

MAY 24-26, 2022

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# ALCF

# Computational Performance Workshop



# Just a few of the Argonne staff here to help with your questions



**Yasaman Ghadar**



**Filippo Simini**



**Nevin Liber**



**Kathy Gorgan**



**Chris Knight**



**Yuri Alexeev**



**Corey Adams**



**Jeri Knepper**



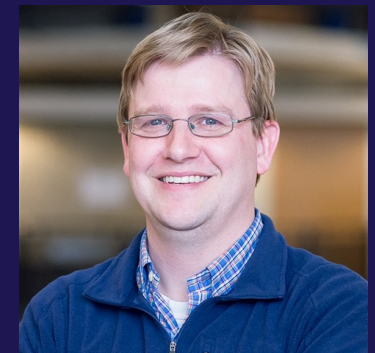
**James Osborn**



**Ray Loy**



**Avanthi Mantrala**



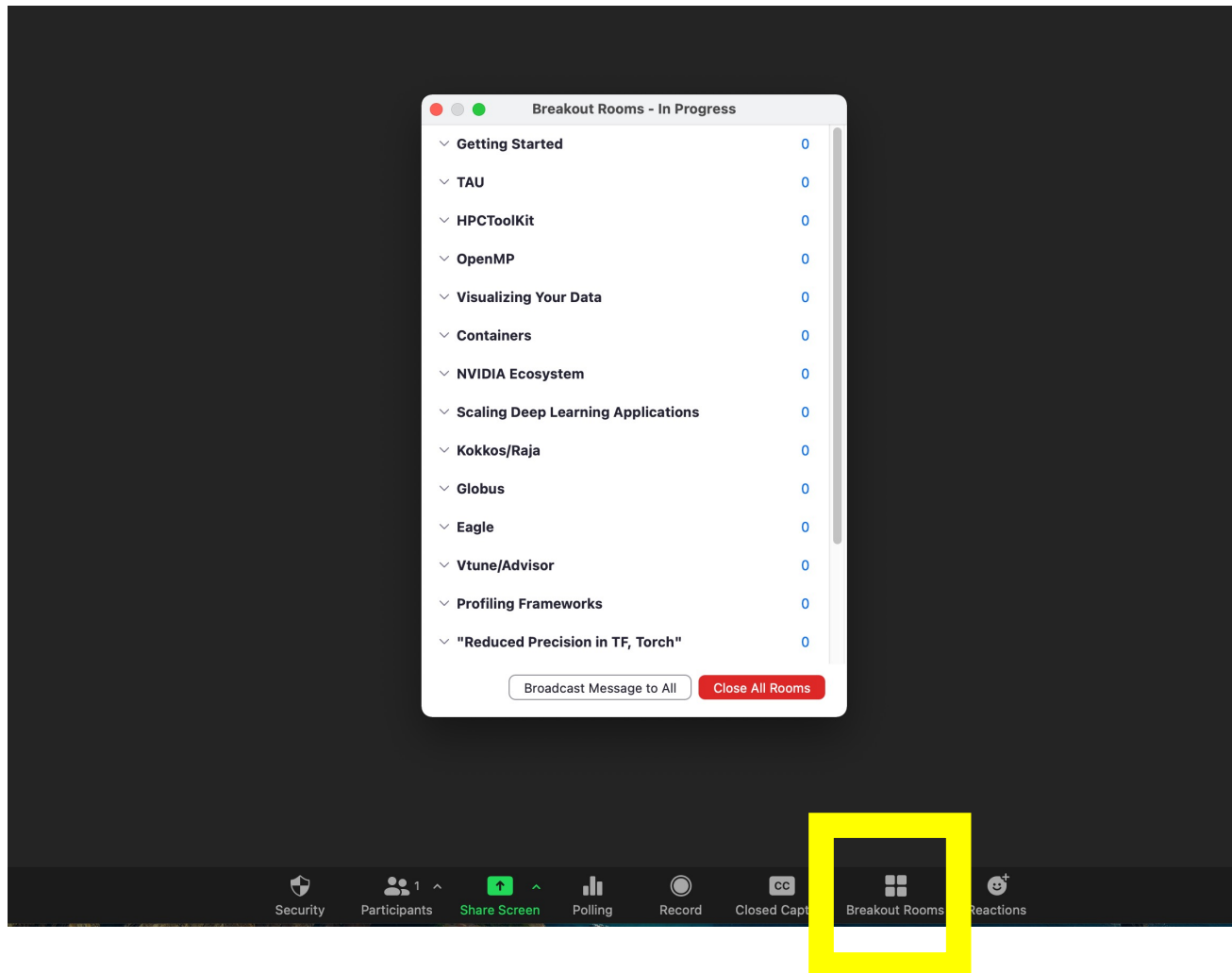
**Jim Collins**

# Workflow of the Workshop

- ❑ Agenda can be found here: <https://www.alcf.anl.gov/events/2022-alcf-computational-performance-workshop>
- ❑ Please make sure to join the Slack space: [alcf-workshops.slack.com](https://alcf-workshops.slack.com)
- ❑ Zoom chat has been disabled, please make sure to use Slack channels. For general questions use #\_general
- ❑ For each topic there is a dedicated breakout room for attendees and speakers to discuss and get help.

# Zoom

- For best experience please update your zoom application to most recent one



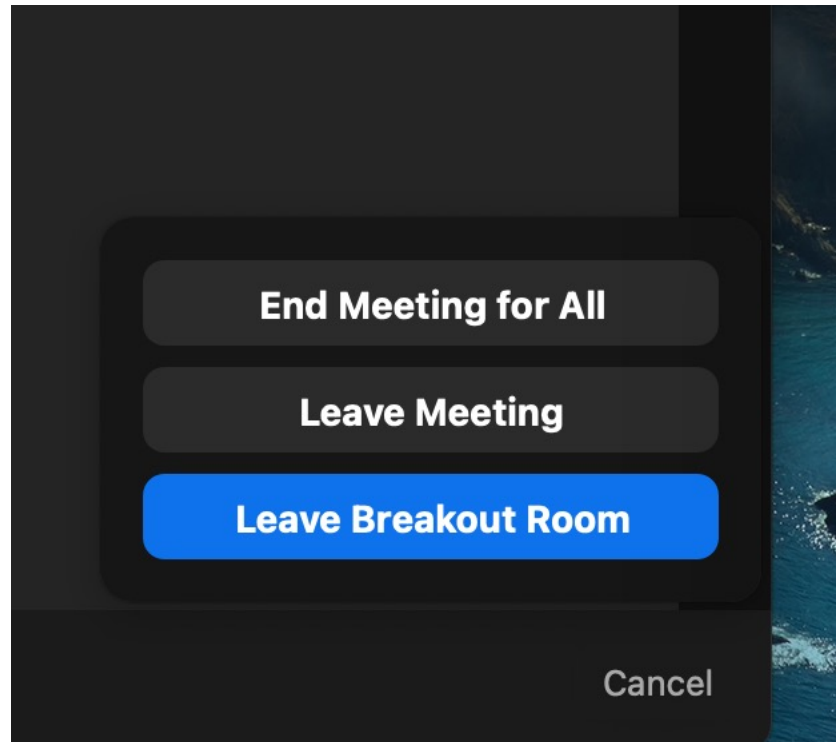
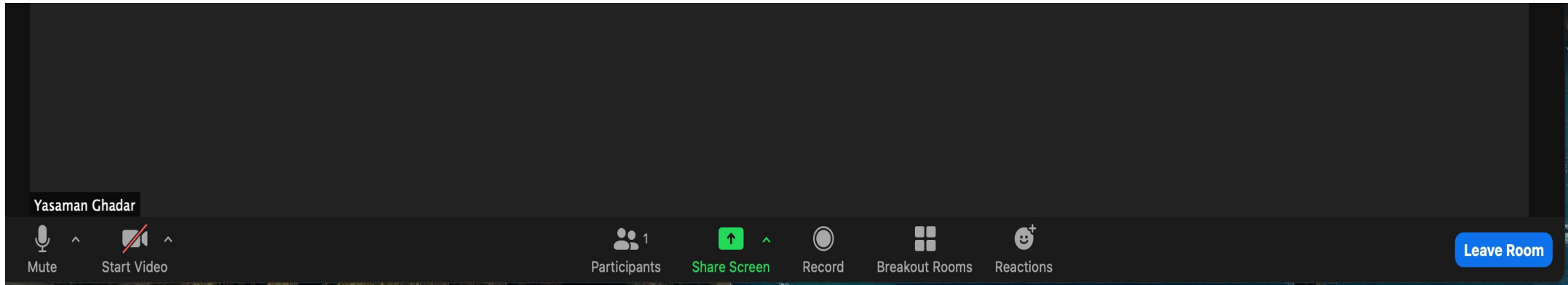
Breakout Rooms - In Progress

- Getting Started 0
- TAU 0
- HPCToolKit 0** [Join](#)
- OpenMP 0
- Visualizing Your Data 0
- Containers 0
- NVIDIA Ecosystem 0
- Scaling Deep Learning Applications 0
- Kokkos/Raja 0
- Globus 0
- Eagle 0
- Vtune/Advisor 0
- Profiling Frameworks 0
- "Reduced Precision in TF, Torch" 0

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- "Reduced Precision in TF, Torch" 0

Join HPCToolKit?



# Reservation and Documentation

## ❑ Documentation:

- ❑ **Theta:** <https://www.alcf.anl.gov/support-center/theta/running-jobs-and-submission-scripts>
- ❑ **ThetaGPU:** <https://www.alcf.anl.gov/support-center/theta-gpu-nodes/getting-started-thetagpu>
- ❑ **Cooley:** <https://www.alcf.anl.gov/support-center/cooley/submitting-jobs-cooley>

## ❑ Workshop GitHub repository: <https://github.com/argonne-lcf/CompPerfWorkshop>

## ❑ We have reservations on Theta (KNL) and ThetaGPU

- ❑ **See Slack #\_announcements pinned items for time schedule and more details**
- ❑ Use project name `Comp_Perf_Workshop`
- ❑ For Theta `qsub -q comp_perf_workshop -A Comp_Perf_Workshop....`
- ❑ For ThetaGPU either (depending on time)
  - ❑ `qsub -q single-gpu -A Comp_Perf_Workshop....`
  - ❑ `qsub -q full-node -A Comp_Perf_Workshop....`
- ❑ Outside of reservation times, use the normal queues (See online documentation above)



# Slack pinned items

The screenshot shows the Slack interface for the channel #\_announcements. The left sidebar lists channels including #\_general, #\_slides, #00\_workflows, #01\_openmp, #02\_visualization, #03\_containers, #04\_nvidia\_ecosystem, #05\_scaling\_deep\_learning, #06\_kokkos\_raja, #07\_mpi, #08\_vtune\_advisor, and #09\_profiling\_frameworks. The main content area shows a pinned message from Ray Loy at 3:55 PM. The message contains a list of pinned items: 'Daily 10AM-5PM Queue name: single-gpu', 'EXCEPT Tues 11AM-1:15PM Queue name: training-gpu', and 'Evenings 5PM-on\*' with sub-items for 'training-gpu' and 'single-gpu'. Below this is an 'EVENING RESERVATIONS NOTE' and a Zoom meeting link for the workshop.

5 Pinned + Add a bookmark

Show Pinned 5 Pinned

- Daily 10AM-5PM Queue name: single-gpu (full node mode), available, max 1 job per user).
- EXCEPT Tues 11AM-1:15PM Queue name: training-gpu (full node mode)
- Evenings 5PM-on\*
  - Queue name: training-gpu (full node mode, 15 nodes available)
  - Queue name: single-gpu (1 node available)

**\*EVENING RESERVATIONS NOTE:** Jobs should be submitted before 5PM for best chance to be scheduled that day. Jobs must be no longer than 11.75 hours. Please test on progressively larger node counts if possible. The reservation will be released in the evening when queued jobs have started or there is insufficient remaining time for them to be able to start. Typically this is between 8PM and 11PM.

Pinned by you

**Ray Loy** 3:55 PM

The Zoom meeting link for the workshop is:  
<https://argonne.zoomgov.com/j/1616829978?pwd=L3lnRXJlQ0ZyRTF1d29ibHU4WUdGdz09>  
or if manually joining

- Meeting ID: 161 682 9978
- Passcode: 714437

Please connect 30 minutes prior to the meeting start. Please do not share the meeting info. Before connecting, please make sure your Zoom display name is set to your full name (first and last) as you registered otherwise you will not be admitted from the Zoom waiting room. If you have difficulty changing your display name, please see [these instructions](#).

Pinned by you

**Ray Loy** 11:09 PM

Code examples and other materials are available on GitHub at: <https://github.com/argonne-lcf/CompPerfWorkshop>

This screenshot is similar to the first one but includes a modal window for a pinned item. The modal, titled 'Ray Loy', shows a message from 11:09 PM containing a GitHub link for code examples and materials: <https://github.com/argonne-lcf/CompPerfWorkshop>. The background shows the same pinned message as the first screenshot, but it is partially obscured by the modal.

5 Pinned + Add a bookmark

Ray Loy

Code examples and other materials are available on GitHub at: <https://github.com/argonne-lcf/CompPerfWorkshop>

Today at 11:09 PM

Ray Loy

The Zoom meeting link for the workshop is:  
<https://argonne.zoomgov.com/j/1616829978?pwd=L3lnRXJlQ0ZyRTF1d29ibHU4WUdGdz09>  
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Today at 3:55 PM

Ray Loy



# Slides For the Workshop

- ❑ Slides can be found in #\_slides Slack channel

## Support

### ❑ General Support:


- ❑ For any questions or issues please email us at: [comp-perf-support@alcf.anl.gov](mailto:comp-perf-support@alcf.anl.gov)
- ❑ You can also reach us on Slack at #99\_help-desk

### ❑ Accounts Support:

- ❑ For accounts related questions please email [support@alcf.anl.gov](mailto:support@alcf.anl.gov) and make sure to cc: [comp-perf-support@alcf.anl.gov](mailto:comp-perf-support@alcf.anl.gov) to ensure speedy response.

# The End

Of the beginning...



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**BREAK**

We will resume at  
11:30AM Central

**ALCF**

**Computational  
Performance  
Workshop**