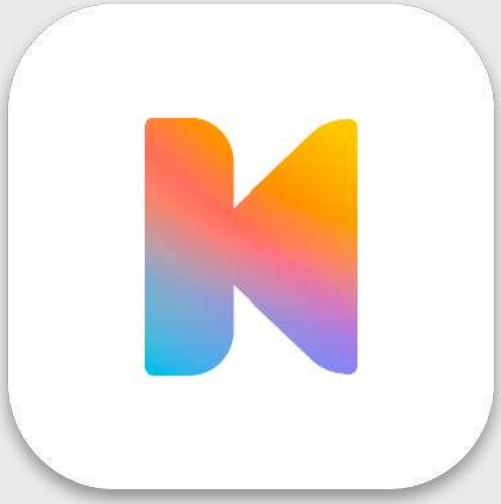
CHALMERS
UNIVERSITY OF TECHNOLOGY

Individual Project

Graphical Interfaces (TDA493 / TIA106)

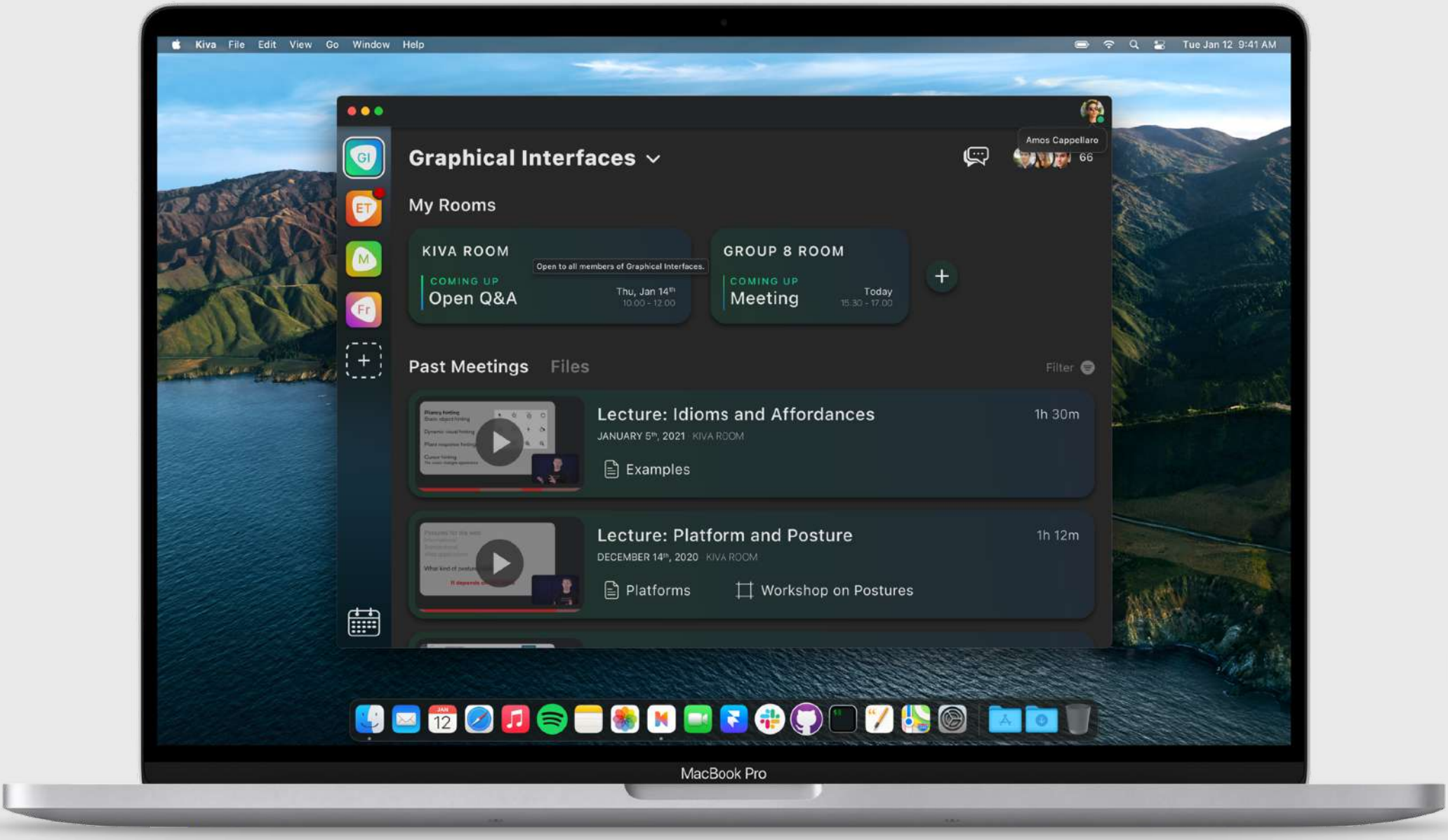
Amos Cappellaro

JANUARY 8th, 2021



KIVA

A video conferencing and collaborative design toolkit


Kiva File Edit View Go Window Help
Tue Jan 12 9:41 AM
Graphical Interfaces
Amos Cappellaro
66
My Rooms
KIVA ROOM
Open to all members of Graphical Interfaces.
COMING UP
Open Q&A
Thu, Jan 14th
10.00 - 12.00
GROUP 8 ROOM
COMING UP
Meeting
Today
15.30 - 17.00
Past Meetings
Files
Filter
Lecture: Idioms and Affordances
1h 30m
JANUARY 5th, 2021 KIVA ROOM
Examples
Lecture: Platform and Posture
1h 12m
DECEMBER 14th, 2020 KIVA ROOM
Platforms
Workshop on Postures
MacBook Pro

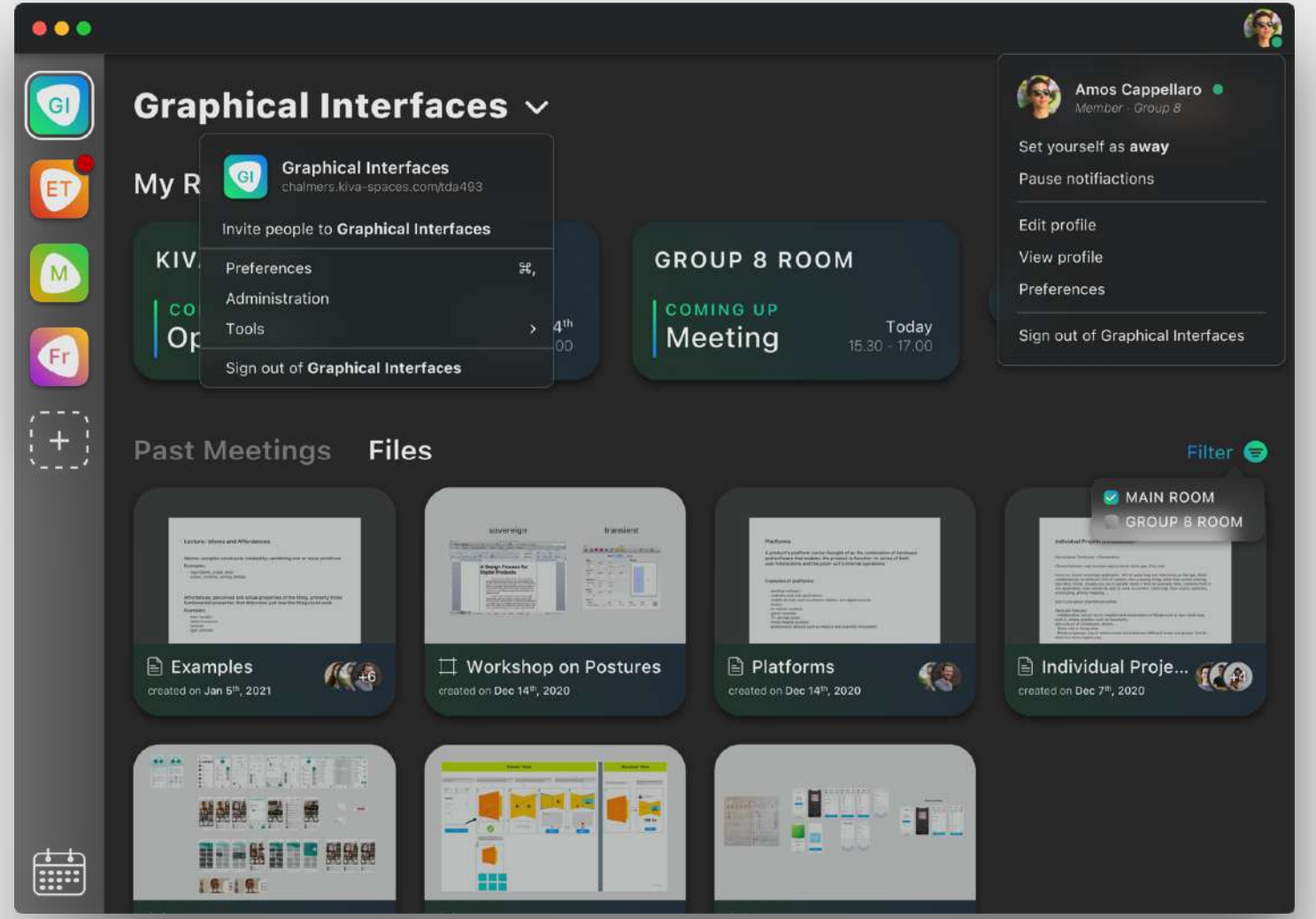
Each Kiva - visible on the left sidebar - consists in a workspace the user is in, where you can attend online meetings, watch past meetings and retrieve files you've been working on during those meetings

As many other applications, Kiva has a main, top-level window consistent presence and layout to help orient users (Cooper, p. 287).

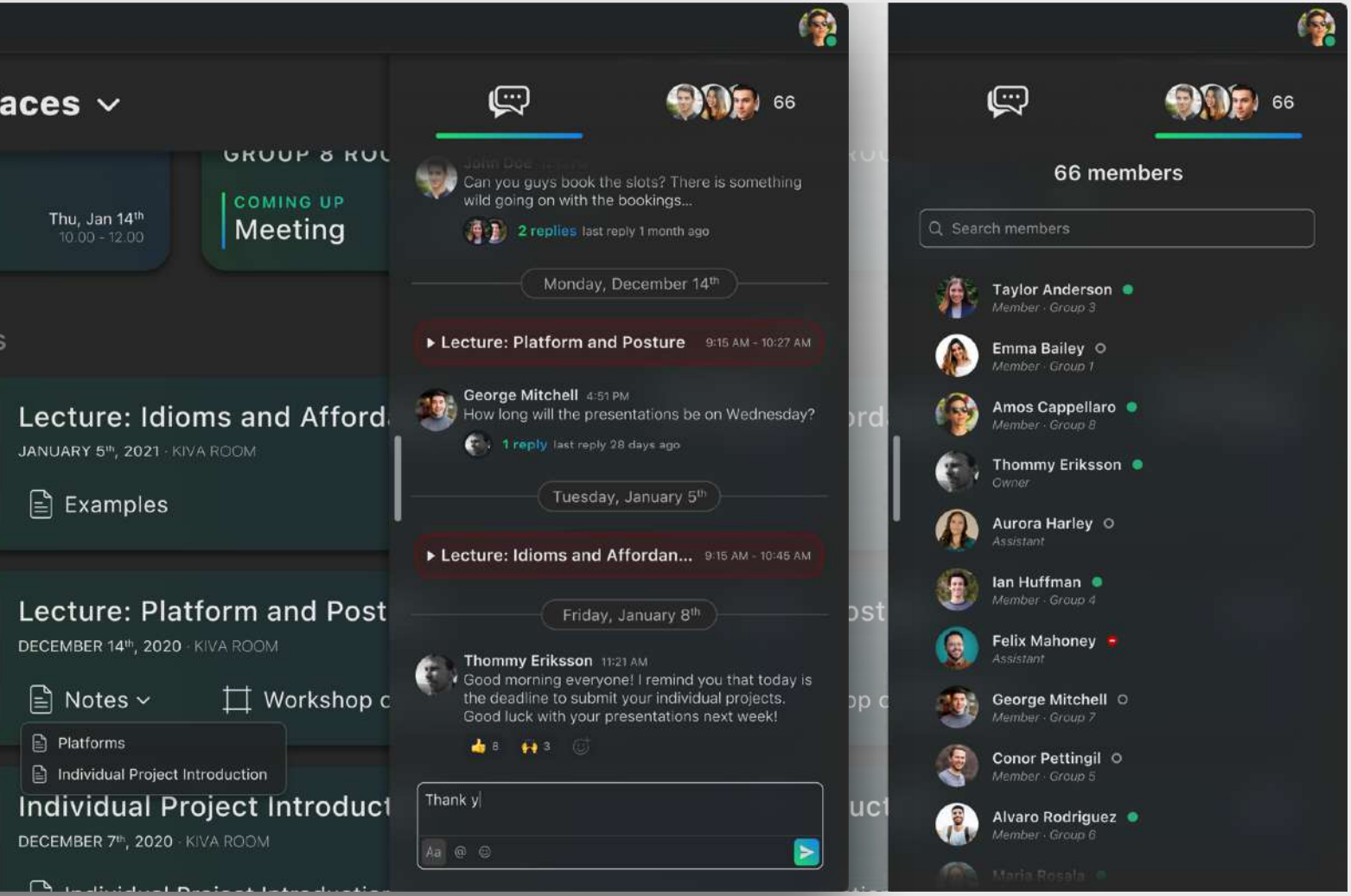
Kivas on the sidebar work as signposts or persistent objects, to let the user understand what Kivas they are in.

To visually communicate pliancy, the Kiva the user is currently consulting has a selection white border around its logo.

The application should remember the information from run to run (Cooper, p. 194). Once the user opens the application, it will display the last Kiva being used as default.



Let’s check out some details about this Kiva

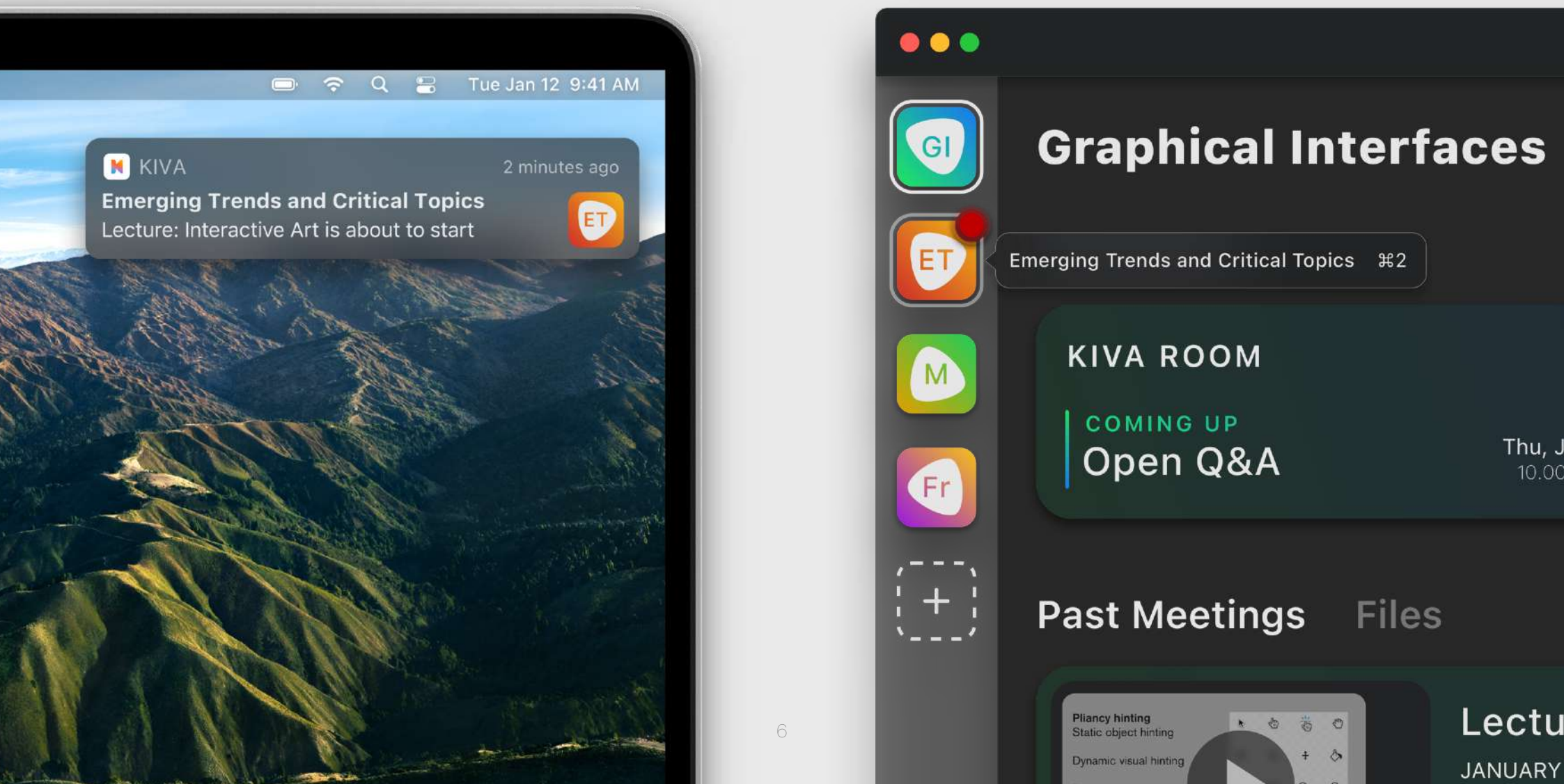


On the right, the user can access the chat and a list of the members who have joined that Kiva. Once the user clicks on either the chat icon or the members icon on the right, a drawer-like behaving panel comes on an upper level and shows the requested content; the user can also switch between the chat and the members’ list by clicking on the according icons on the tab bar on the top.

A drag handle is provided along the left edge of the panel to communicate the user direct-manipulation: by dragging this affordance to the right, in fact, this panel will close.

A new meeting is about to start

The fact that an object is pliant should be communicated visually to users (Cooper, p. 319). Accordingly - once the user will rollover on another Kiva in the sidebar with their mouse - its logo will be surrounded by lighter white border. As various other components will, the Kiva icon offers a ToolTip, indicating its name and a shortcut to open it.



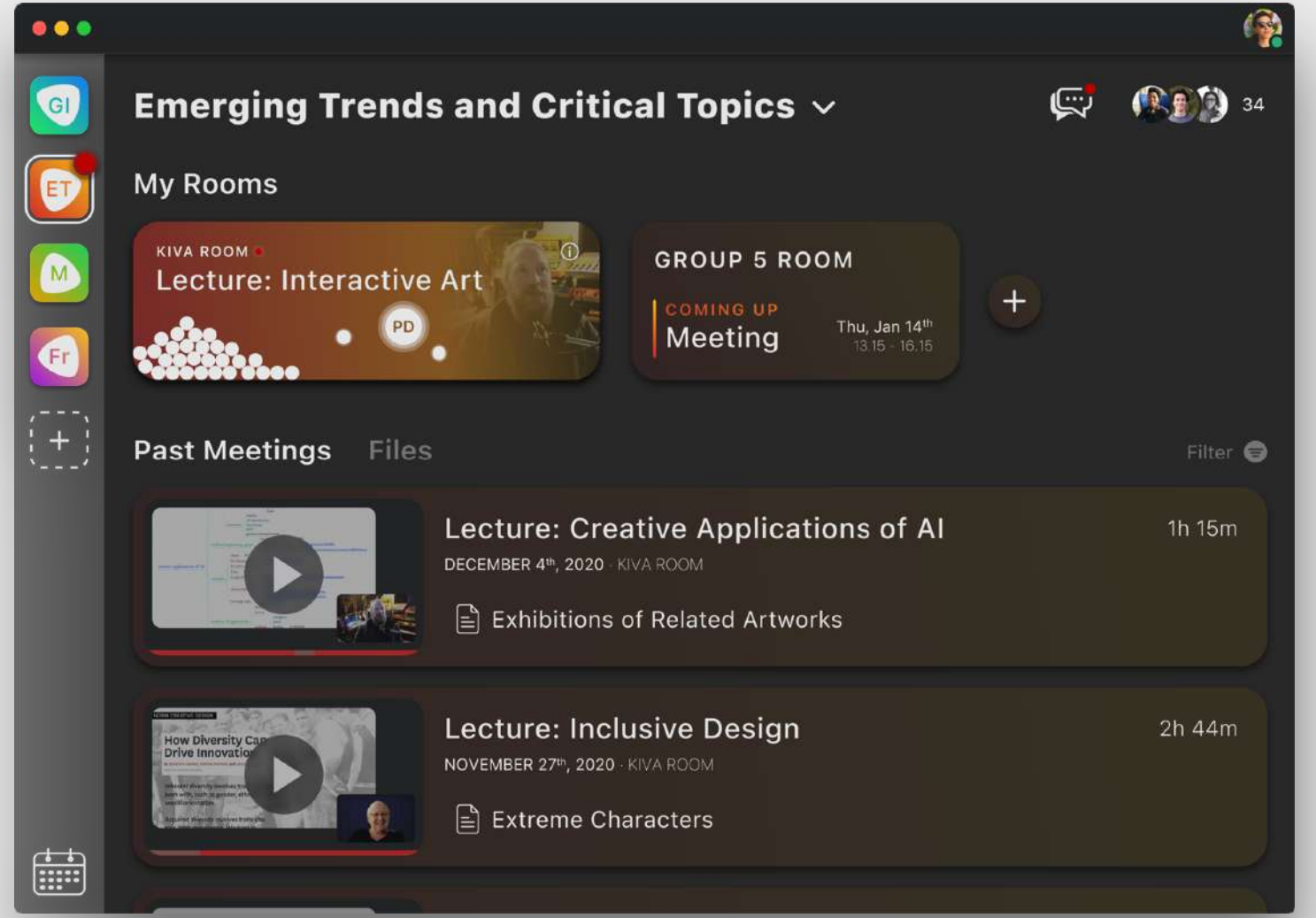
The meeting has already started!

Any time a meeting is running on a room you've joined, its respective box gets brighter.

A rich visual modeless feedback idiom is also adopted here: people in the meeting are represented by small balls, letting the user get a rough idea of how many people are in there.

In addition to that, the balls that are floating represent people with their microphones on, while the bigger ball represents the person currently speaking, with their name initials on it. If the speaker has their webcam on as well, it will be faded on the background of the box.

To get more detailed info, the user can hover over the *info* icon on the top right corner of the room.

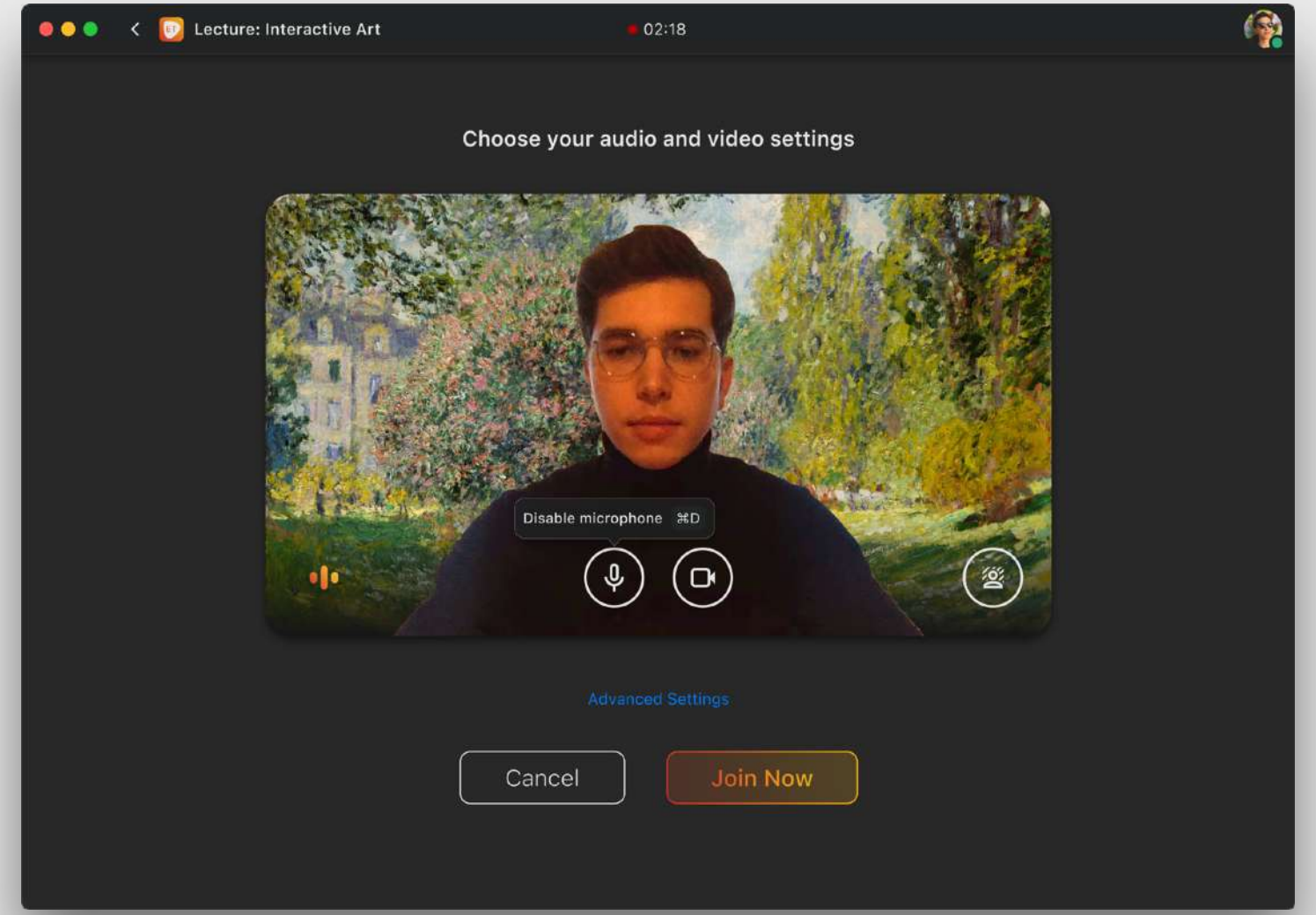


The time to join the meeting has come

As soon as the user clicks on the Kiva room box, a pre-join meeting view is provided.

It’s frustrating how some video conferencing applications don’t let the user be in control of what they’re sharing when joining a meeting.

This pre-join meeting view tackles this problem, offering the user microphone, webcam and background settings, right before joining the actual meeting.



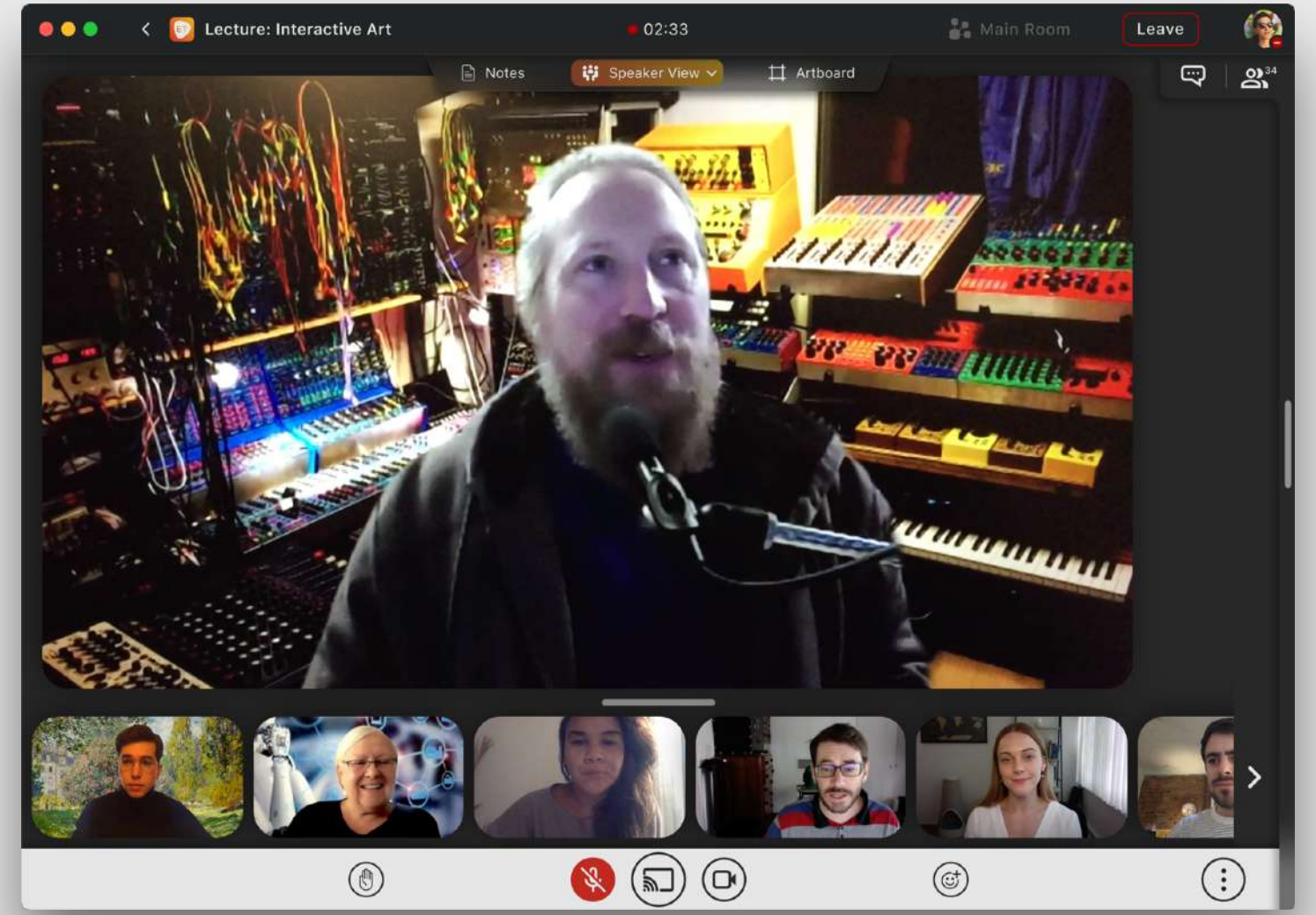
Here we are in the meeting

As soon as the user joins a meeting, the *Speaker View* will be displayed by default.

This view is divided into two main panes: the upper one displays the speaker's webcam; the lower one, instead, displays an array of webcams of the other participants.

The user can arrange the size of these two panes by dragging up or down the drag handle between them. This direct-manipulation control is a command that expresses an immediate modality (Cooper, p. 380).

As long as the user doesn't move the mouse, some details about the participants (such as their names and their audio state) are hidden.



Let’s rearrange the participants’ webcams

A user should be able to drag the items into the desired order directly, without an algorithm’s interfering with this fundamental operation (Cooper, p. 317). The user might want to swap between some participants’ webcams. They can do it by simply dragging and dropping the webcam they want to move.

Cursor hinting - which communicates pliancy by changing the cursor’s appearance as it passes over an object or screen area (Cooper, p. 321) - is crucial here. In our case, the user should see the cursor changing when passing over someone’s webcam to an open hand; moreover, when dragging that webcam, the cursor should become a closed hand until the user drops the webcam in the highlighted drop target.

open hand

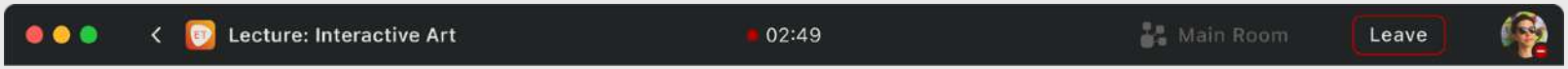
closed hand

The user may also drop the webcam to a drop target that can possibly be scrolled offscreen (Cooper, p. 488). The application, then, will auto-scroll the participants’ webcams until the user drops the webcam where they wanted.

In this case, since the user is moving his mouse, some details about participants will be shown.

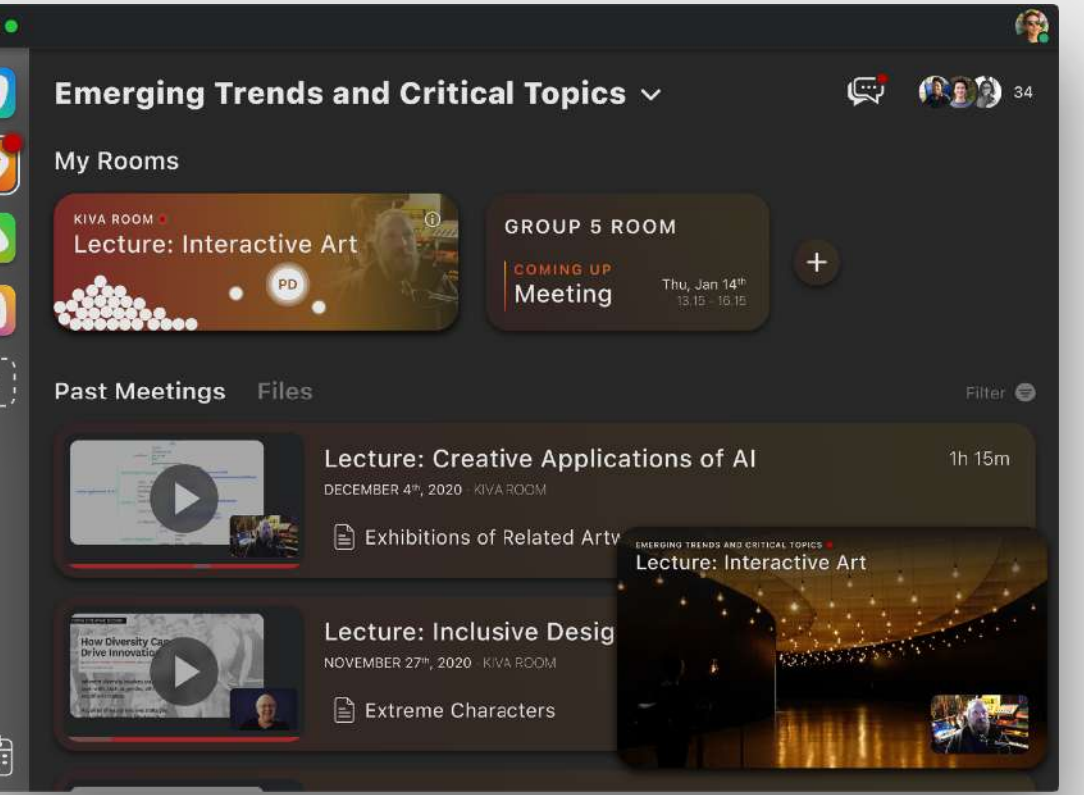
Picture-in-Picture Mode

It may happen that the user might have forgotten to check something out - like anything in the Kiva, in the calendar or even anything in other Kivas - before joining a meeting. Picture-in-Picture Mode will let that without the user having to leave any meeting at all.

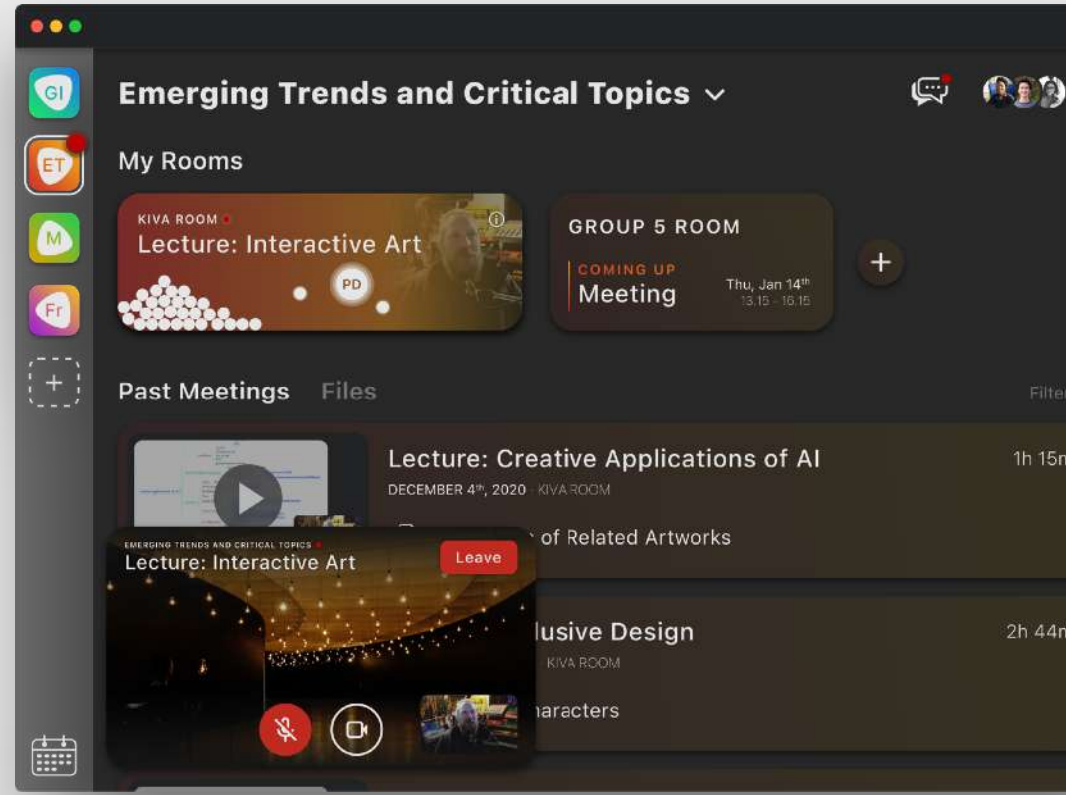


The only thing the user will have to do is clicking on the Kiva logo or in the back arrow on the top bar, shown above. The user will be then able to navigate in the application without leaving the meeting, shown in a floating box. To go back to the meeting, the user will just have to click on that box.

mouse is around the application



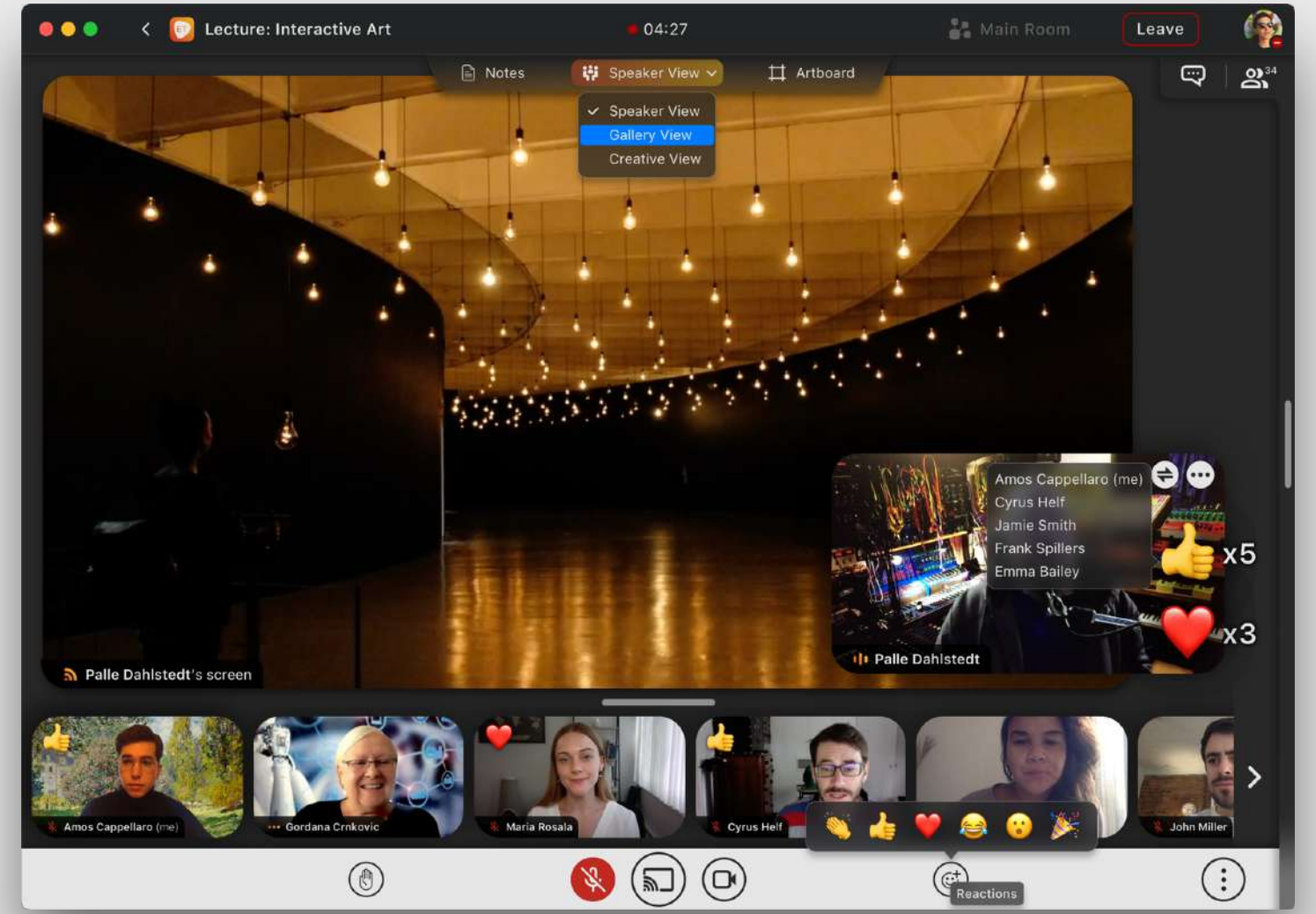
mouse is rolling over the meeting box



Reactions

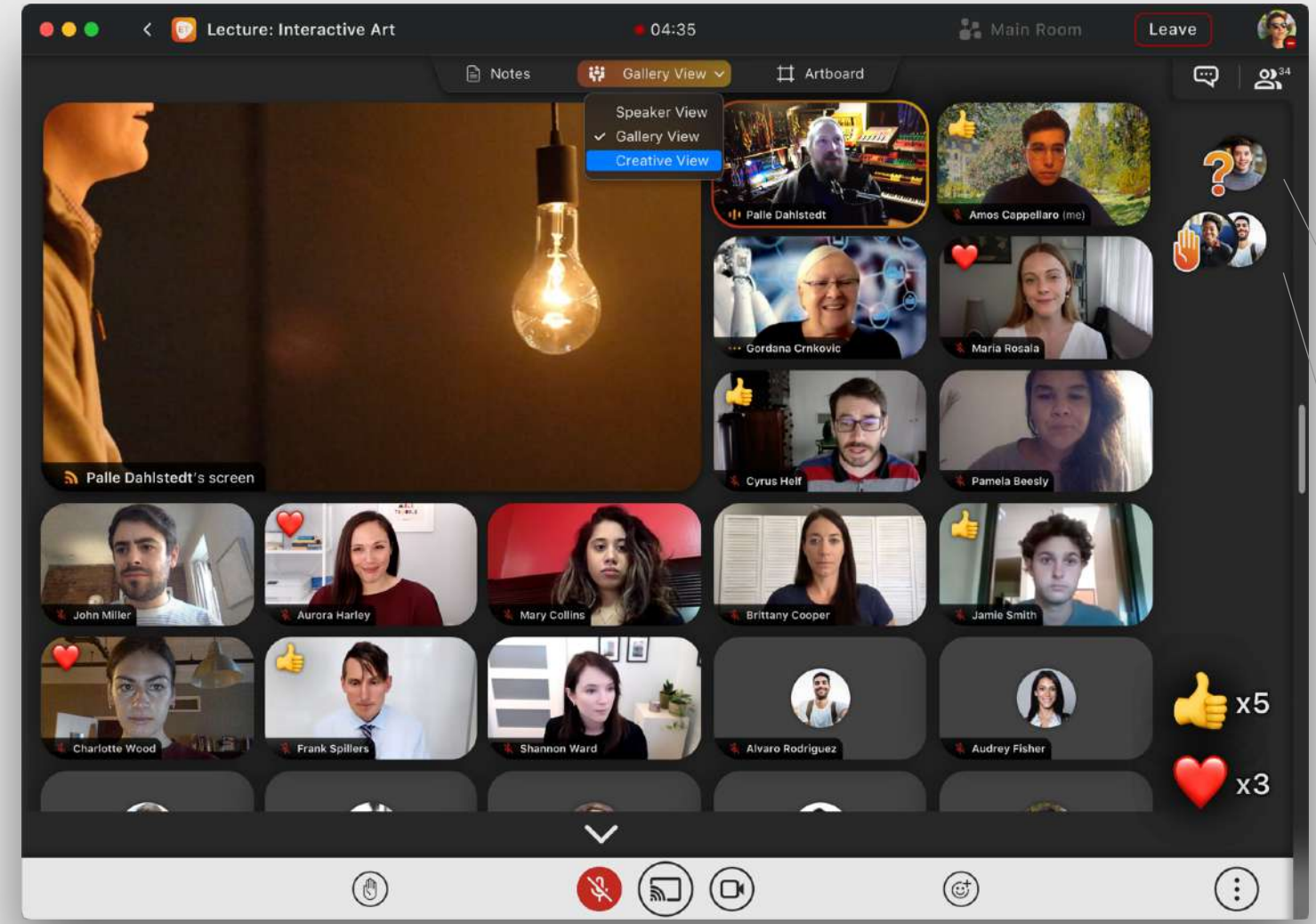
As soon as the user gets back from the Picture-in-Picture Mode, he notices that the speaker has started sharing his screen, showing a video about interactive art installations. The user seems to like that video a lot so he decides to send a *like* reaction.

Along with our user, other participants start sending some reactions, all visible on the bottom right corner of speaker pane. The user is curious to know who sent those reactions: he can check this out by just rolling over the reaction icons or also by switching to *Gallery View*.



Gallery View and Live Actions

Other than some participants reacting to that beautiful video, others asked some questions in the chat or raised their hands to intervene.



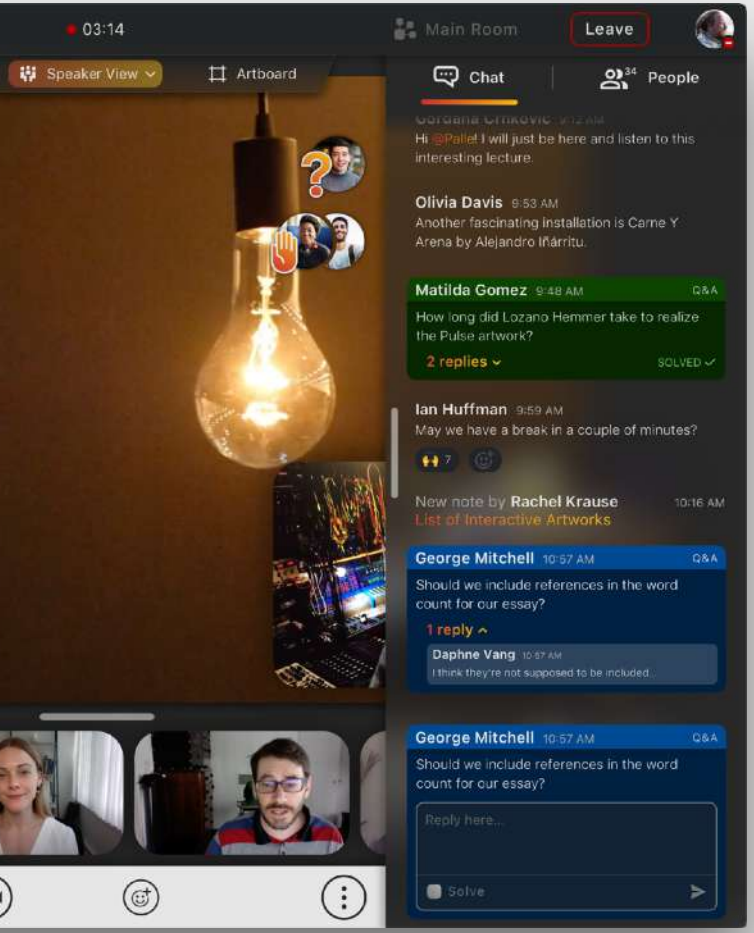
We can say that since some pop-up icons appeared on the top right portion of the screen: one person asked a question in the chat, while two others raised their hands. These pop-up icons can be handled by the owners of the Kiva.

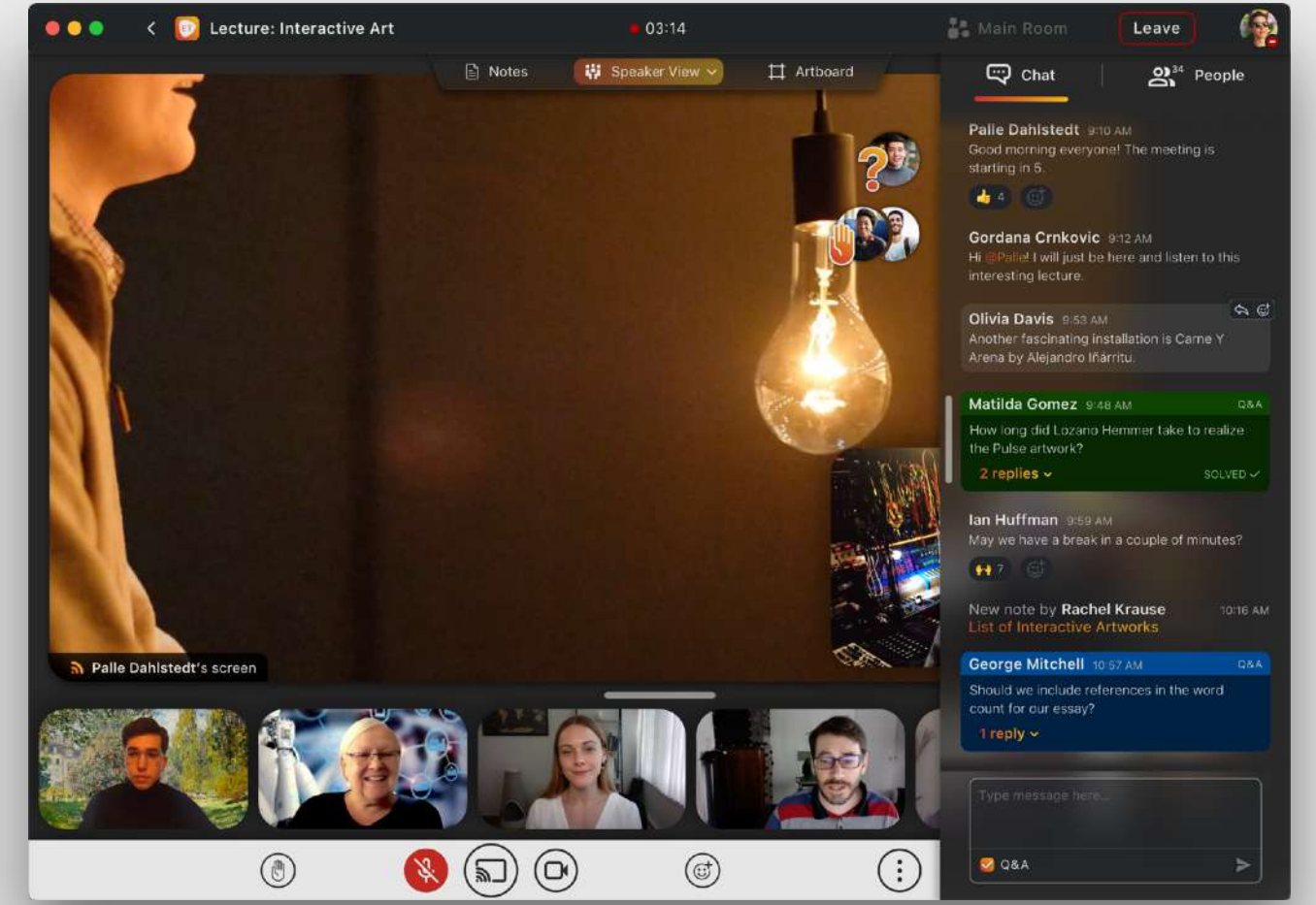
By clicking on the question pop-up icon, the owner of the Kiva will make the application read out loud the related question made in the chat.

By clicking on the raised hand pop-up icon, the owner of the Kiva will send a request to the person who raised the hand to open their microphone. If other people raised their hands, the owner can click on there once again, otherwise that pop-up icon will just disappear.

Chat

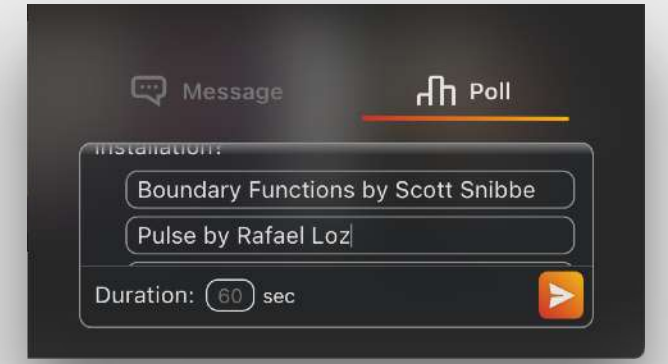
Participants can ask questions in the chat and let the owners play them out loud by checking their message as Q&A, as shown in the image below on the right. Participants can also reply messages by clicking on them; the input field will be then enriched with the message they wanted to reply to on top.

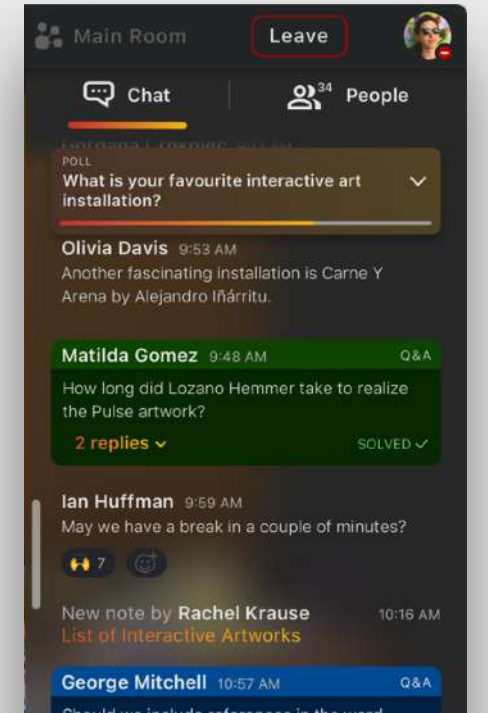


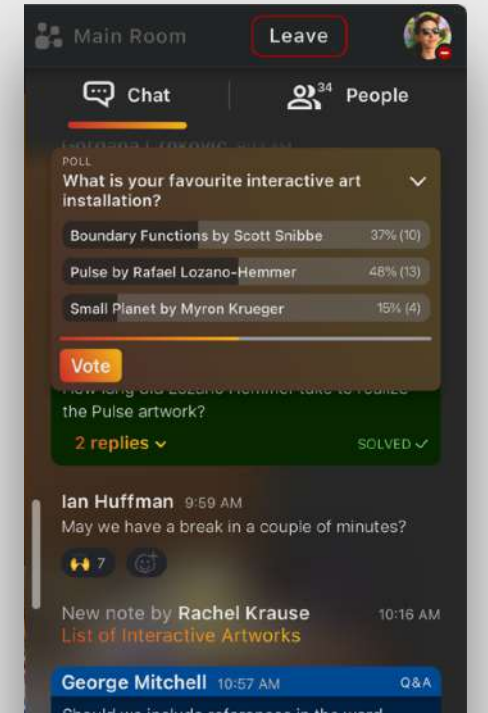


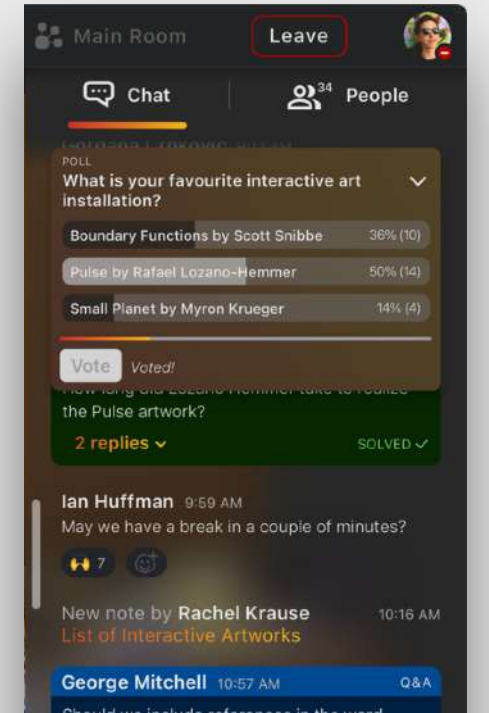
Polls

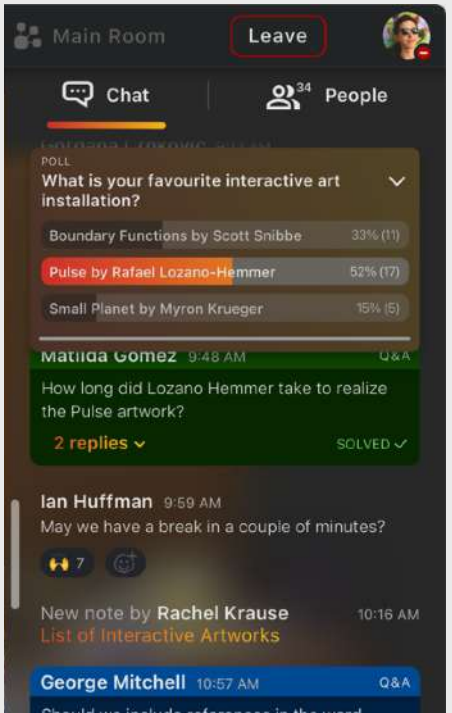
Participants in the meeting who have higher privileges than simple members, such as owners, co-owners and assistants, can launch polls.











Creative View and Whisper Mode

Creative View allows the user to resize and crop other participants' webcams in a more free and organic way.

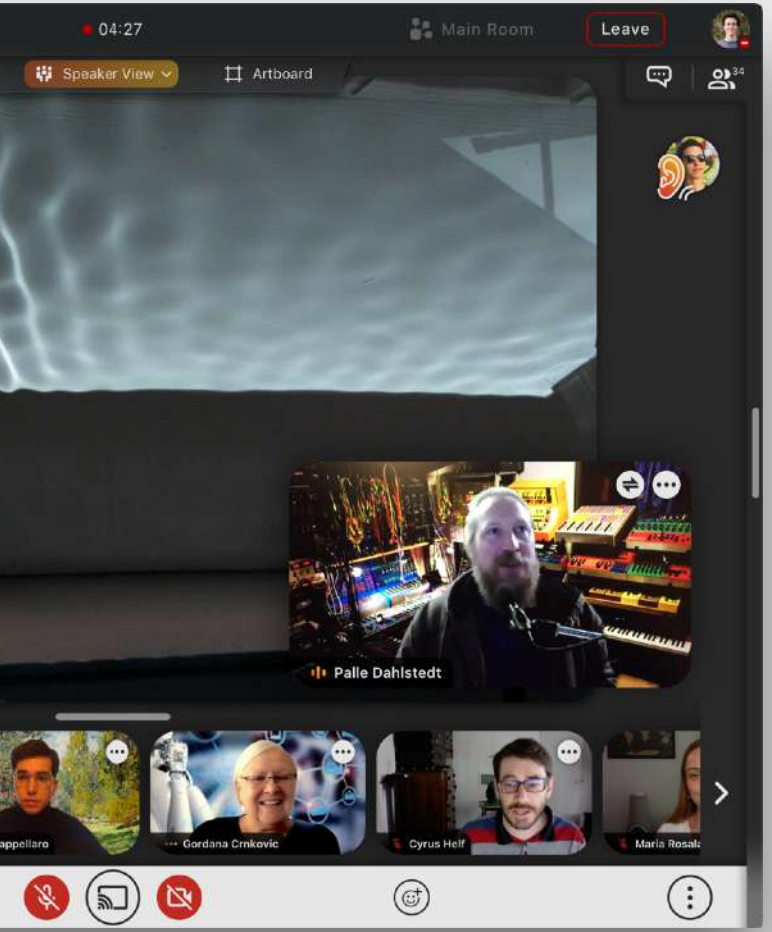
In the mean time, though, our user is still amazed from the video that he would like to talk about it with his friend Ian - who is in the meeting as well - but he wouldn't want to disturb everyone. Kiva allows to do that through Whisper Mode: the user will just to look for his friend on the participants list and click on the Whisper Mode icon, represented by a ear.

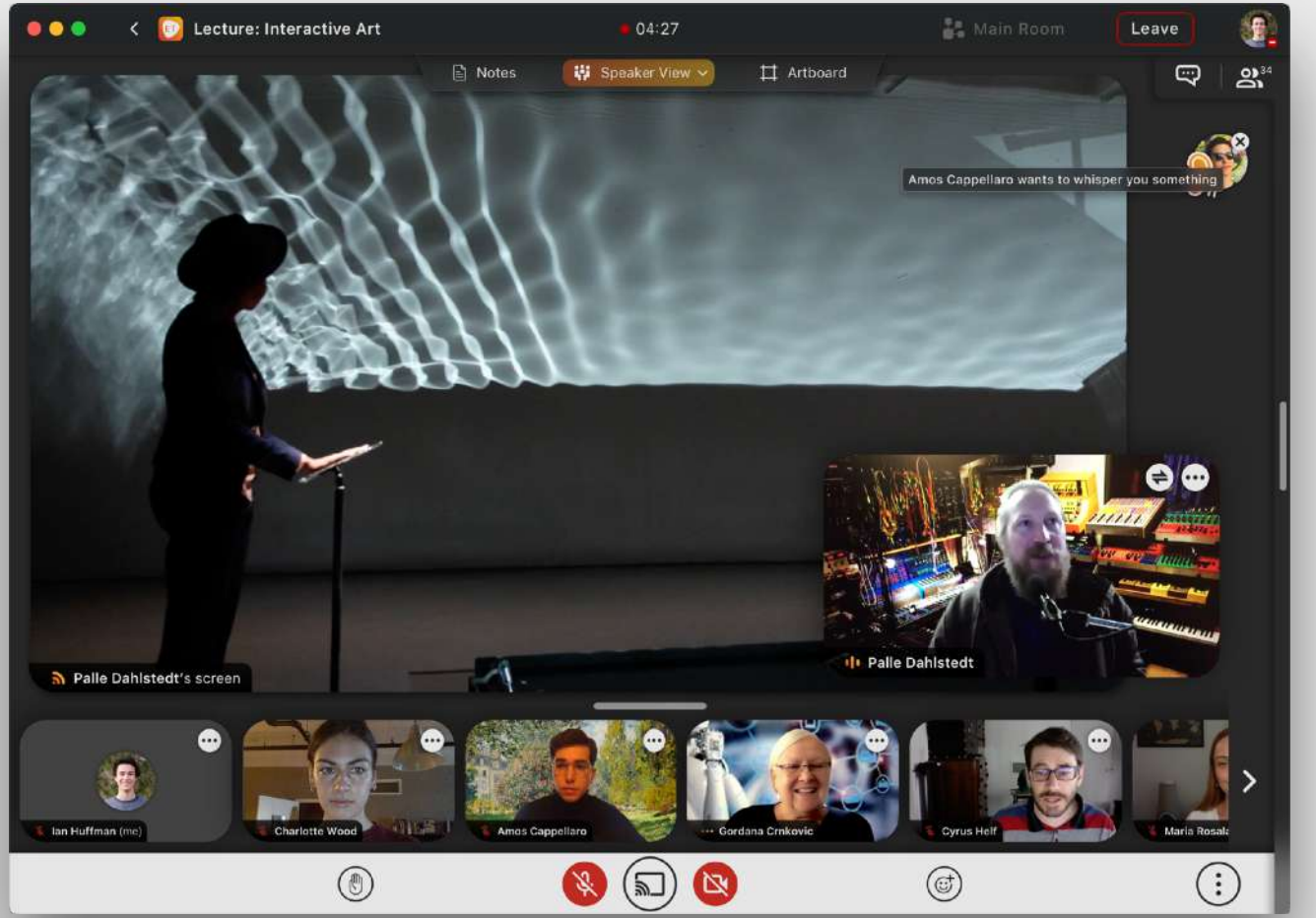
mouse is rolling over Ian Huffman in the participants list

Whisper Mode on the other side

As soon as our user clicks on the Whisper Mode icon, Ian Huffman notices the request by having an icon popping-up on the top right portion of the screen.

While rolling over it, he will get a ToolTip explaining that someone would like to whisper him something. At that point, Ian can either click on the icon to open Whisper Mode, which will mute both participants from everyone in the meeting but themselves, or click on the cross to decline the request.

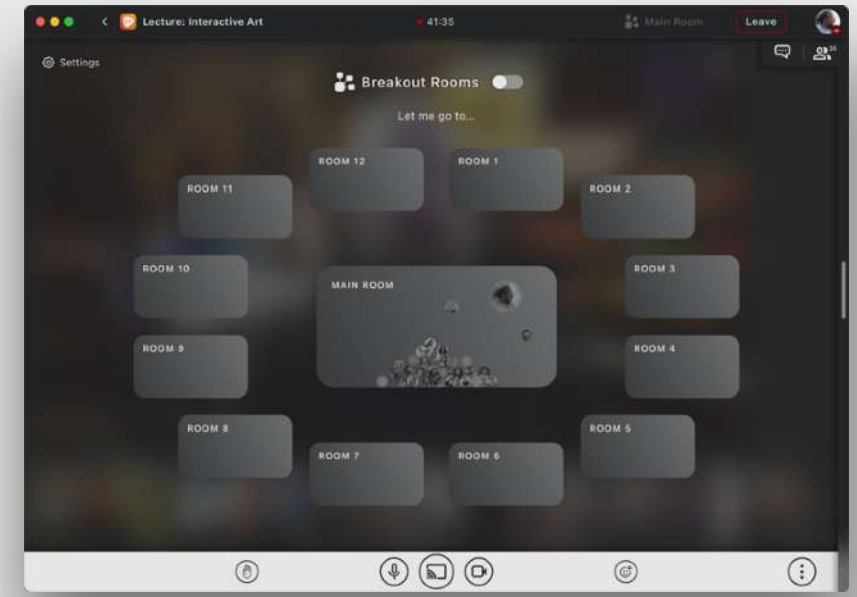


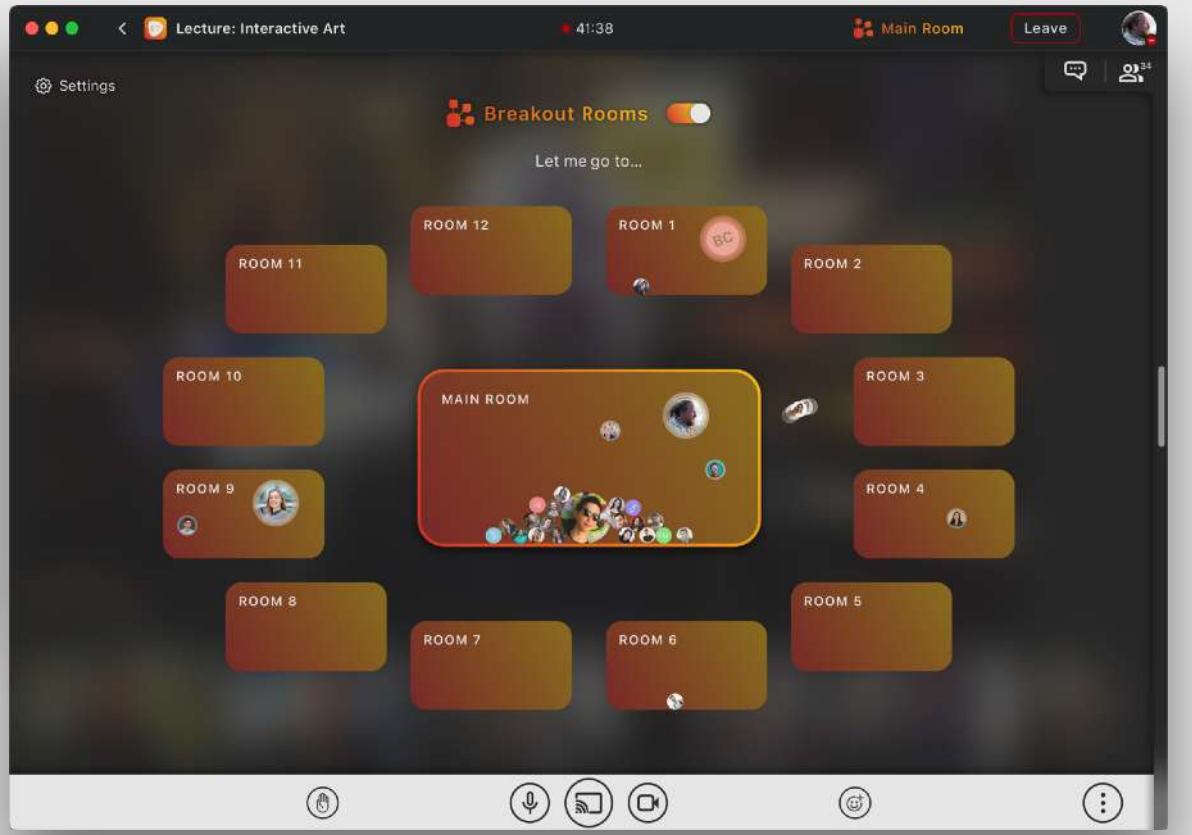


It’s time to open Breakout Rooms

All participants should now split into groups and ideate their own interactive art installations. In order to do that, it’s necessary to open the Breakout Rooms. As the top bar indicated, they’re still closed: an important convention, in fact, is to disable items when they are unavailable in a given state, and the disabled state typically is indicated by graying out the text for the item (Cooper, p. 450).

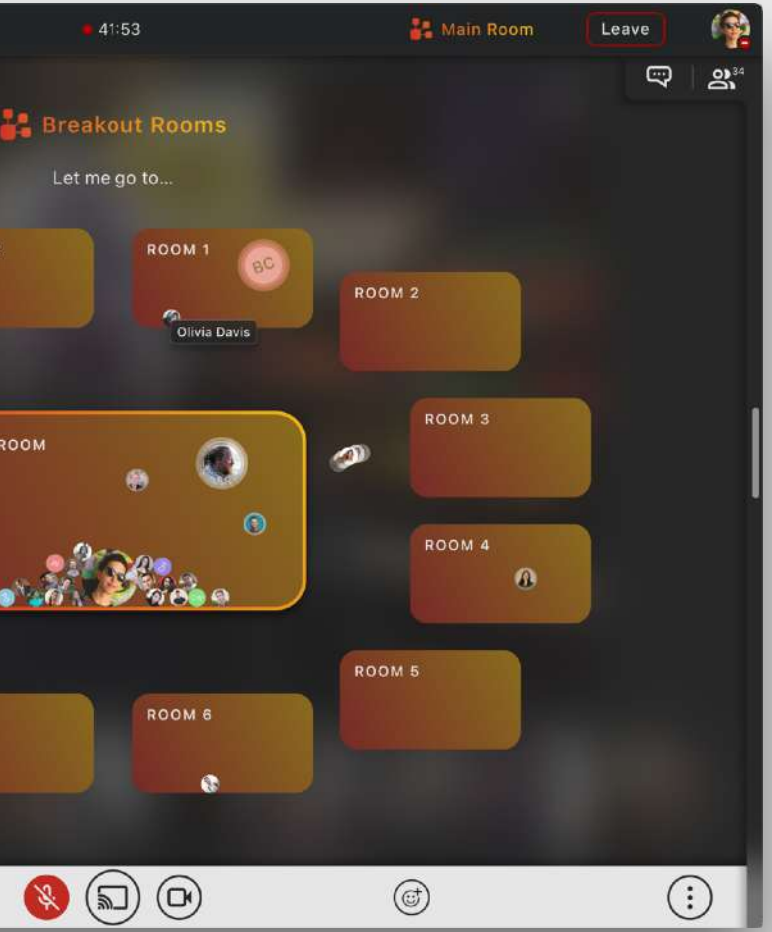
To open Breakout Rooms, owners, co-owners or assistants of the Kiva can still click on the Breakout Rooms item on the top bar and open them by activating the switch control, which is a compact version two radio buttons used together (Cooper, p. 598). Once open, participants in the main room can start join other Breakout Rooms.





Let’s join a Breakout Room!

Our user may want to join one of the available Breakout Rooms. To do that, they can simply click on one of the boxes representing each room, or drag their user profile icon from the room they’re currently in to the room they want to join. Not by chance, their icon is bigger than everyone else’s, to give the user the hint of it being draggable: if we want to move an object from A to B, we click or tap it and drag it there (Cooper, p. 315). This way, each box representing the rooms is a drop target: when the user tries to drop their icons in one room box, that box will get brighter, in order to give pliancy.



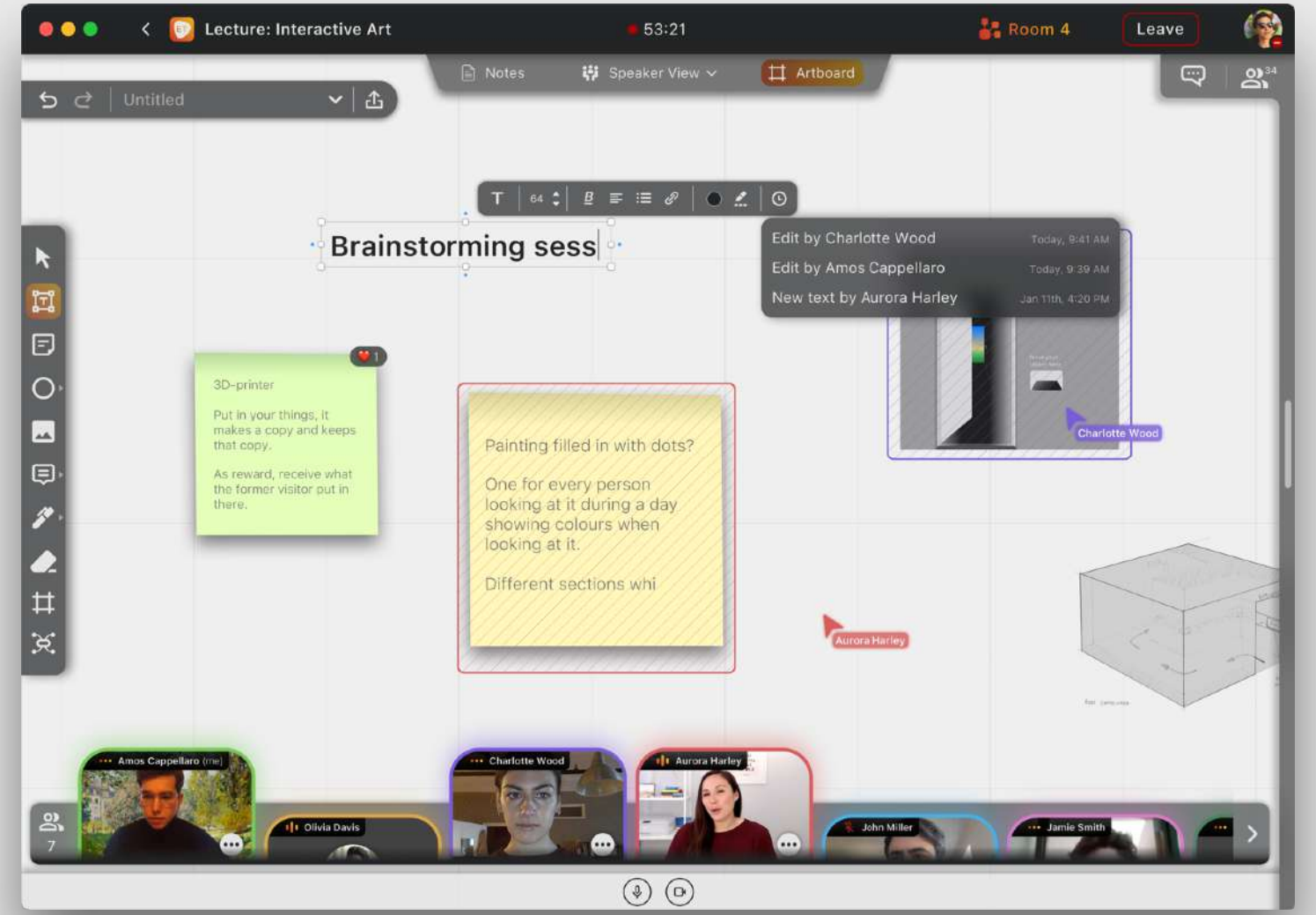
Artboard

The use of tabbed screen areas is a space-saving mechanism and is sometimes necessary to fit all the required information and functions into a limited space (Cooper, p. 275). To let participants in the meeting collaborate, they can switch to Notes or Artboard by clicking on the the tab bar on center top.

The selection box shows four little blue dots to connect items together with arrows: instead of dragging the first object onto the second, a connecting line or arrow is drawn from the first object to the second (Cooper, p. 500).

Space here will acquire great importance: participant's webcams here are disposed following a macOS dock-like idiom. Everyone who is working very closely in the artboard with the user will have their webcam fully displayed; in other words, the participants' cursors visible to the user are the same with their webcam fully up. Moreover, the user will be able to hear them full volume.

On the other hand, everyone in the artboard who are working on another portion of the artboard that is not visible to the user, will have their webcam displayed only partially; if they talk, our user will hear them just slightly, as if they're distant, far off.

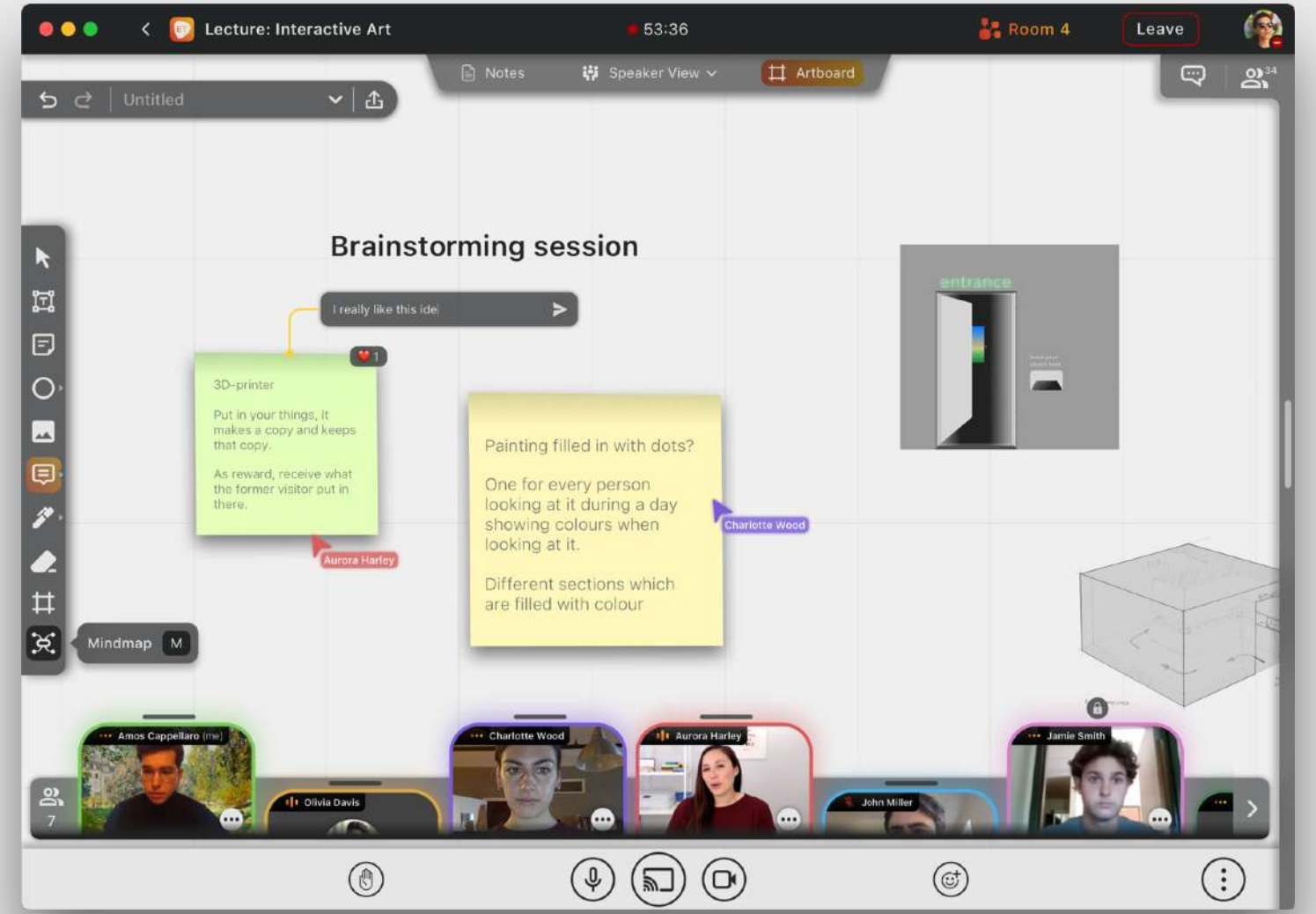


Comment others’ objects

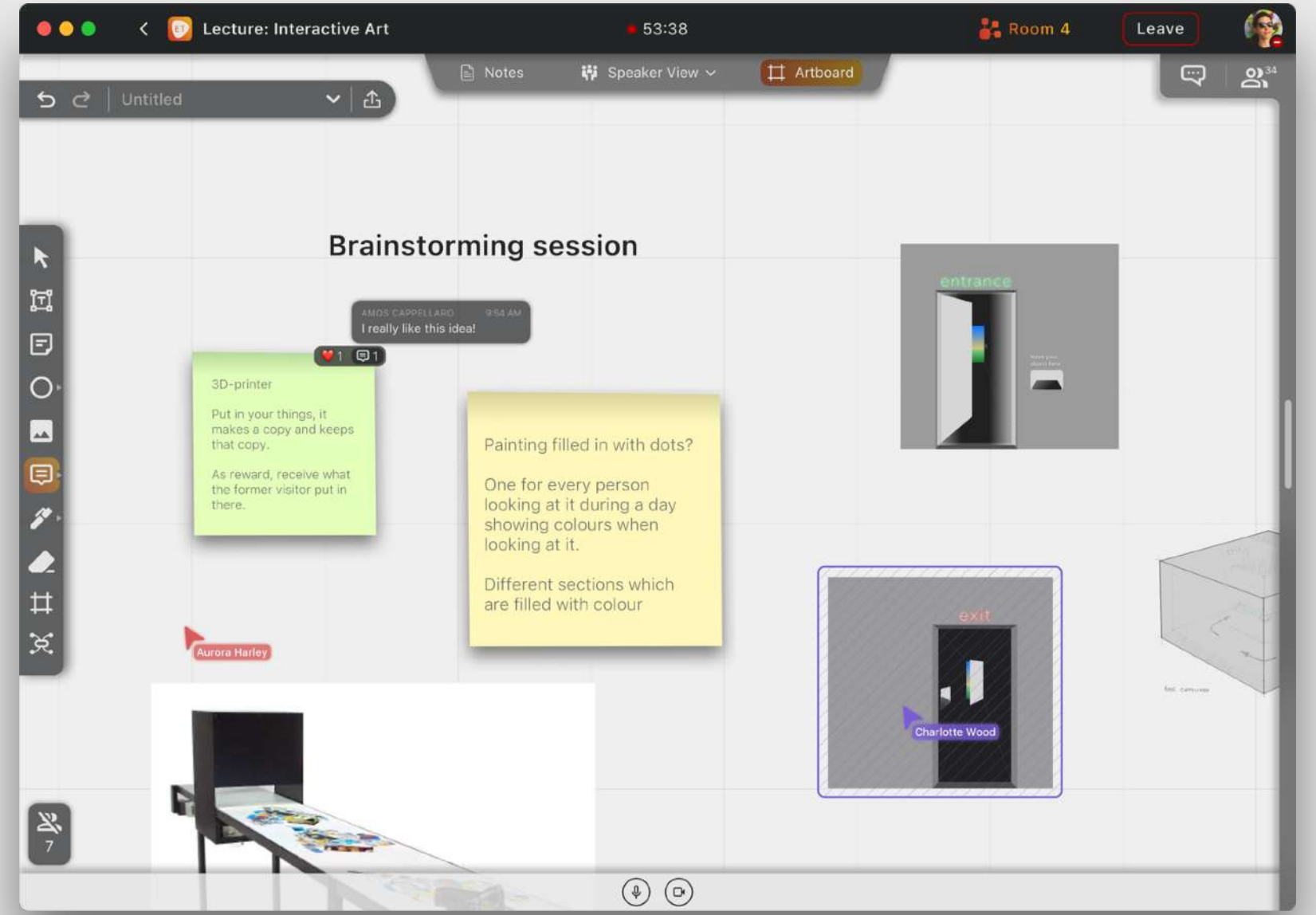
When the cursor rolls over a pliant object, the object temporarily changes its appearance (Cooper, p. 320). This can be seen for example on the mindmap icon: we can suppose that the mouse is rolling over there for a few seconds, since also a ToolTip embedding a shortcut is appearing.

Meanwhile, the user is leaving a comment on someone else’s object. Unlike the situation on the previous page, it looks like no one is selecting any object in the artboard. Objects that are selected by someone are not selectable by other people, otherwise some conflicts may arise.

The user also locked Jamie Smith’s webcam up, by dragging the drag handle on top of the webcam way upper than the maximum height that webcam could reach (even if the webcam stopped coming up, the user kept pulling the drag handle up).

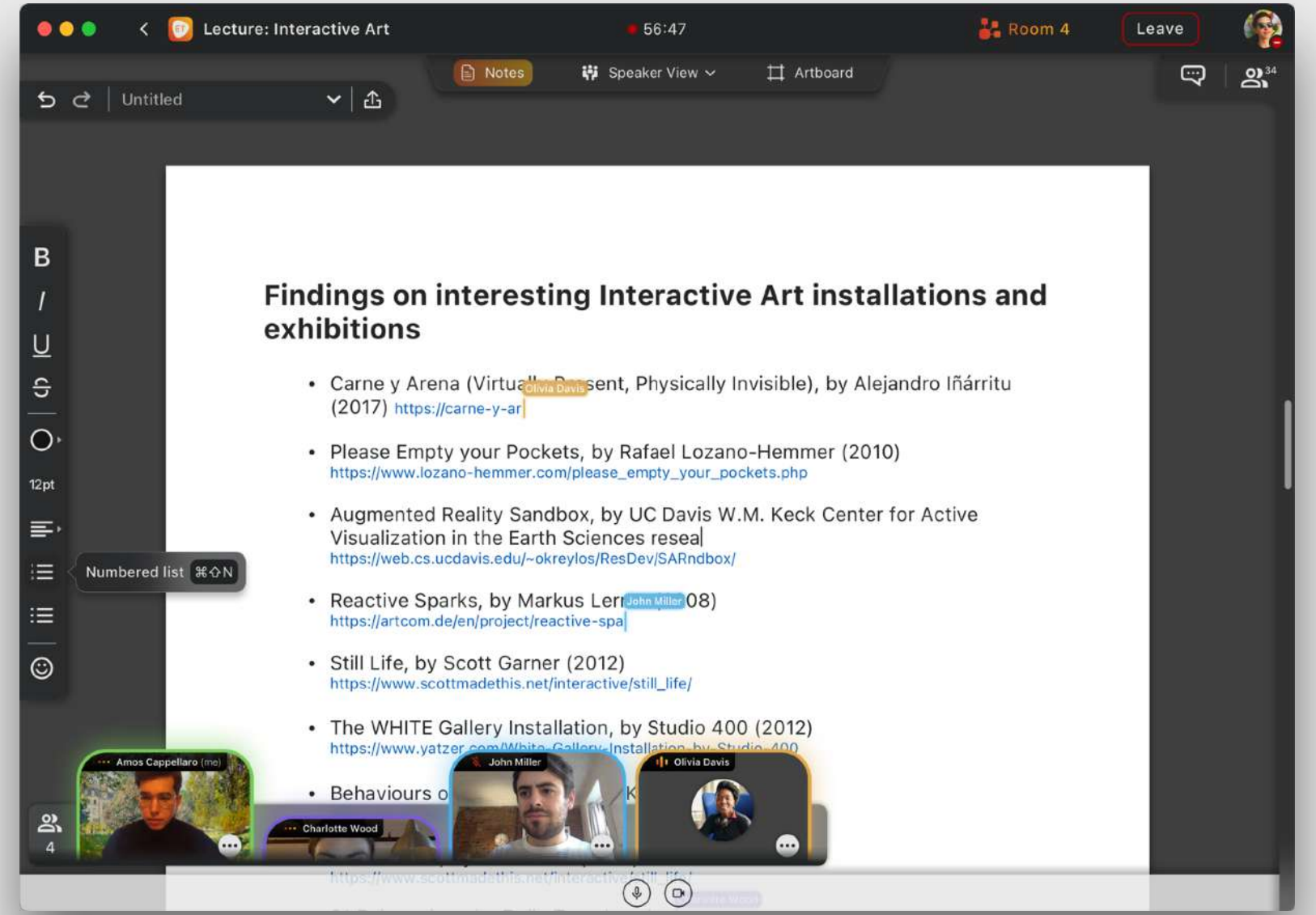


mouse is rolling over the comment icon on the sticky note, the user also decided to hide everyone's webcam by clicking on the icon on the bottom left



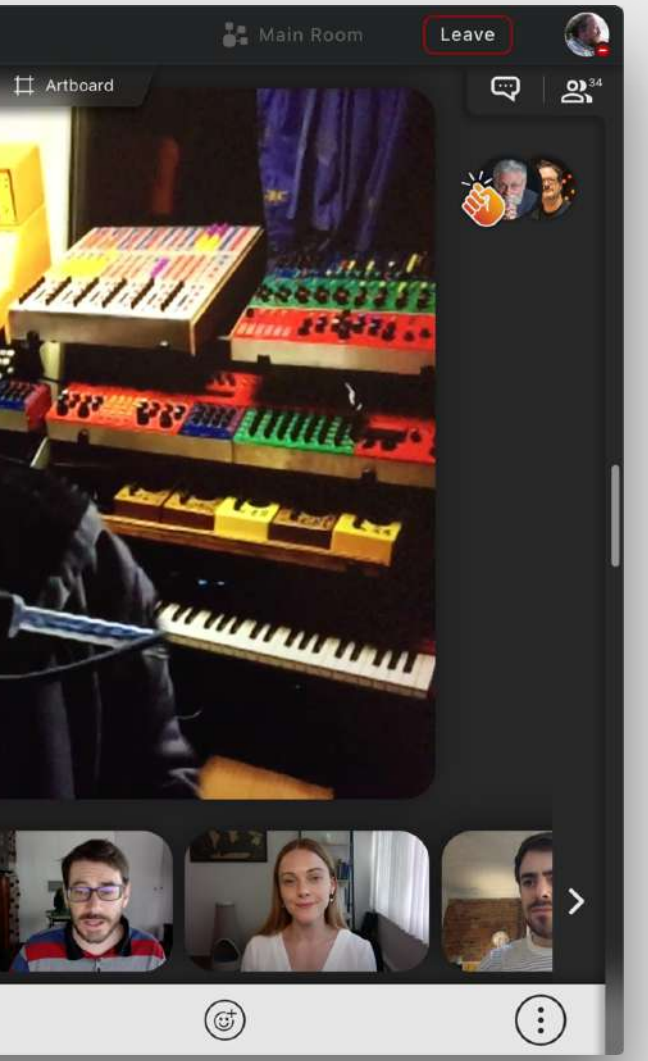
Notes

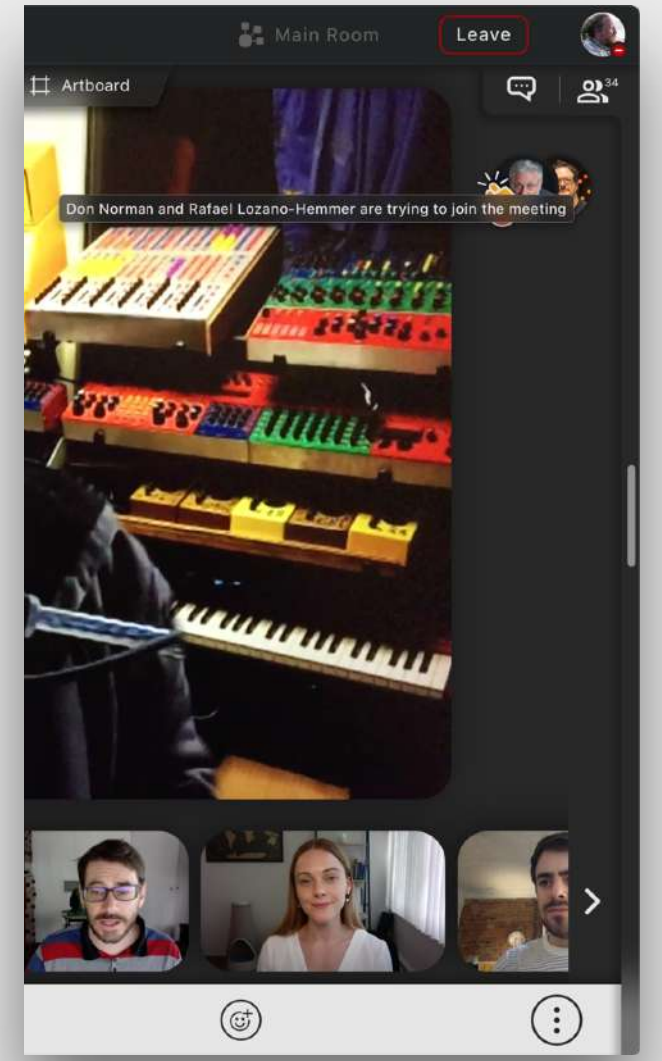
Similarly to the Artboard, participants can work together on notes.

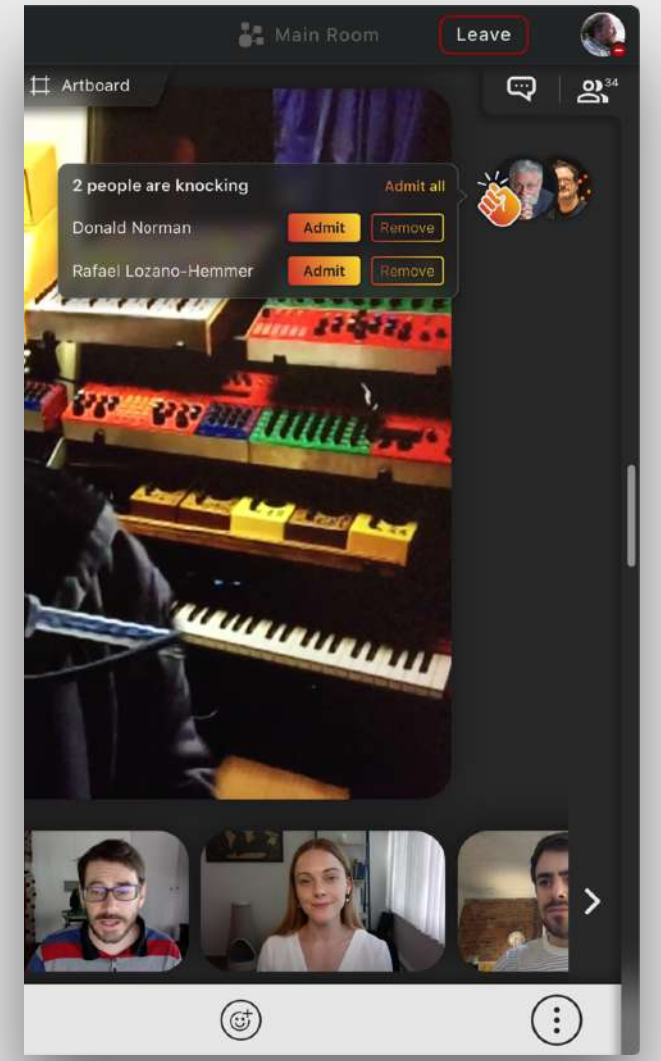


Someone’s knocking!

In case someone who is not in the Kiva yet has been invited to join a meeting through a link, can participate as guest. As soon as they will click on the link they got, they will metaphorically knock to join the meeting. Everyone in the meeting will hear a knock sound, while owners, co-owners and assistants will also get a pop-up icon, which they will be able click on to admit or remove the people who are trying to join.







Guests are in! A surprising guest lecture can now start!

References

Cooper, A. (2014). *About Face: The Essentials of Interaction Design* (4th ed.). Wiley.