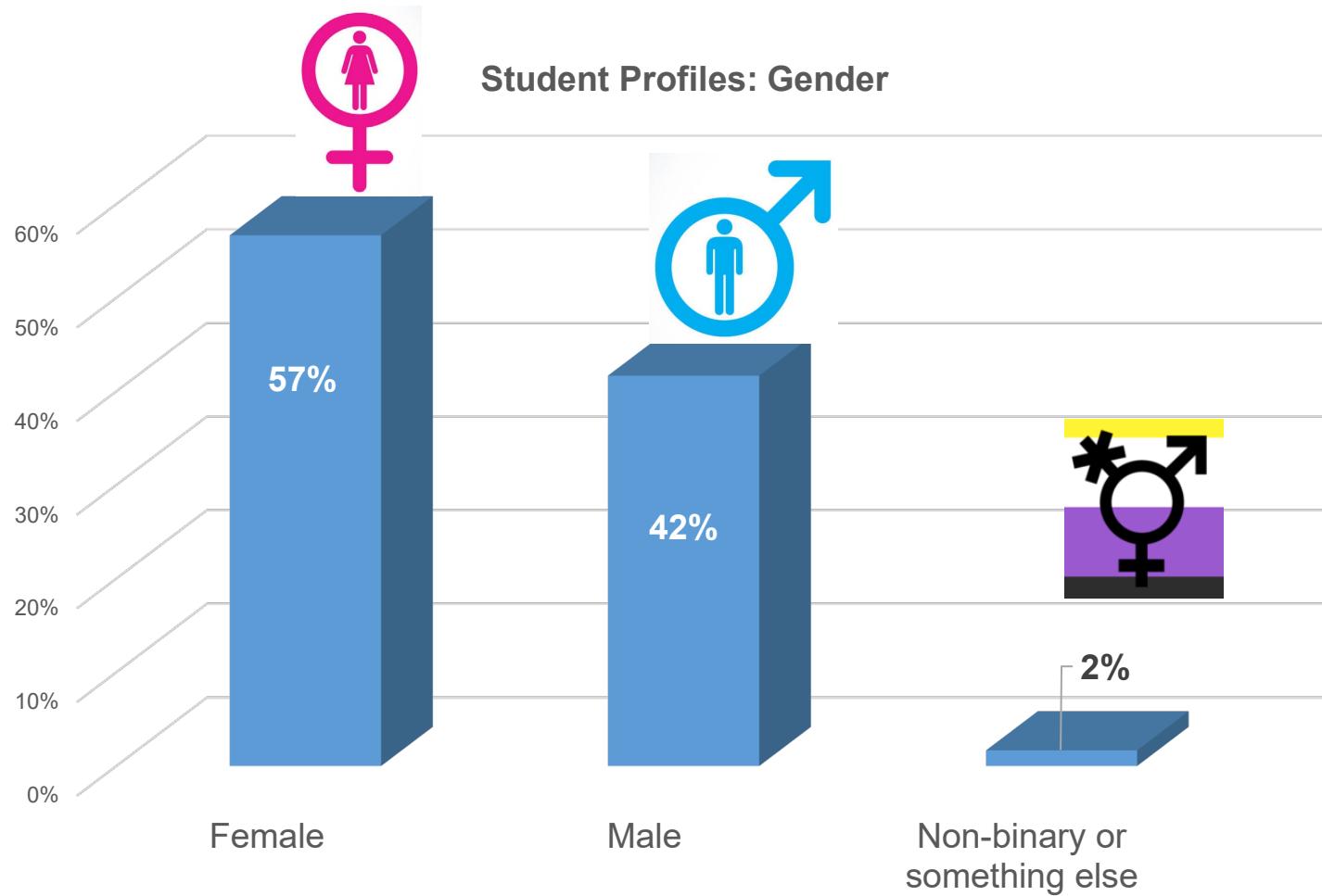
Logistics

Lodging: Hotel Shattuck Plaza
Intro to HPC Bootcamp Bus
Local transportation

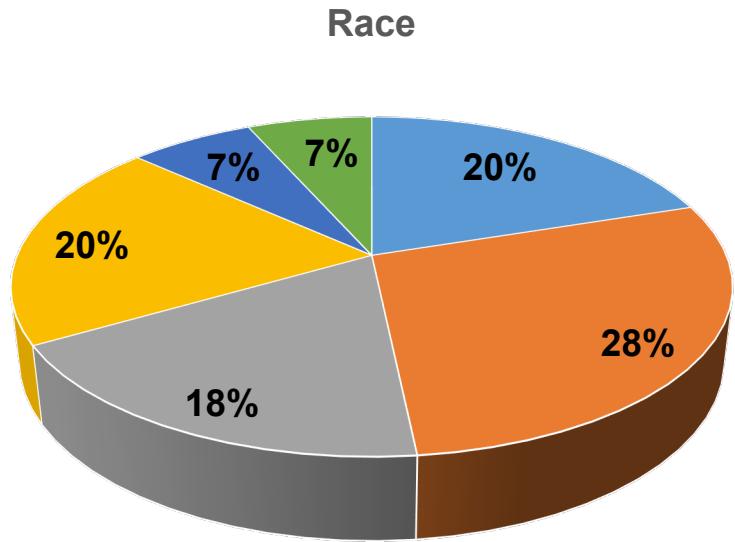
Resources

[Agenda](#)
[NERSC Intro to HPC Bootcamp GitHub Repo](#)
[Slack](#)
[NERSC User Account Information](#)

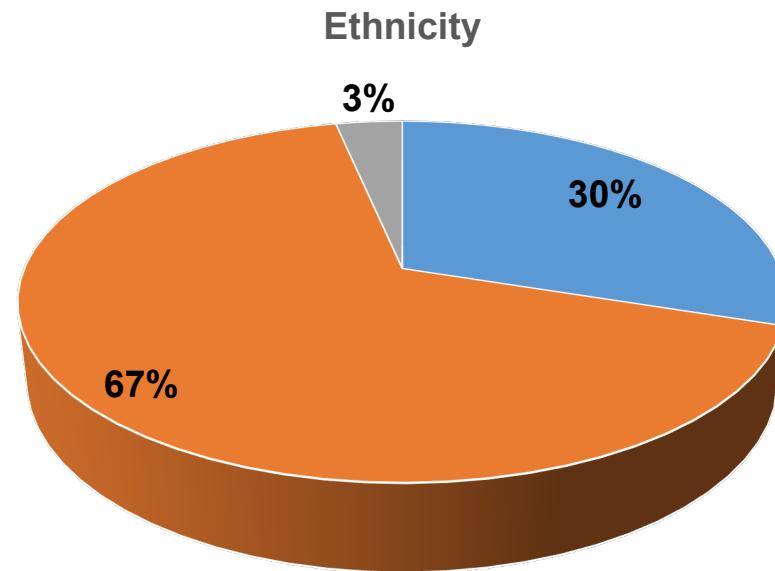
Getting to know you...student profiles



Getting to know you...student profiles

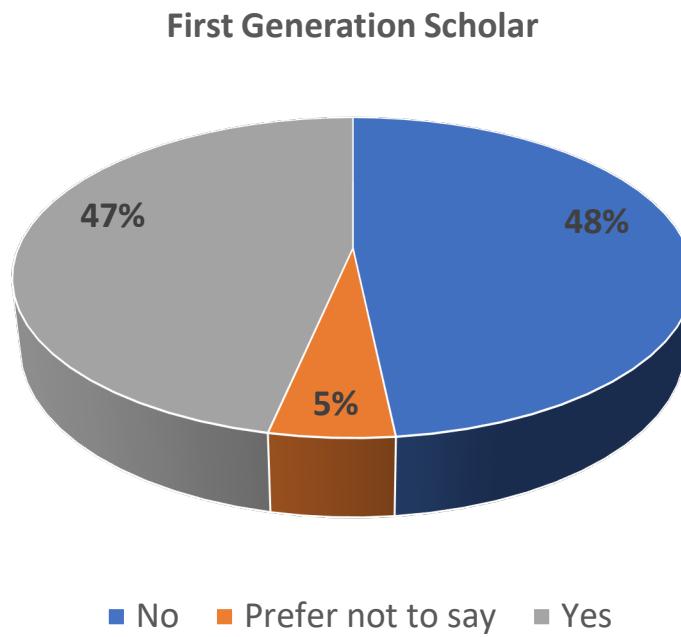
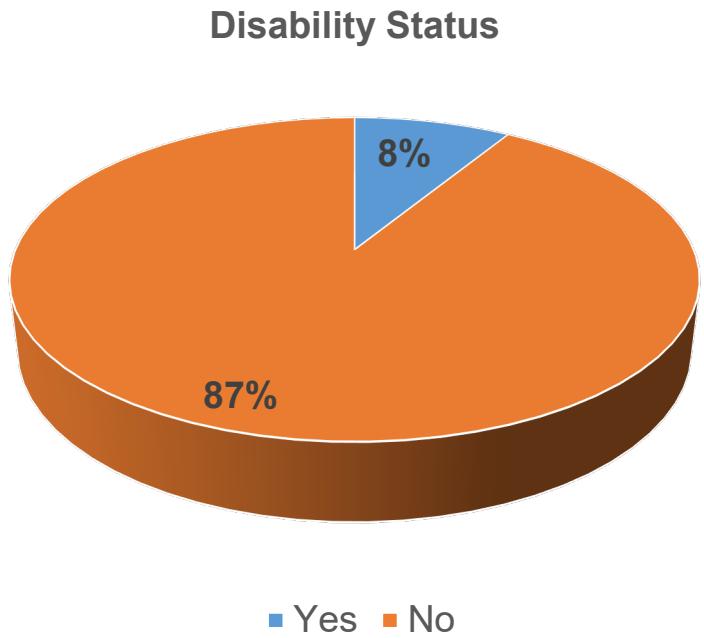


- Asian
- Caucasian
- other
- Black or African American
- Multiple
- Prefer not to say

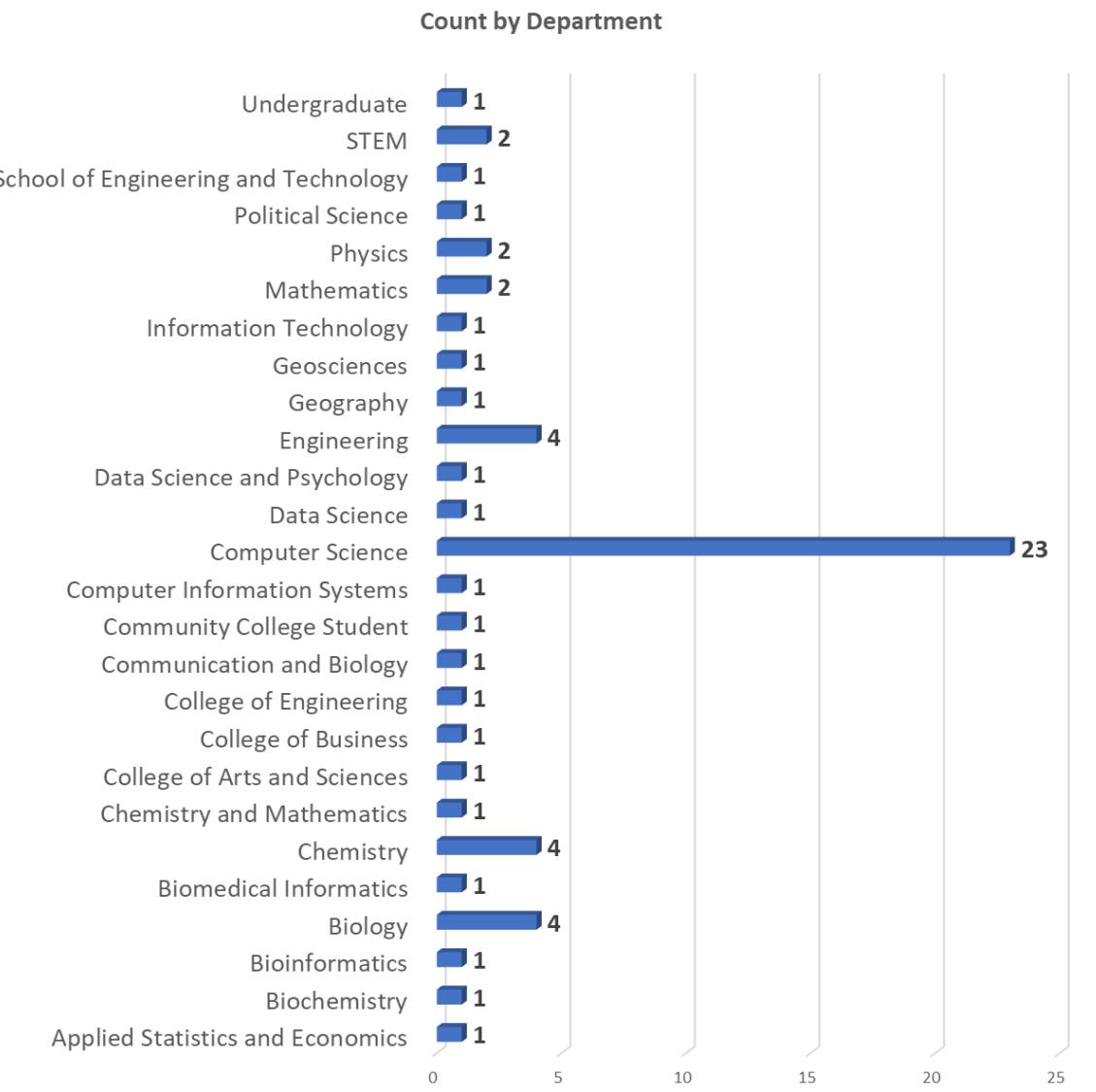
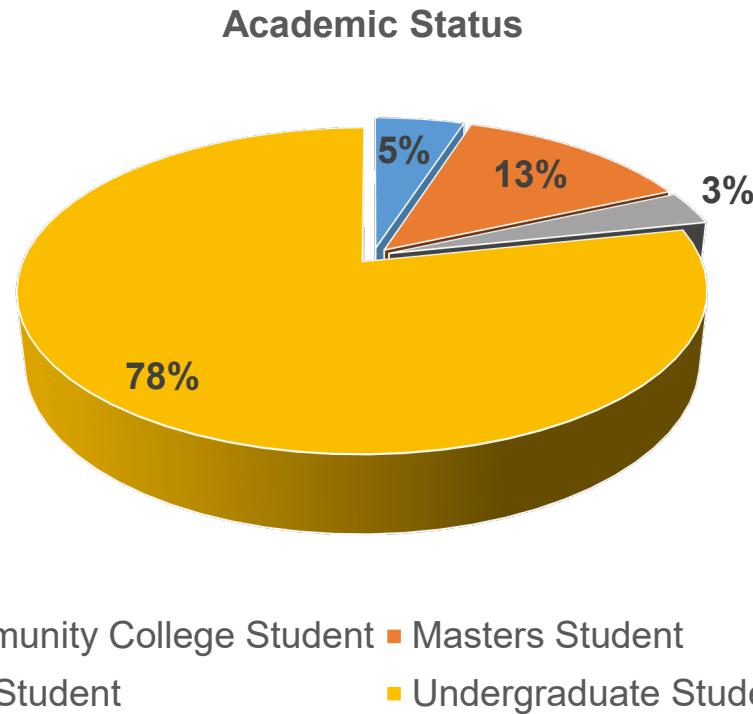


- Hispanic or Latinx
- Not Hispanic or Latinx
- Prefer not to say

Getting to know you...student profiles



Participant Profiles



We are a diverse group!

- Diversity on many fronts
 - Technical
 - Academic
 - Social
 - Demographics
- It might be uncomfortable but, it is an OPPORTUNITY
- Everyone can learn and teach each other



Welcoming and inclusive bootcamp experience for all

Listen Respectfully

Listen to understand

Criticize ideas not individuals

Commit to learning not debating

Comment to share information not to persuade

Avoid assumptions



Invite • Welcome • Connect

"Guidelines for Discussing Difficult or High-Stakes Topics." CRLT,
crlt.umich.edu/publinks/generalguidelines. Accessed 4 July 2023.

Diversity creates more innovation

- Opportunity to
 - Learn
 - Grow
 - Innovate
- Show
 - Respect
 - Freedom from bias
 - Avoid assumptions

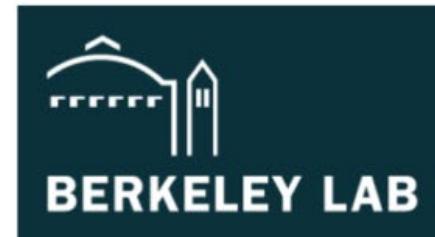




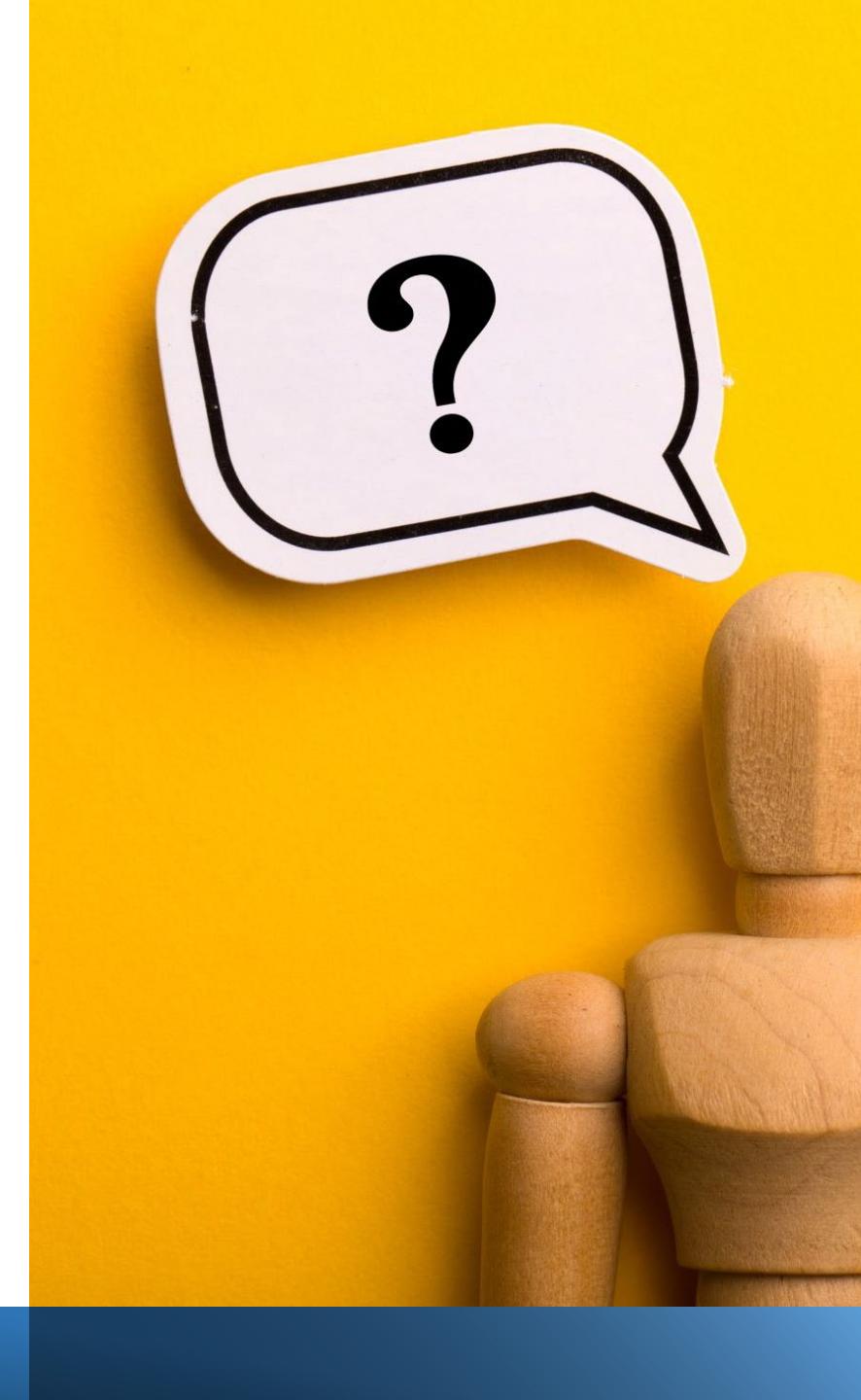
Have fun and learn!

Warm up Activity

Lacy Barrier, Sustainable Horizons Institue



1. Where are you from?





2. What are you most looking forward to this week?

3. What do
you want to
be an expert
in by the end
of this week?



4. What are
you already
an expert in?



Intro to HPC Bootcamp Logistics



Air Travel

- Contacts for emergency air travel changes:
 - 24 Hour Emergency Assist call:
 - (206) 467-5722 or
 - (855) 393-8799 or
 - Send an email to:
CTAH@corporatetraveler.us
 - Email Lacy with any changes you make to your arrangements.
[\(lbARRIER@shinstitute.org\)](mailto:lbARRIER@shinstitute.org)
- Additional charges and fees for changes to air travel are not covered by the program.



Travel between the Hotel the Airport

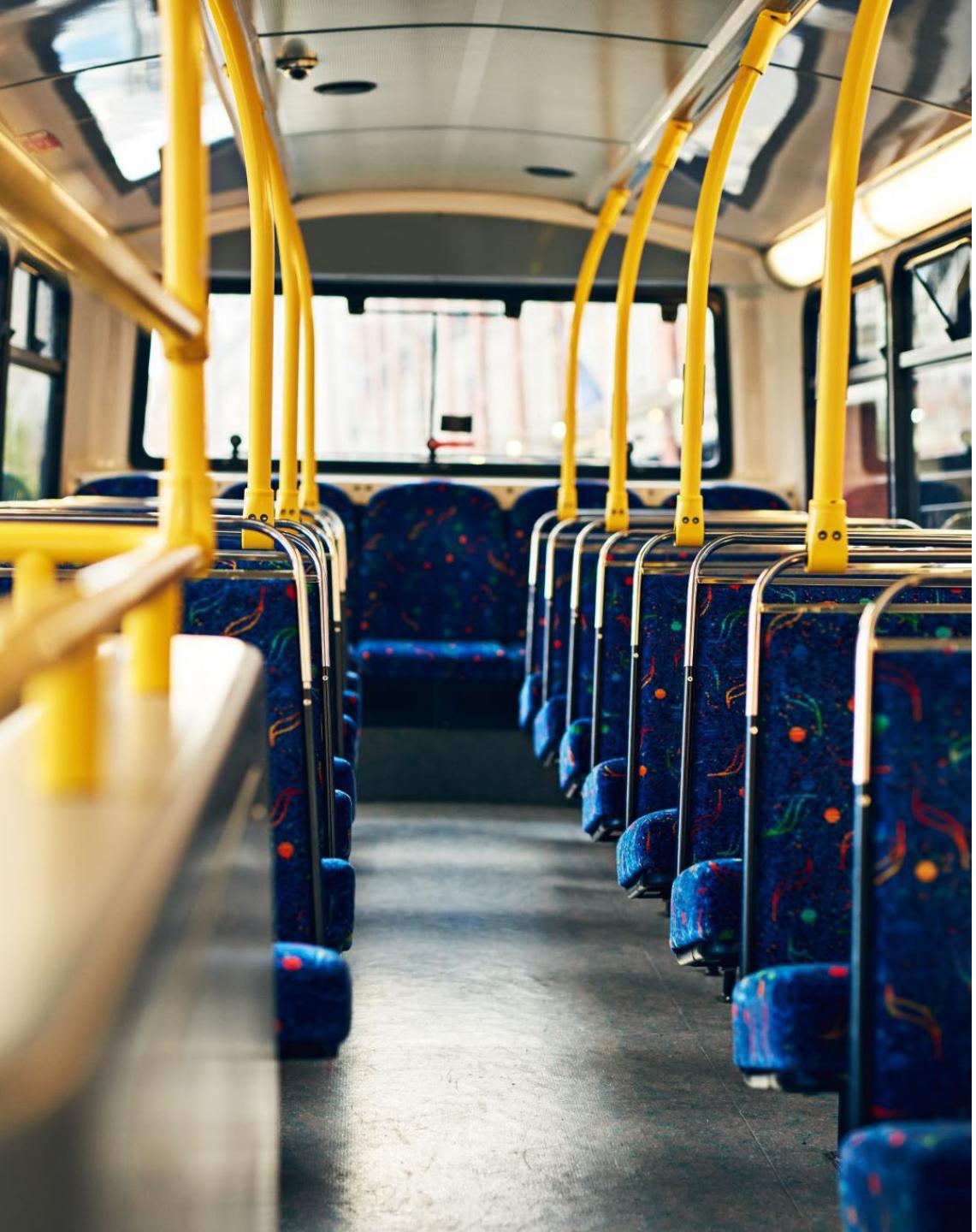


- You can select any form of travel that is most convenient for you.
- \$150 for transportation fees have been included in the per diem payment you will receive on Monday.
 - This includes travel to and from the airport, checked baggage fees, etc.
- The payment amount provided WILL NOT change regardless of the selected mode of travel.
- [BART information](#) can be found on the [SHI website](#).

Hotel

- Hotel Shattuck Plaza
- Telephone number:
 - (510) 845-7300
- Address:
 - 2086 Allston Way, Berkeley, CA 94704
- Check-Out
 - Noon is the latest check-out time, but they will store your luggage.





Bootcamp Bus to Berkeley Lab

- Bootcamp Bus will pick up in front the hotel
- Check the [website](#) for latest bus assignments
 - If you miss the Bootcamp Bus you will need a site access badge to ride the Berkeley Lab shuttle.

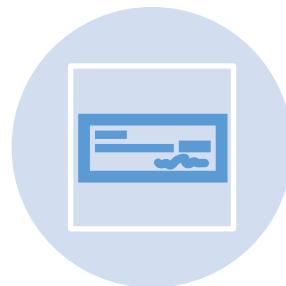
Per Diem Payments



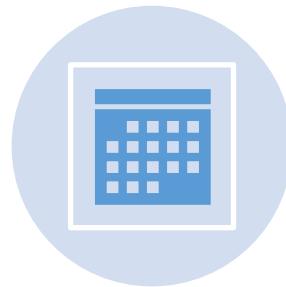
Per diem payments will be distributed by the end of the day via echeck.



The per diem payment is for meals not provided by the program, transportation and other costs.



There will be direct deposit option for your check. The fee for direct deposit is included in the echeck amount.



Stipend payments will be issued the week of August 13, via echeck. You must check in with Lacy at the registration table on Friday to confirm final payment.

NERSC Supercomputer Tour



Visitors **MUST**
wear flat,
closed-toe
shoes to visit
the NERSC
computer room
on Tuesday.



High heels,
open-toed
shoes, and
sandals are not
permitted.



Visitors not
meeting these
requirements
will be turned
away.

Social Media



- Posting on social media?
 - Use #IntroToHPC
 - Tag @NERSC and they will repost
- Photographer on campus throughout the week
- Share your own photos with our [google shared folder](#).
- Berkeley representative writing an article: Kathy Kincade

Website

shinstitute.org/energy-justice-bootcamp-2023/

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[Bootcamp Bus Groups](#)

[BART Transportation Guide](#)

[Berkeley Site Map](#)

[Logistics Letter](#)

[Logistic Letter Final](#)

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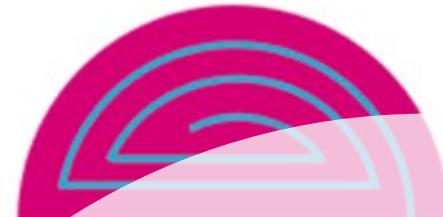
Slack

[NERSC User Account Information](#)



Questions???

- Get to know you Bingo throughout the week
- Have your peers/mentors/project leaders sign their name on the matching square
- Fill up the whole board and you can turn it in to me for a prize



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Contact

Lacy Barrier, Program Coordinator
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lbarrier@shinstitute.org

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