

Barnard Biology Research Symposium 2021

<https://biology.barnard.edu/biology-events/symposium-program-2021>

Monday, April 19th | 1:00 pm to 4:45 pm

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Department of Biological Sciences

biology.barnard.edu

212.854.2437

Barnard Biology Research Symposium

April 19, 2021 | Zoom | 1:00 pm to 4:45 pm

We are delighted to welcome you to the annual Barnard Biology Research Symposium! This symposium is dedicated to showcasing and celebrating the exemplary work of our Guided Research & Seminar and Senior Thesis Research & Seminar students. Under the guidance of their dedicated mentors, both at Barnard and throughout New York City, our students have spent the 2020–2021 academic year working independently on projects ranging from those in cell biology to bacterial antibiotic resistance to clinical trials.

Today, we feature the meticulous and painstaking work of our presenters and congratulate them and their mentors on their steadfast commitment to their research! We hope today's presentations and posters will inspire the next generation of Barnard Biology majors to follow boldly in their footsteps in the pursuit of knowledge across biological disciplines.

We encourage you to join us today for both sessions, the first of which will feature presentations by our Senior Thesis Research & Seminar students from 1:00 pm to 2:00 pm, followed by the Guided Research & Seminar poster session from 2:15 pm to 4:45 pm.

Warmly,

The Barnard College Department of Biological Sciences

Note: A brief how-to-use Zoom guide is provided on pages 10–20 of this program. Please make sure you have updated to the most recent version of Zoom. This will be important for the poster session. On the day of the event, this program will be available as a webpage ([link](#)).

Schedule of Events

1:00 pm to 1:15 pm — Opening Remarks by Professors JJ Miranda and Alison Pischedda

SESSION ONE

1:15 pm to 2:00 pm — Senior Thesis Research & Seminar Student Presentations

BREAK

2:00 pm to 2:15 pm — Break and Mingling

SESSION TWO

2:15 pm to 2:30 pm — Opening Remarks & Student Poster Oral Abstracts

2:30 pm to 3:15 pm — Guided Research & Seminar Student Poster Session A

3:15 pm to 3:30 pm — Break

3:30 pm to 3:45 pm — Opening Remarks & Student Poster Oral Abstracts

3:45 pm to 4:30 pm — Guided Research & Seminar Student Poster Session B

4:30 pm to 4:45 pm — Closing Remarks

A detailed schedule—including presenters, project titles, and the event Zoom link—is provided on the following pages. Research mentors and their respective institutional affiliations are listed below each title. On the day of the event, this program will be available as a webpage ([link](#)).



Senior Thesis Research & Seminar (2021)

(From left to right.) Top: Sophia Howard and Abigail Schreier

Bottom: Ornella Pedrozo

Biology majors enroll in Senior Thesis Research & Seminar to satisfy their senior capstone requirement for the major. This yearlong course requires students to work on independent research projects under the guidance of their mentors. It culminates in both a scientific paper and a 15-minute research talk presented in today's first session.

Session One: Senior Thesis Research & Seminar Presentations

Zoom Meeting ID: 954 3027 0486 | Passcode: 473764 ([Zoom Link](#))

As you join the meeting, please ensure that your microphone is on Mute (see pg. 18). Questions at the end of a presentation will be moderated by Professors Miranda and Pischedda in the chat (see pg. 19); please post your questions by sending them to 'Everyone', which is the default on Zoom. To clap at the end of a presentation, use the clap emoji under the reactions button (see pg. 19).

1:15 pm **Abigail R. Schreier**

Exploratory analysis of targeted trunk training in Dance for PD[®] classes

Lori Quinn, Hai-Jung Steffi Shih, and Miriam King (Department of Behavioral Sciences, Teachers College, Columbia University)

1:30 pm **Ornella Pedrozo**

A molecular and cellular identification of neuronal cell types in *Xenopus laevis* and *Xenopus petersii*

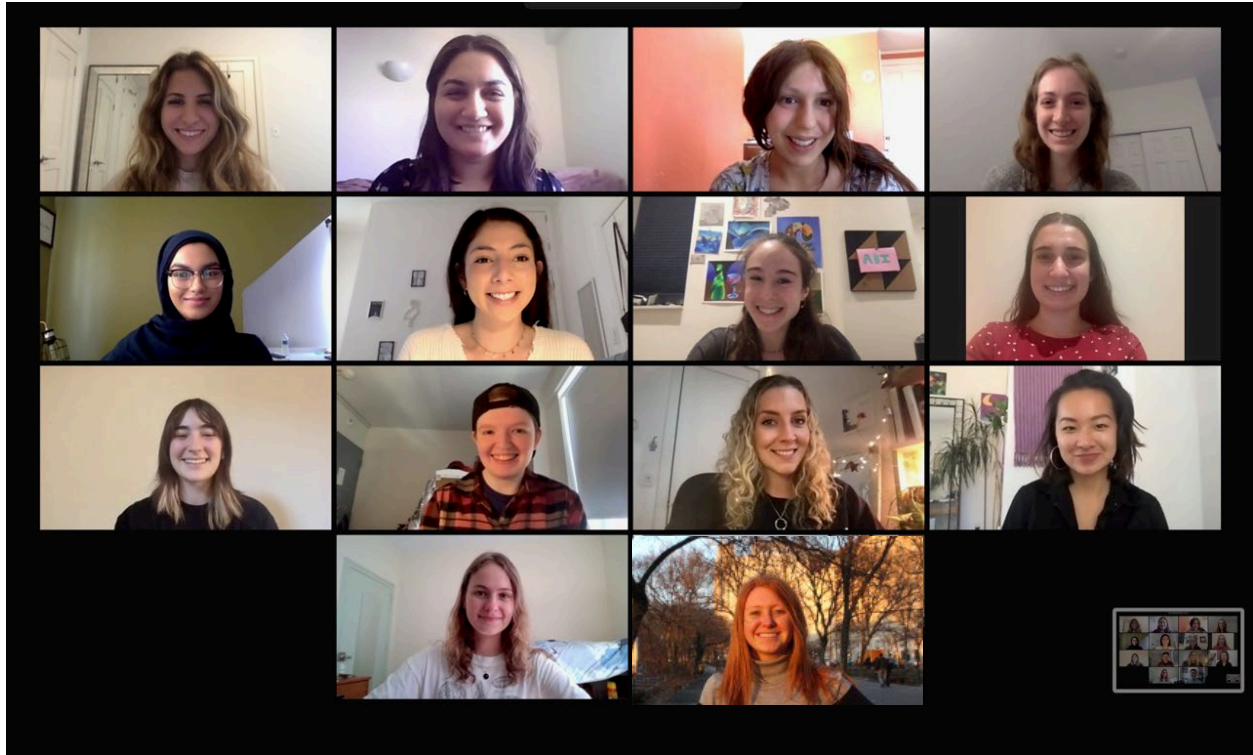
Darcy Kelley (Department of Biological Sciences, Columbia University)

1:45 pm **Sophia Howard**

Fear expression modulates activity in the ventral subiculum-BNST pathway in male and female rats

Elizabeth Bauer and Louise Urien (Department of Biological Sciences, Barnard College)

2:00 pm **Break**



Guided Research & Seminar (2021)

(From left to right.) Top: Lina A. Ariyan, Emaan Hassan, Gabriella Chefitz, and Kayla Kaplan.

2nd row: Aneeza Asif, Alana Palomino, Abi Spingarn, and Alyssa Semmelman.

3rd row: Clara Levrero, Sarah Braner, Hannah Prensky, and Athena Chin.

Bottom: Karolina Szenkiel and Erin Parsons.

Biology majors enroll in Guided Research & Seminar to satisfy the upper-level biology labs required for the major. This yearlong course requires students to work on independent research projects under the guidance of their mentors. It culminates in both a scientific paper and the poster presented in today's second session.

Session Two: Guided Research & Seminar Poster Session

Student Poster Session A Welcome & Abstracts (2:15 pm to 2:30 pm)

[Zoom Meeting ID: 954 3027 0486](#) | [Passcode: 473764](#) ([Zoom Link](#))

Attendees will be invited to self-selecting breakout rooms after the abstracts where each student will be hosting their poster session for 45 minutes. Never used this feature below? See the guide on pg. 15–18. In order to move between poster rooms, you'll need to update your Zoom to version 5.3.0 or higher (see pg. 11–12 for a guide on how to ensure that your Zoom has been updated to the most recent version).

Student Poster Sessions (2:30 pm to 3:15 pm)

Poster 1 Lina A. Ariyan

The nuclear lamina does not maintain human herpesvirus gene repression

JJ Miranda (Department of Biological Sciences, Barnard College)

Poster 2 Aneeza Asif

pPyk2 affects cell motility in natural killer cells

Emily M. Mace and Amera L. Martinez (Department of Pediatrics, Vagelos College of Physicians and Surgeons, Columbia University Irving Medical Center)

Poster 3 Sarah Braner

Targeting Epstein-Barr virus-associated oncogenes and superenhancer components in Burkitt lymphoma with JQ1

JJ Miranda (Department of Biological Sciences, Barnard College)

Poster 4 Emaan Hassan

The role of mitochondrial dynamics in the transformation of myelodysplastic syndrome (MDS) to acute myeloid leukemia (AML)

Stavroula Kousteni and Rossella Labella (Department of Physiology and Cellular Biophysics, Columbia University Irving Medical Center)

Poster 5 Kayla Kaplan

Telehealth during the COVID-19 pandemic: The headache provider experience

Mia T. Minen (Division of Headache Research, Department of Neurology, NYU Grossman School of Medicine)

Poster 6 Hannah Prensky

Characterizing the generality of the plasmid acquisition cost

Allison J. Lopatkin (Department of Biological Sciences, Barnard College)

Poster 7 Abi Spingarn

Oral stimulation from glucose is sufficient in eliciting cephalic phase insulin release

John I. Glendinning (Department of Biological Sciences, Barnard College)

Student Poster Session B Welcome & Abstracts (3:30 pm to 3:45 pm)

Zoom [Meeting ID: 954 3027 0486](#) | [Passcode: 473764](#) ([Zoom Link](#))

Attendees will be invited to self-selecting breakout rooms after the abstracts where each student will be hosting their poster session for 45 minutes. Never used this feature below? See the guide on pg. 15–18. In order to move between poster rooms, you'll need to update your Zoom to version 5.3.0 or higher (see pg. 11–12 for a guide on how to ensure that your Zoom has been updated to the most recent version).

Student Poster Sessions (3:45 pm to 4:30 pm)

Poster 8 Gabriella Chefitz

Uncovering transcriptional crosstalk between two cancer-causing viruses

JJ Miranda (Department of Biological Sciences, Barnard College)

Poster 9 Athena Chin

$\gamma\delta$ T cell subsets display tissue-specific effector functions throughout infant immunity

Donna Farber and Joshua Gray (Department of Microbiology and Immunology, Columbia University Irving Medical Center)

Poster 10 Clara Levrero

Fes/Flt3 kinase pathway function in KSHV-associated primary effusion lymphoma

JJ Miranda (Department of Biological Sciences, Barnard College)

Poster 11 Alana Palomino

The mobile metabolome of prevalent *Escherichia coli* pathogens

Allison J. Lopatkin (Department of Biological Sciences, Barnard College)

Poster 12 Erin Parsons

Exploration of *Atm/Msh2* dKO embryonic lethality

Mark Emerson and Miruna Ghinia (Department of Biology, City College of New York)

Poster 13 Alyssa Semmelman

The N308S mutation in SHP-2 alters the RAS cell signaling pathway

Neel Shah and Anne Elise van Vlimmeren (Department of Chemistry, Columbia University)

Poster 14 Karolina Szenkiel

Modeling the population dynamics of metabolism-based antibiotic selection

Allison J. Lopatkin (Department of Biological Sciences, Barnard College)

Closing Remarks (4:30 pm to 4:45 pm)

Zoom: Tips and How-to-Use

Downloading Zoom (free) for Desktop and Cell Phone or Tablet

Before the date of this symposium, download Zoom for Mac or PC by visiting <https://zoom.us/download>.

If you will be joining by cell phone or tablet, visit the Google Play Store/Apple App Store and search “Zoom” to download and install. You can also download the app at the following links:

Google Play Store:

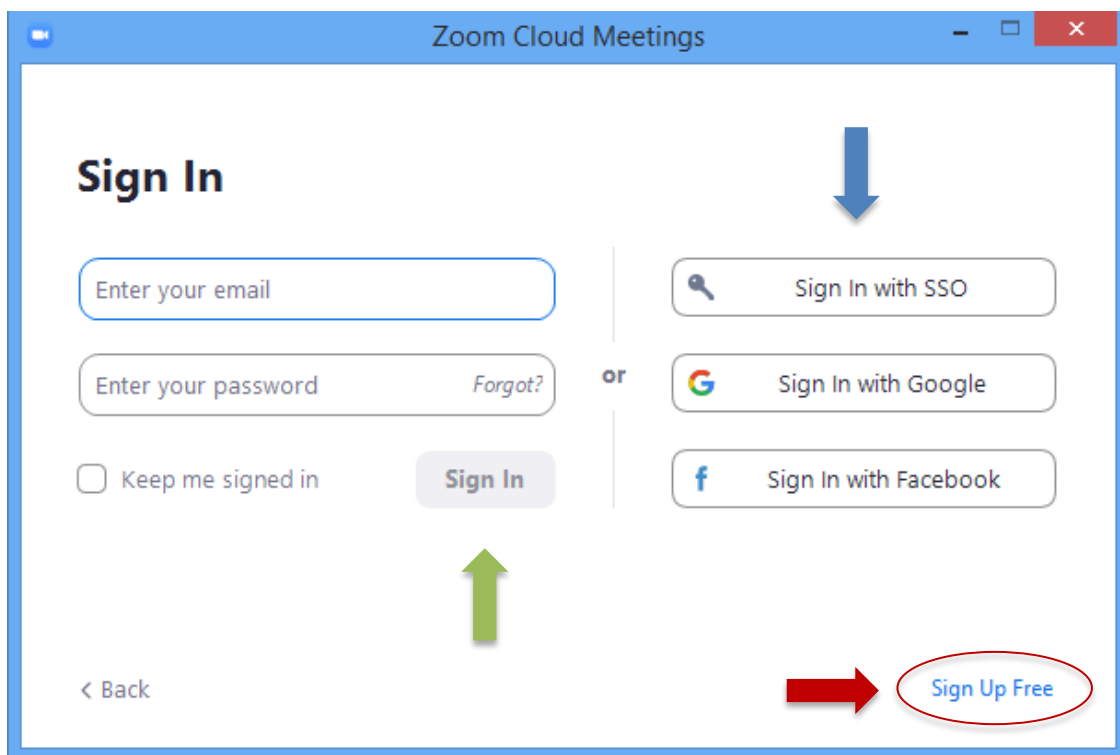
<https://play.google.com/store/apps/details?id=us.zoom.videomeetings>

Apple App Store:

<https://apps.apple.com/us/app/id546505307>

Account Set Up & Sign In

Launch the Zoom app. If this is your first Zoom meeting, you’ll need to sign up for a Zoom account (red arrow). Otherwise, enter your account credentials (green arrow).



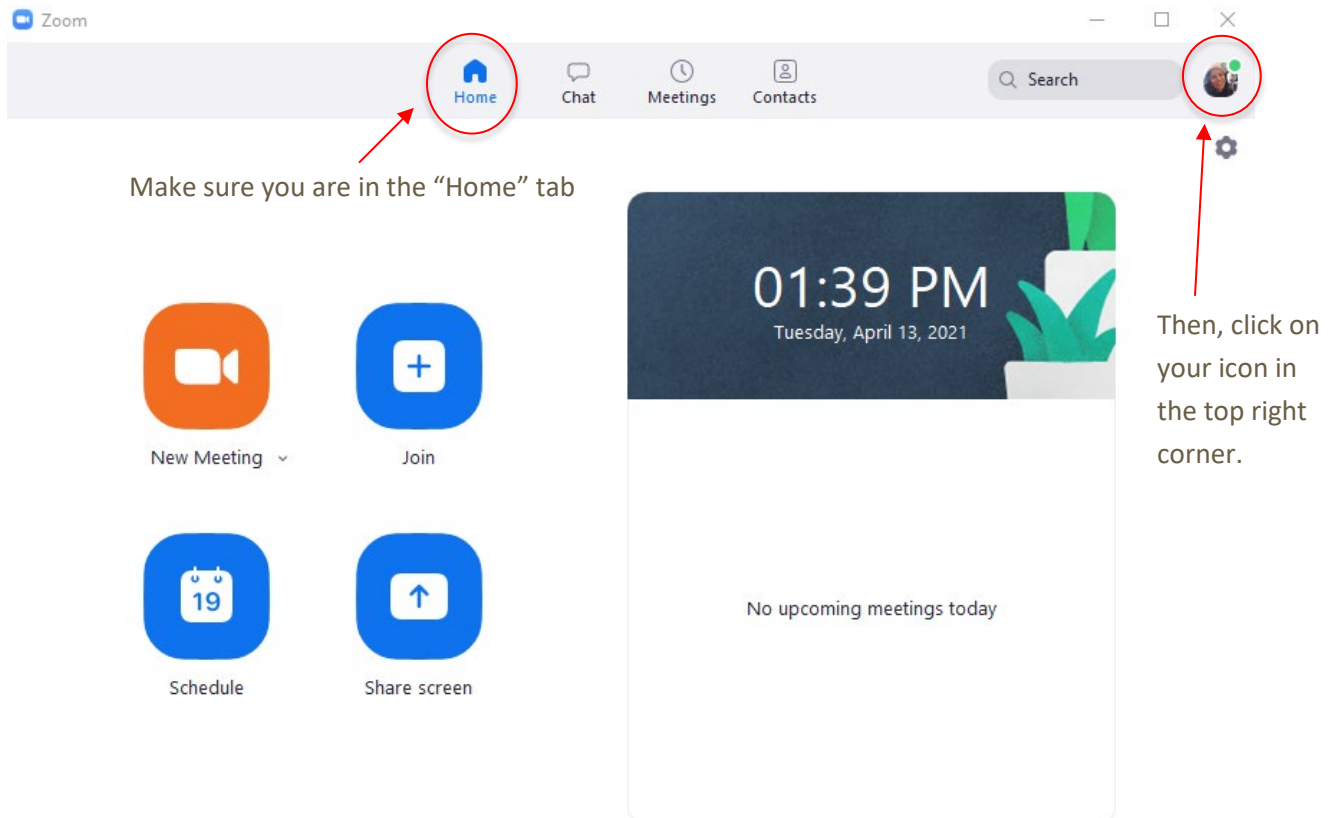
If you have a Gmail or Facebook account, you can sign up using those credentials (blue arrow).

If you are signing up for an account, follow the instructions at <https://zoom.us/signup>. Once you have created your account, sign in following the instructions above.

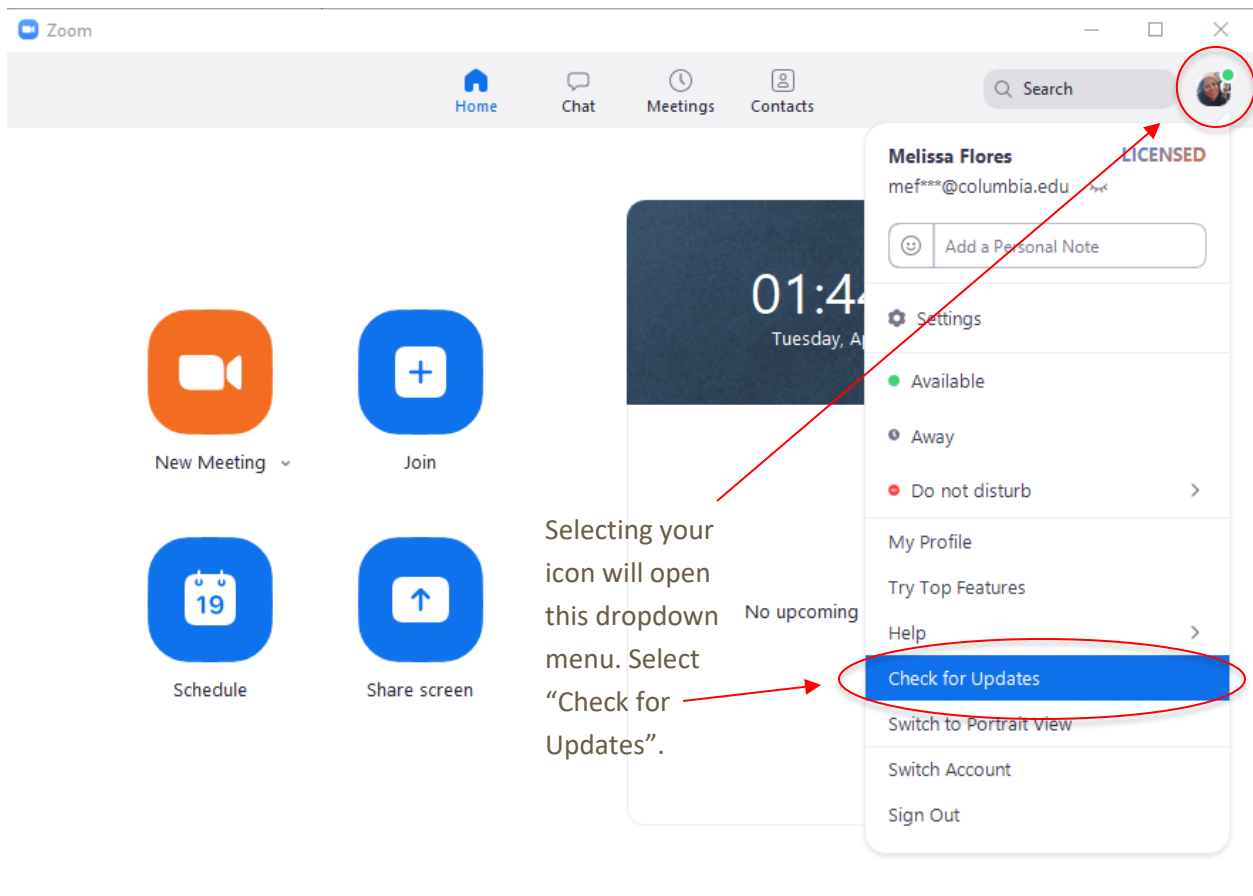
Updating Your Zoom Account

In order to use the self-selecting breakout room feature used during the symposium’s poster sessions, you’ll need to ensure that you’ve updated your Zoom account to the most recent version BEFORE joining the meeting.

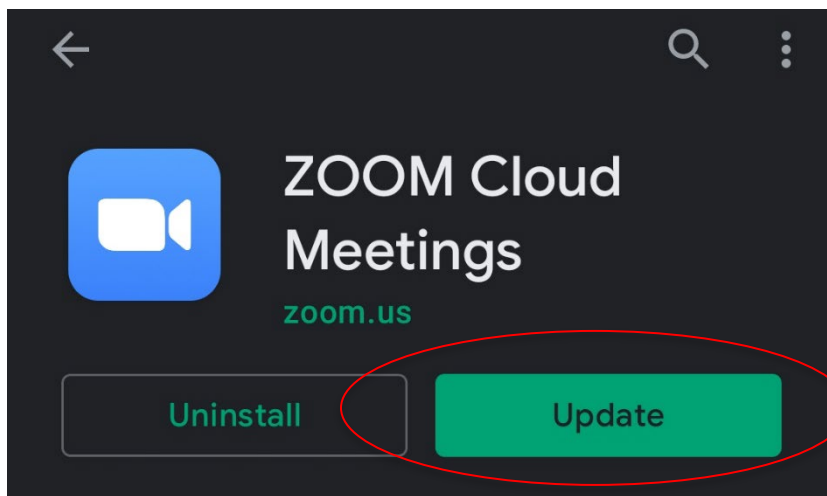
First, open your Zoom app. Sign in using the instructions provided above. Now, under the “Home” tab, click on your icon in the top right corner.



Selecting your icon will open a dropdown menu. Select “Check for Updates” (see image on the following page).



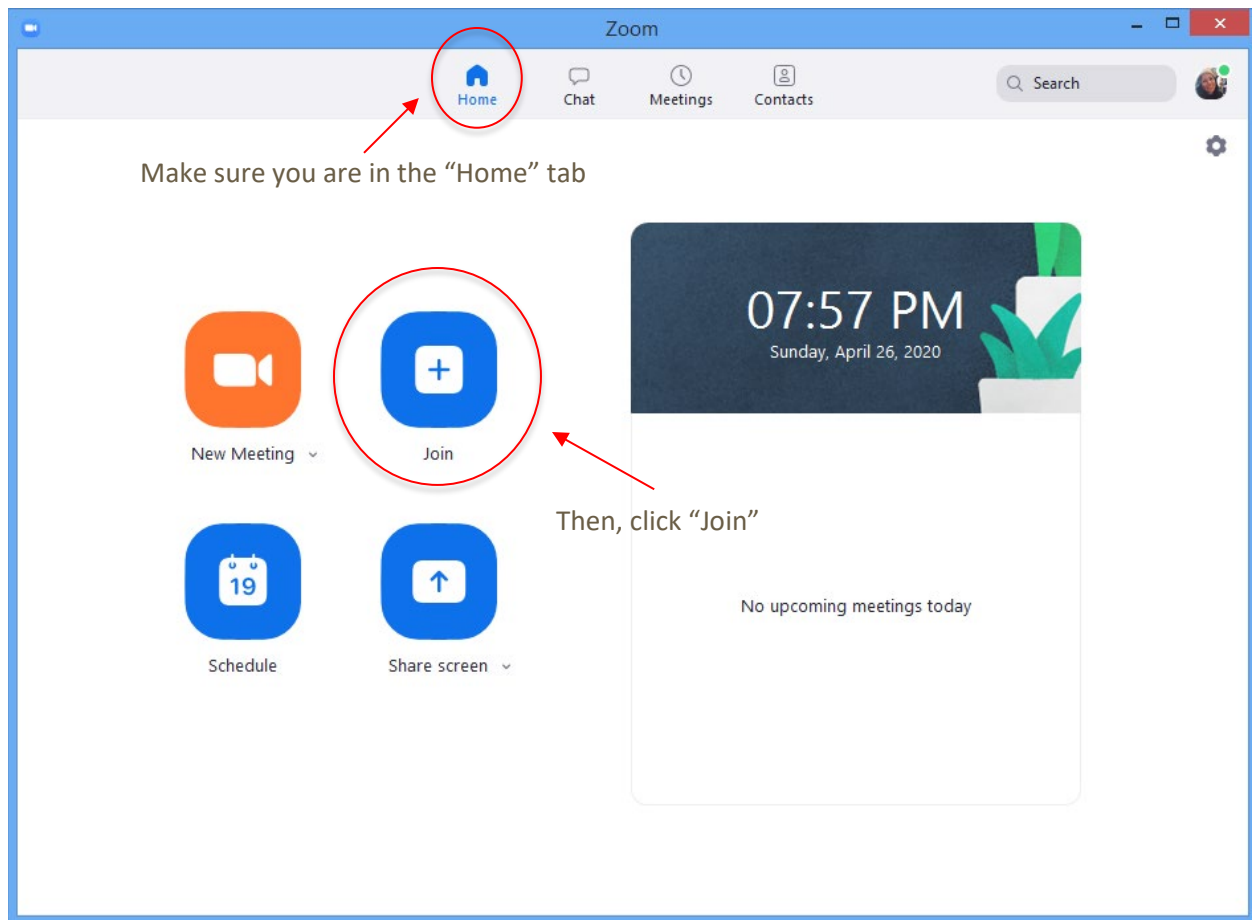
After selecting "Check for Updates", if a newer version of Zoom is available, selecting "Update" will prompt Zoom to download it and install it. Zoom will close, then re-launch. Once you have updated your version of Zoom, you can join the symposium meeting, following the instructions provided below.



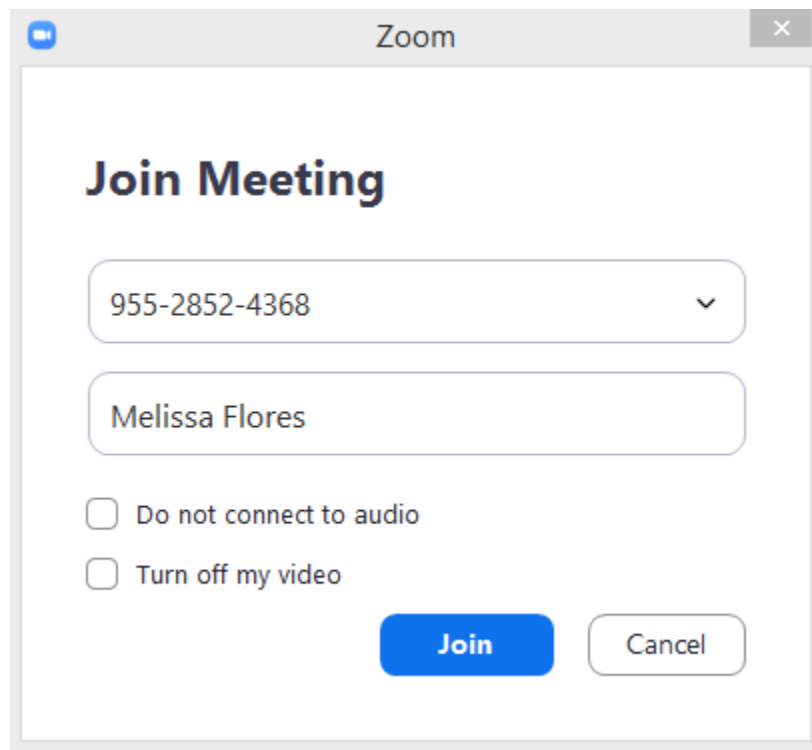
To update the Zoom mobile app (iOS or Android), go to the Google Play Store or Apple App Store on your device. Search "Zoom Cloud Meetings" and open the application. If an update is available, select "Update". Then, open the Zoom app and join the symposium meeting.

Joining a Meeting

All of this symposium's talks and posters will be hosted on Zoom. For the thesis talks, poster abstracts, and poster sessions, you'll join the "main" Zoom Meeting either by clicking the link provided in the program above, or by "joining" the meeting using the meeting ID provided. Once you have signed in, under the "Home" tab, click "Join".



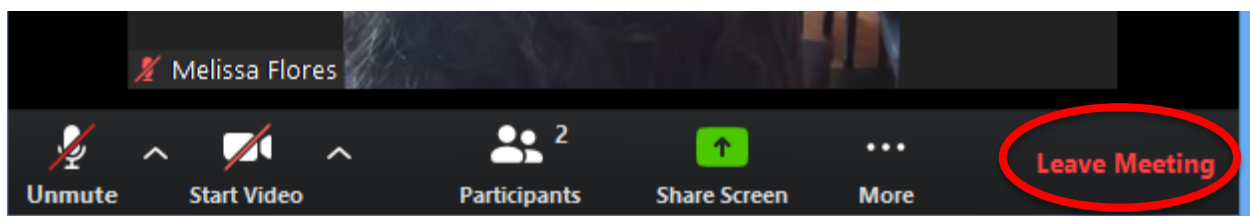
Type in the meeting ID provided in this program and your name as you want it to appear. If you wish to disconnect your camera, select the box that says “turn off my video”. Then press “Join” (it’ll prompt you for the passcode once you “Join”).



If you are using a tablet or phone, you will find the “Join” button under the “Meet & Chat” tab after logging in using the Zoom app. You’ll type in the Meeting ID, your name as you want it to appear, and toggle “Turn Off My Video” if you do not want your camera on.

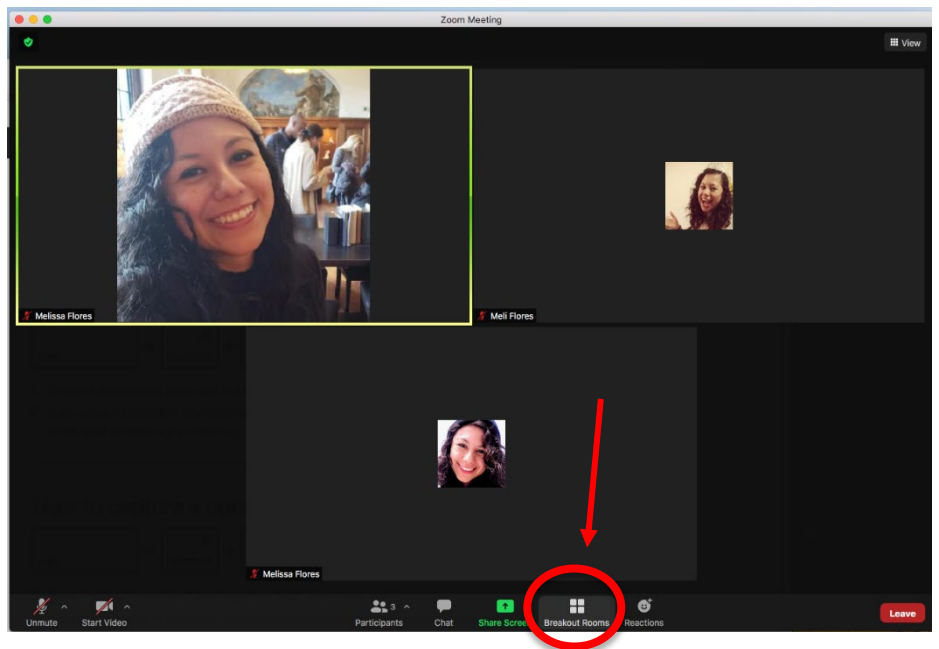
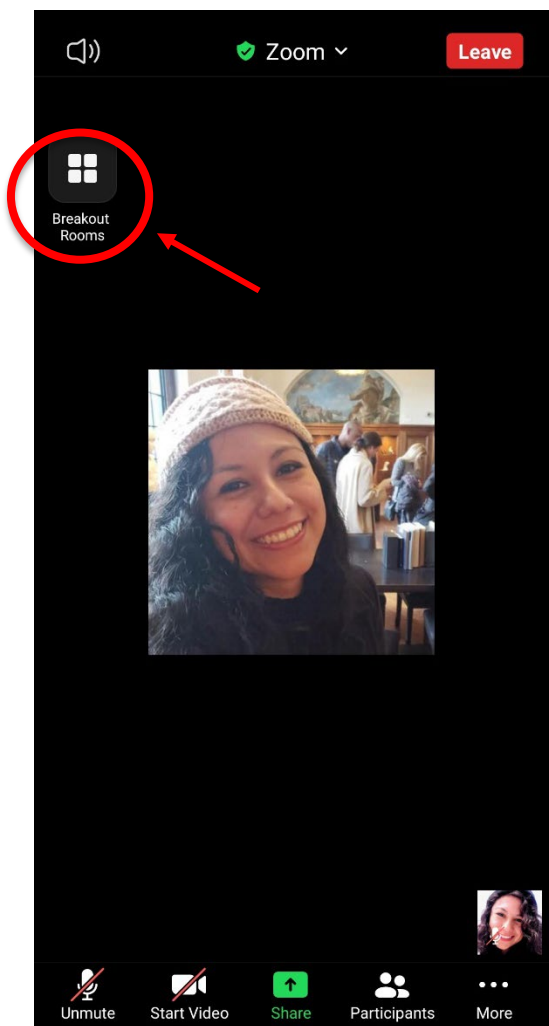
Leaving a Meeting

To leave a session, simply press “Leave Meeting” in the lower right-hand corner of your screen. On phone or tablet, this red button may be in the top right-hand corner.



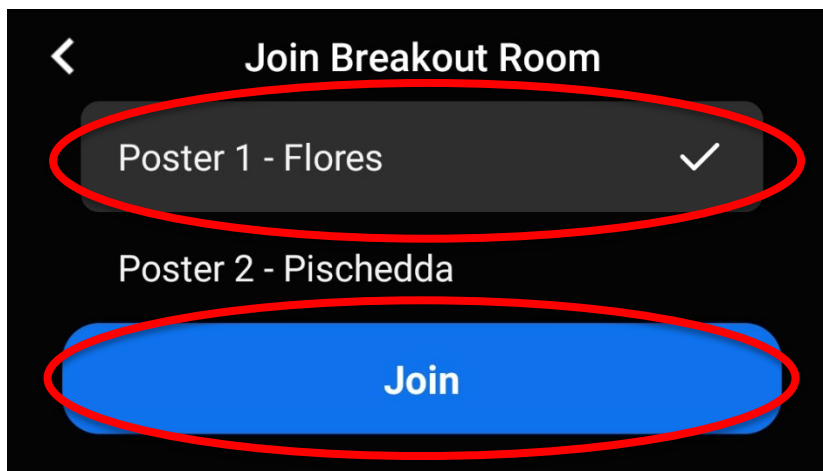
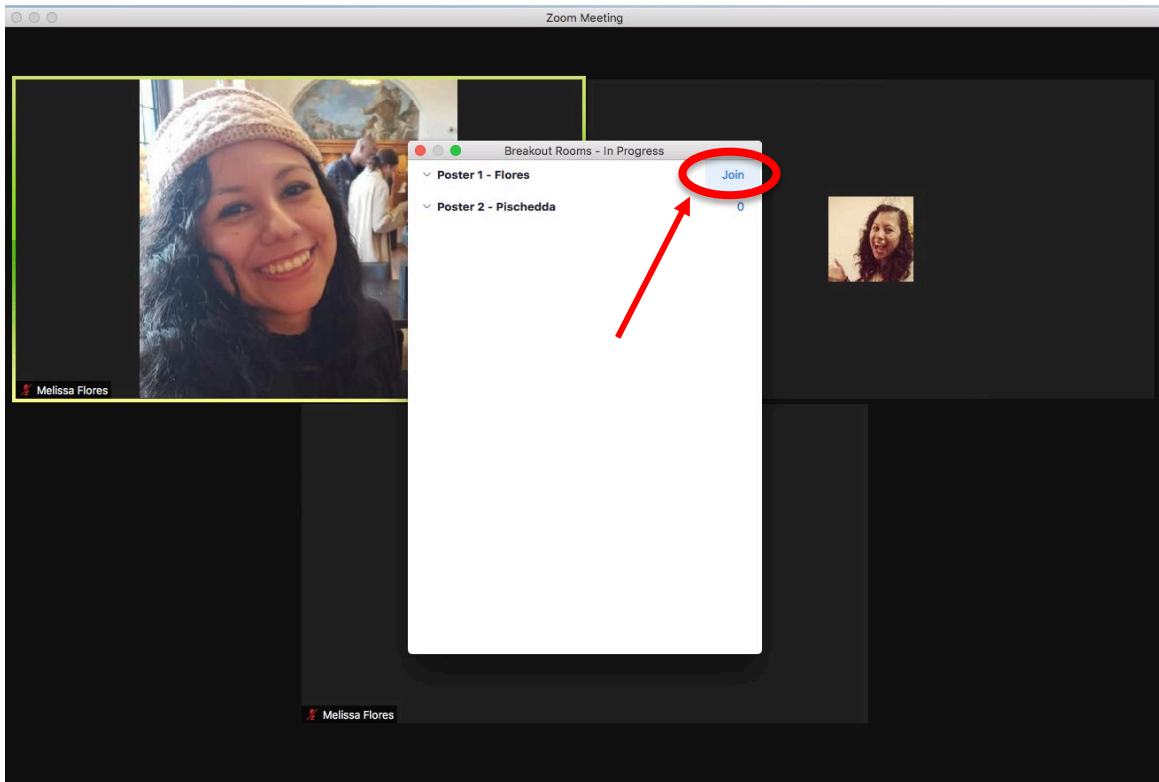
Self-selecting Breakout Rooms

For today's poster session, we will use a newly available feature that allows attendees to select a breakout room to join and freely move between rooms. Each student presenting a poster will be the Host of their individual breakout room. First, the main Zoom meeting host will open breakout rooms for 45 minutes. A new "Breakout Rooms" icon will appear on your menu when they do so. Click on the icon to open the list of breakout rooms



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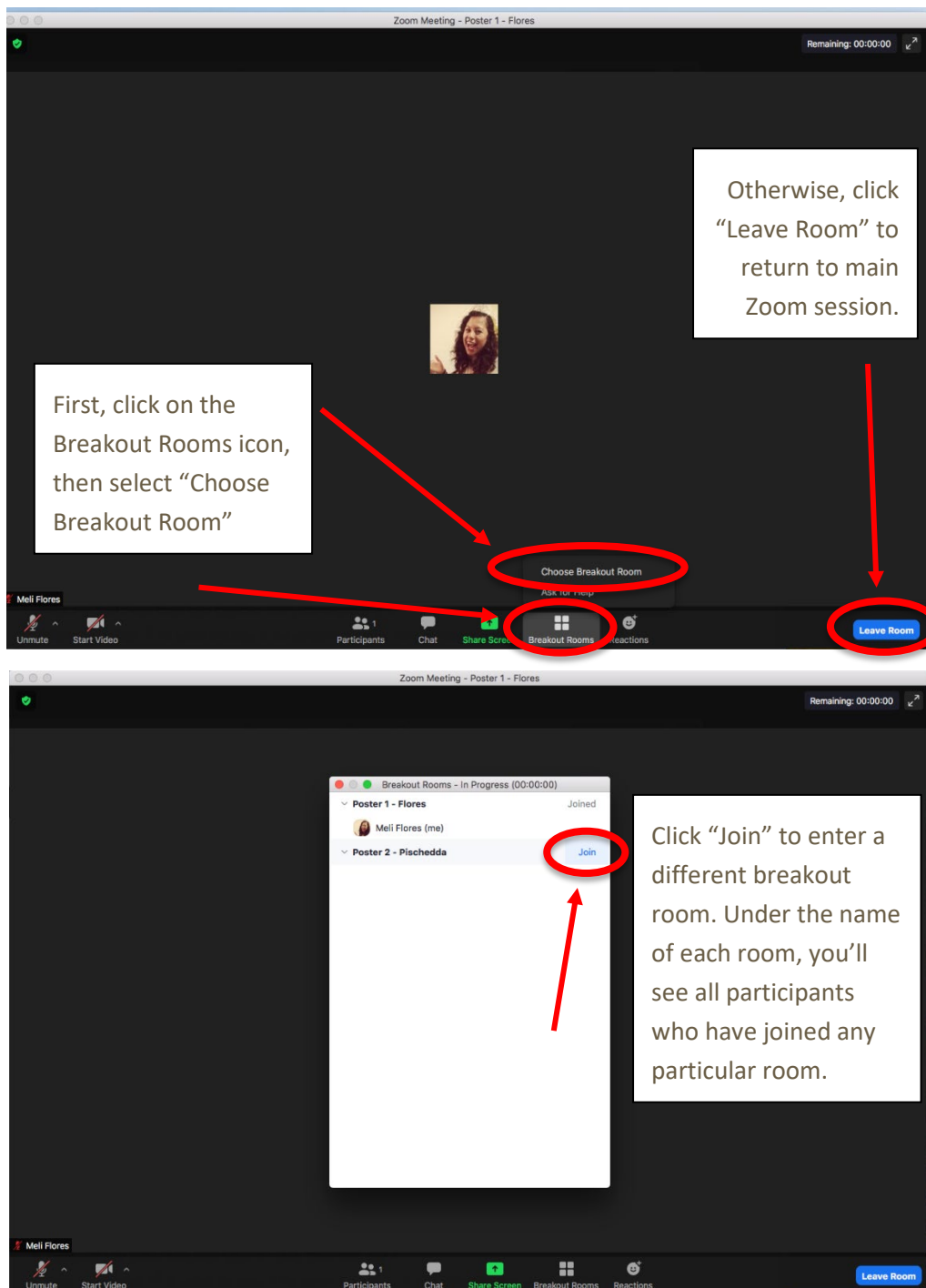
The rooms will list the Poster No. and Last Name of the poster presenter. To Join a room, hover to the right of the name of the room you'd like to join (may list the number of people in that room as seen below). This will make the word "Join" visible. Click on "Join" to enter the breakout room. You'll be asked to confirm whether you're sure that you want to join that room. When you join, the host will be sharing their screen so that you can view their poster.

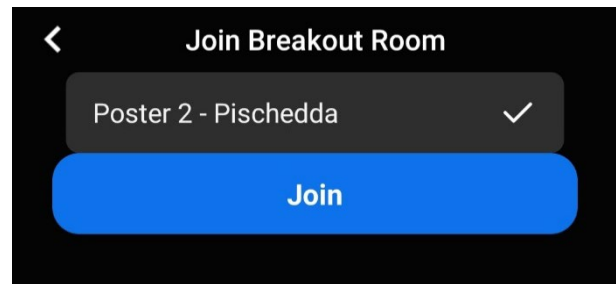
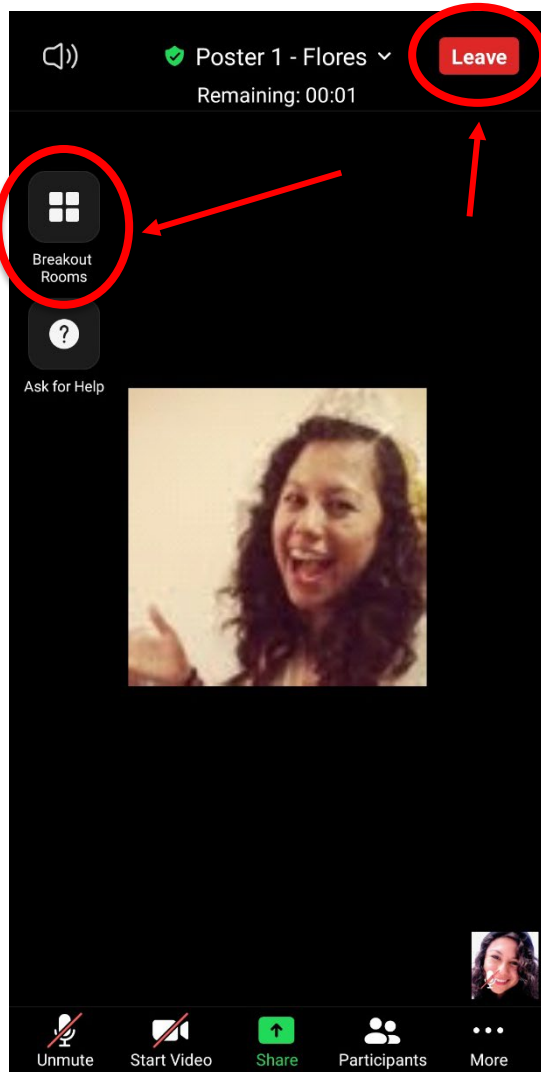


On mobile/tablet, clicking the Breakout Rooms icon will open the list of available rooms you can join. Tap on the name of the room you would like to join, then click on the blue "Join" button.

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To join another room, click on the Breakout Rooms icon again. This will give you the option to either “Choose [Another] Breakout Room” or “Ask for Help”. Clicking on “Choose Breakout Room” will reopen the list of other breakout rooms that you can join. To enter a different room, click “Join” (to the right of the name of the room).



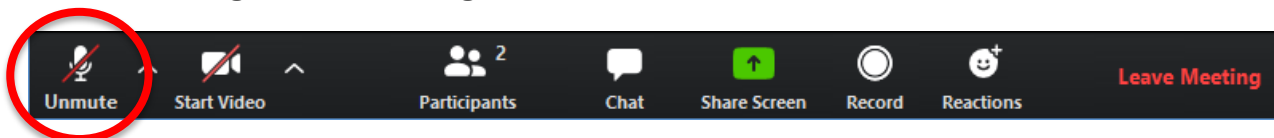


On mobile/tablet, selecting the Breakout Rooms icon will reopen the list of other possible breakout rooms to join. Tap on the name of the room you'd like to join and then tap on the blue "Join" button (as seen above).

To return to the main Zoom session, click on "Leave".

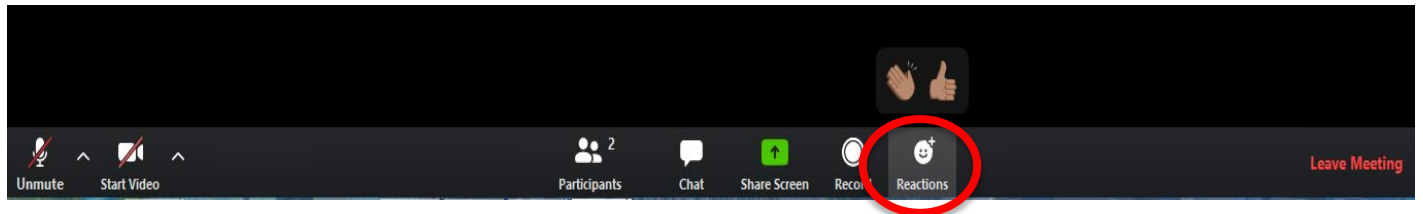
Best Practices & Tips

In general, it is a good idea to make sure your microphone is on mute when joining a meeting. A host will likely have this setting on by default. This way, any background noise on your end will not disrupt the meeting. To turn your microphone off, select the microphone icon in the bottom left of your screen. You should now see it as crossed out. To unmute yourself, simply click that icon again. You'll no longer see the mic as crossed out.

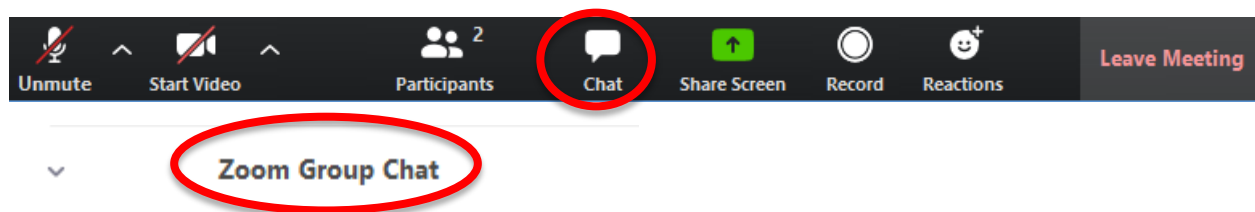


You can turn your camera on and off by selecting the video icon to the right of the microphone icon.

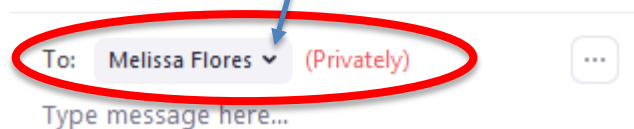
After a presentation, you can “clap” for a participant by selecting the “Reactions” button on your control bar and selecting the clapping hands icon. This is to the left of the Leave Meeting button.



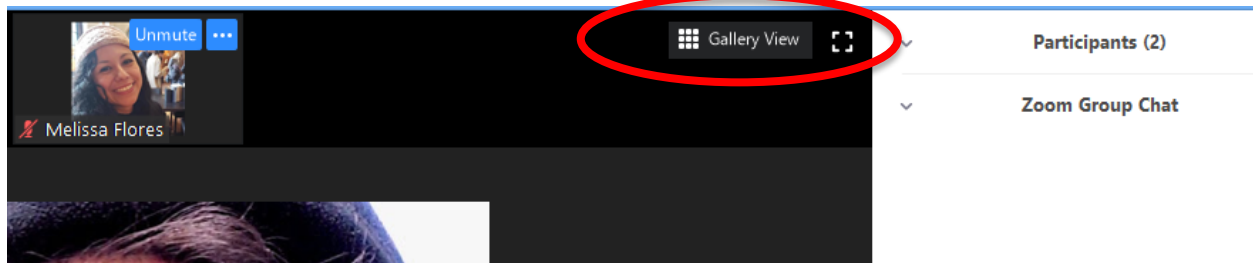
You can send questions by message using the chat function. First, select the “Chat” icon. This will open up the chat box to the right of your screen (or in a new window). At the end of a presentation, you may send questions to ‘Everyone’. Professors JJ Miranda and Alison Pischedda will moderate these depending on the amount of time left at the end of a presentation.



This sidebar will appear on the right hand side of your screen after clicking the “Chat” icon. Select the person you’d like to message from the dropdown where it says “to:”. For questions, please send them to ‘Everyone’, which is the default.



Lastly, by default, Zoom is set up to “Speaker” view where the screen changes between whoever it picks up as actively speaking during a meeting (outlined in green). If you’d instead like to view all participants who are in a meeting, you can select “Gallery” view on the top right-hand corner of your Zoom window. If you have “Participants” and/or the “Chat” boxes selected, you will see the “Gallery” view button to the left of them in the top right hand corner of the speaker box. Once you select it, it will become the “Speaker” view button. You can toggle between the two per your preference, even as one user’s video has been spotlighted, such as during a presentation.



Questions about Zoom? You can contact the department administrator, Melissa Flores by email at mflores@barnard.edu. She will be checking email on the day of the event.