A remote lecture series roadmap to equity, diversity, and inclusion in STEM

Supplementary Text: How to launch, execute, maintain, and administer a remote lecture series

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How to launch a remote lecture series

This section will walk readers through the intricacies of beginning a new remote lecture series.

Assemble founders

Who can run a lecture series? A robust organizing effort requires a skilled executive team. Here, we will highlight three important factors that should inform the founding of a new organization.

First, founders must be familiar with both the target audience and the pool of candidate speakers. In some cases, dedicating time to search the internet for relevant candidate speakers or research articles and rallying the community to engage with the lecture series can suffice. In other cases, the desired information is not publicly accessible. For example, a queer engineer student group seeking to host a queer engineer faculty series might not be able to recruit sufficient candidate speakers using public information -- at least temporarily. If the identities and contact information for either the target audience members or the candidate speakers are not known, then launching a series will require that founders personally have this knowledge.

Second, founders must be trusted by their community to realize the goals of the lecture series. While several community members will likely possess the technical skills to organize a lecture series, far fewer can claim a track record of success and engagement. Individuals with relevant track records who are trusted by the community can directly or indirectly influence the success and engagement of future series. If trusted community members are not invested or included in a new seminar series, target audience members' enthusiasm might be diminished. Indeed, promotion of a new seminar series from trusted community members is immensely valuable for boosting interest in attending.

Third, how long founders will stay in their current position should be considered. Within the course of a year, a prospective founder could very well leave their institution. Anticipate spending at least 3 months to build an executive team for a new series. Depending on the scope, 6 to 12 months may be needed. Co-founders must be able to commit to actively organizing for the requisite length of time.

Draft a mission statement & establish core values

Once dedicated co-founders have committed to starting a seminar series, the mission of the lecture series should be established. The process of coming to an agreement should consist of multiple meetings whereby co-founders can openly discuss priorities. The interests of co-founders may be motivated by technical subject matter (such as demonstrating applications of a niche technology), career development (such as honing presentation skills), community building, or something else. Co-founders might pursue similar seminar content for different reasons. Co-founders should discuss their core values and how they relate to hosting speakers, admitting executive team members, and managing the executive team's time and resources. Ensuring common values will make it easier to resolve future bouts of indecision.

After establishing core values, co-founders should develop clear criteria for evaluating lecture series success. Ultimately, co-founders should draft a mission statement that attains unanimous approval. Both the goals and scope of the lecture series should be reflected in the mission statement. It is expected that the goals of a new organization may change over time, especially if co-founders have not previously established joint long-standing interests. Nonetheless, candidate speakers and prospective attendees will want to read the mission statement of your organization before committing to attending an event.

Recruit a full executive team

Building an effective executive team is the most important step in ensuring a successful lecture series. The executive team must recruit speakers, set a lecture format, create flyers, advertise meetings, and moderate sessions. Executive team members will ideally have complementary interests that simplify sharing the workload, but more important is ensuring representation of relevant stakeholders at your institution and, if applicable, collaborating partner institutions. Executive teams must reach the targeted audience to be successful, which is most reliably achieved when facets of the target audience are represented in leadership.

Consider the target size of your executive team. Larger teams require more active management, but offer benefits such as greater access to email lists, more feedback on seminar quality, and a reduced burden on individual team members. DASL's executive team is wholly composed of academic trainees from several departments and degree programs. Thus, having 5-10 team members actively organize helped extend our reach. For other groups managed by a large team, we emphasize the importance of clear communication and assignment of well-defined tasks and deadlines to executive team members. Typically, one or two founders will ultimately have to take responsibility for ensuring completion of tasks and should be prepared to take on a large share of the organizing load.

As turnover can be high, especially among trainees, continuous recruitment of executive organizing members new to the community (early graduate students and postdoctoral scholars, for example) is essential to continuity and institutional memory for a long-term endeavor. Establishing a concrete plan for how to continuously recruit and retain executive team members is advisable.

Plan ahead for how to attain a sustainable executive team model. Assisting in running a remote lecture series offers substantive but limited value as a learning experience. Once executive team members have acquired the related skills and professional contacts, the incentive to volunteer is diminished. Overloading team members also creates the potential for burnout, endangering their sense of intellectual fulfillment and personal support. We offer three possible solutions: passing responsibilities to new members, varying lecture series format, and compensating executive team members. Passing responsibility to new team members shares the professional development opportunities with more individuals and protects against burnout. Changing the lecture platform can introduce new skills to learn for people who have already learned the basics and provide continued intellectual stimulation. Compensation for executive team members' time creates a durable incentive for executive team members to continue, but requires fundraising and does not address personal fulfillment. The best choice may be to employ multiple of these strategies to sustain a full executive team.

Assign executive team members well-defined roles

For large executive teams, it should be clear what role each member should play. It is unlikely that team members will spontaneously take on responsibilities while also coordinating effectively as a team.

Transparency with respect to what executive team members have done and plan to do can avoid duplication of effort. Share template emails to prevent multiple executive team members from spending time repeatedly composing similar emails. Organization and archival of such resources ensures that future members will avoid redundant effort. Similarly, collect data including background details on speakers and stakeholder opinions only once and share with team members to avoid sending multiple emails. In general, executive team members should have precisely defined tasks assigned to them: what emails to compose, which templates to fill, when to contact speakers, and where to record speaker background information should be explicit.

No matter the diligence of an executive team, some tasks cannot be unambiguously assigned to a team member in advance. Wholly unforeseen circumstances -- including lecture series “emergencies” wherein speakers or target audience members are unexpectedly unavailable -- are not unlucky, but inevitable. Alternatively, a task might arise that could be the purview of multiple executive team members. In either case, the ambiguity of who is ultimately responsible can lead to a diffusion of responsibility. One solution is to create an arbitrator role for addressing emergencies and assigning responsibility, which can rotate amongst executive team members. The arbitrator should have some ability to anticipate when diffusion of responsibility might occur and both give and receive communications from other executive team members.

Executive team members should feel comfortable receiving feedback from their speakers, their target audience, and each other. An excellent lecture series is rarely conceived in a vacuum. Remote lecture series can face a long list of challenges: rambling speakers, confusing questions, audio/video outages, and delayed starts. Such difficulties can sometimes be mitigated, for example by dry-run sessions, pre-prepared questions, alternative contact information, and reminder emails. More important than any specific precaution is the openness of the executive team to acknowledging organizational missteps and implementing improved protocols. Surveying speakers and audience members can point to areas for improvement on top of discussions amongst executive team members.

Hold regular meetings and keep a record

Regular meetings remain vital for hosting seminars over the long term. One of the first tasks of an executive team is to set a time for a recurring meeting for the duration of the seminar series. Depending on the maturity of the lecture series and the overall organizational load, this could range from quarterly to weekly.

Setting an agenda ahead of time helps team members prepare. Assign tasks and deadlines to executive team members, either during or in advance of regular meetings. Furthermore, the frequency of meetings should correspond to how regularly tasks must be completed. For example, if new tasks arise and must be assigned every week, meeting monthly is unlikely to be sufficient.

At each meeting, time should be allocated to discuss successes and failures of previous lectures and how to improve future lectures. Taking minutes and disseminating them before each meeting helps executive team members stay fully informed and prepares them to comment on any unresolved issues. Keeping a record of activities also helps track the team’s progress and provides continuity when new executive team members join.

Set the lecture format and time slot

One of the earliest and most significant tasks facing an executive team is establishing a format for a remote lecture series. Small changes can add up to a big difference in attendees’ experience of the seminar series. Executive team members should choose wisely!

Seminars must have a defined time allotment per event. By convention, academic seminars typically occupy a 1-hour time slot. We have also found that participants express a preference for seminars that begin on the hour. Seminars that begin on the hour are more often compatible with a 12-1 lunchtime and other hour-long meetings.

Executive team members must also decide the number of speakers per seminar. Several factors can guide this decision. Junior career speakers may have a smaller body of work and prefer a shorter time slot. In these cases 2 or 3 speakers could fill an hour-long session. Seminar series with multiple goals, such as sharing research, building scientific community, and exploring the personal background of the speakers, may benefit from fewer speakers per session.

Include time for an introduction, questions and some buffer. For example, a one-hour slot would not be sufficient for two 30-minute, or even 25-minute, talks. Starting the session, troubleshooting glitches, taking questions, transitioning between speakers, and reserving some buffer time conservatively requires 15 minutes out of the hour. For shorter talks, we have found that providing a range ("10-12 minute" or "15-20 minute" talks) yields more consistent talk lengths across speakers.

Achieving regular attendance at a seminar requires setting a regular schedule. If seminars occur at unpredictable dates or times, some individuals will inevitably miss out on seminars that interest them. Choosing a specific day of the week and frequency of meeting will go a long way to ensuring a stable audience. Anticipate the interest level of your target audience: are they prepared to meet weekly? Monthly? Quarterly? If you don't know, ask potential viewers what they prefer. While seminars can be held at any interval, regular weekly lectures are easy for attendees to remember and for administrators to add to departmental or group calendars.

The above choices are all influenced by the audience executive team members wish to target. A broad or nonscientific audience may require more motivation and background and favor fewer speakers per session. An academic or professional audience will likely be familiar with Zoom functionality such as Chat and Polling. Undergraduates might have more availability in the evening after classes have ended, whereas professors would attend only during typical workday hours.

Recruit speakers

The success of any seminar series relies on a robust recruitment strategy. Candidate speakers for a new seminar series face an additional burden of setting seminar scope and tone. For this reason, executive team members should talk to multiple close contacts one-on-one -- or plan to serve as speakers themselves -- prior to announcing the series. Sending a request for nominations to a mailing list will likely yield few leads or confirmed speakers until familiarity with the lecture series grows. Candidate speakers are much more likely to accept when they and the person making the request have a pre-existing relationship; for example, alumni from the same lab, members of the same PhD cohort, or collaborators on a research project. Consider including early speakers in the process of establishing seminar goals so they can set a strong precedent.

Take steps to make early seminars visible to community members and future candidates. Social media, email lists, and a website will all increase visibility. As familiarity with a seminar series increases, attendees will be better equipped to nominate future speakers. Accepting nominations offers a number of advantages: it can expand the candidate speaker pool beyond close contacts of the executive team, diversify speaker background and discipline, and standardize candidate screening. Useful information to request as part of a nomination includes email address, potential talk content, institutional affiliation, role, and why the candidate would make a great speaker.

Once candidates have been identified, candidate speakers must be invited and scheduled. Include information about the lecture series format, potential time slots, and mission statement in the invitation. It is hard to predict the acceptance rate of nominees beforehand, so the best strategy is to begin scheduling far in advance. For longer series, contacting several speakers at once and requesting multiple dates per speaker will minimize the possibility of unscheduled slots: time slots with fewer speakers available can then be filled first. Speakers with greater seniority (e.g. professors) on average have less availability and require more advance notice than trainee speakers.

Test the virtual meeting platform

Executive team members should be very familiar with the virtual platforms they intend to use. The host should test the whole process multiple times in advance of the scheduled seminar: creating the virtual meeting room, setting privacy options, admitting attendees, sharing any presentation materials (e.g., slides, videos, or audio), and recording the lecture if desired. Once satisfied, credentials for the virtual meeting and instructions for how to join can be recorded and sent to the scheduled speaker(s).

How to execute a remote lecture

This section will explain how to host a remote lecture step-by-step.

Prepare speakers and advertise the lecture

At least two weeks in advance of the scheduled lecture, the executive team should request a photo, talk title, and any other relevant information from scheduled speakers if they have not provided it at the time of scheduling. Senior career scientists may have an established body of work and pre-prepared presentation materials months in advance, but trainee speakers may not have any pre-prepared materials or decide the content of their talks until two or three weeks before presenting. If talks are scheduled one quarter in advance, trainee speakers might struggle to provide a title at the time of scheduling.

Lectures should be advertised a week in advance. A branded flyer template helps simplify the work in preparing flyers. Include the name, institutional affiliation, logo, time slot, and (if applicable) website of the lecture series. Speakers' names, affiliations, photos, and talk titles can be filled in predefined boxes each session. The filled in flyer can be sent to all relevant mailing lists and posted to social media. Resending flyers the day before and shortly before the session can boost attendance. Instruct speakers and hosts to join the virtual meeting 5-10 minutes before the lecture start time and send instructions for joining the virtual meeting.

Hold a dry-run

In addition to the formal lectures, DASL also operates dry-runs wherein trainee speakers can run through their presentation and receive feedback from executive team members. Why practice remote lectures? Dry-runs can achieve many aims:

1. Troubleshooting technical issues
2. Timing speakers' talk lengths.
3. Providing feedback on presentation style and content prior to the formal lecture
4. Facilitating networking between the executive team and selected speakers
5. Familiarizing speaker(s) with the leadership of the remote lecture series.
6. Answering remaining questions speakers might have.

At DASL, coordination of a dry-run begins at least one week before the formal lecture. An executive team member manages the dry-run and replies to the speaker(s) individually via email as soon as the speaker(s) submit their photo and talk title. In the email, the dry-run manager introduces themself, proposes time slots for a dry-run, and states that the speaker should request alternate times in the event that they cannot make any of the proposed times. Scheduling both speakers in one dry-run conserves time, helps prepare speakers, and facilitates networking amongst speakers and lecture series leadership. Nonetheless, it is not always possible to find a compatible time for all speakers to practice together. Listeners must also be present at scheduled dry-runs to give feedback. In our experience, assigning a dry-run manager to follow up with executive team members one-on-one is the most effective way to recruit individuals to give feedback. We recommend recruiting three listeners for an optimal level of feedback.

Dry-runs should mirror the formal talk as closely as possible. The virtual meeting platform, level of account authentication, and speaker permissions should be kept the same so as to screen for technical glitches that might occur during the formal session. At the start of the dry-run, ask the speakers what feedback they want to receive - the focus of the dry-run should be to work with the speakers to improve their talk.

Following dry-runs, it can be challenging for speakers to recall and address feedback that is only delivered orally. New executive team members might also be unsure what aspects of the talk to provide feedback on. Consider drafting a standardized feedback rubric to mark feedback and share with speakers after the dry-run.

What if a speaker can't complete a dry-run? Technical glitches in remote lecture series are common. We advise providing speakers with a practice virtual meeting room and contact information for an executive team member who can answer last minute questions by phone or email. Ask speakers to confirm that they have received the credentials needed to access the virtual meeting.

Begin the session

15 minutes before the virtual meeting's formal start time, hosts should be logged into the virtual meeting room ready to greet speakers. If the speakers arrive early, as requested, hosts can remind speakers of the talk format and note any virtual meeting features or distractions, e.g., chat boxes, notifications or Q&A format. Hosts can then ensure that mics, video, internet connection, and screen sharing features are functioning as expected. We reassure speakers that hosts will address any important notifications and engage with speakers should the need arise. The host can also ask questions of the speaker, such as position, name pronunciation, departmental affiliation, and personal pronouns, as well as confirm speaker order and any plans for recording the session.

Assuming speakers have finished conferring with the speaker(s), the host can begin admitting attendees to the virtual meeting around one minute prior to the formal start time. At the formal start time, assuming all waiting attendees have been admitted, the host should acknowledge the start of the lecture and announce when the meeting will begin. We wait until two minutes after the hour to begin the session to allow attendees to transition from their previous meeting.

At the designated time, the host should introduce the lecture series and speaker(s). In a remote lecture series, it is often easier for hosts to broadcast introduction slides compared to in-person events. Introductions by the host, including introductory slides, may be used to achieve the following:

1. Broadcast the name and goals of the lecture series
2. Announce future lectures or events of interest to the target audience
3. Provide more information about speakers, including contact information

After the introduction is complete, the host should invite the speaker to share their screen and begin their talk. The host should check any communication or recording settings during the transition. 2-3 minutes into the talk, if the platform allows, the host can message the audience any relevant information about the lecture series, such as instructions on how to subscribe to an email list, submitting questions to the speaker, or viewing the lecture series schedule.

Hosts must be prepared to moderate Q&A segments at the end of each talk. We believe it is easiest to prepare a question that can kick off the Q&A. While in-person lectures often have a lull where attendees applaud, shuffle in or out of the auditorium, or walk up to a microphone, remote lectures instead often end in a disorienting total silence. When multiple speakers present per session, it is important to manage the length of the Q&A segments so that later speakers have time to present in full. If multiple speakers are presenting, we recommend reserving equal amounts of Q&A time for each speaker after their talk and designating time at the end where attendees may ask questions to any speaker. This helps ensure that each speaker has adequate Q&A time while providing a buffer for time should there be technical difficulties that extend talks beyond the budgeted time.

Conclude the session

Hosts should be mindful of the scheduled end of the seminar. Hosts should politely warn speakers if talks appear likely to extend past the prescribed length. If the scheduled end elapses, either during the talk or during Q&A, the host should verbally acknowledge the time so that those with another meeting know if they have to exit the virtual meeting.

At the end of the lecture, the host should thank the speakers and attendees, and acknowledge the date of the next lecture. Afterwards, follow up with the speaker(s). Share any recordings or feedback with the speaker, if applicable. Invite speakers to share their thoughts on the lecture and any areas for improvement.

How to maintain a remote lecture series

This section highlights long-term challenges specific to remote lecture series.

Build community remotely

Remote lecture formats necessarily introduce some limitations and challenges. Opportunities for small group discussions and impromptu conversations in particular are curtailed, making meetings feel less welcoming. This poses a particular problem for DASL, as many of our speakers speak about important personal experiences. We believe that these challenges can be mitigated and even overcome: dry-runs, conversations between the host and the speaker after the presentation, and small group breakout discussions can achieve a sense of intimacy matching in-person lectures.

Guard participant privacy

Care should be taken with respect to privacy in remote lecture series. Speakers may not be comfortable with sharing unpublished work with a broad audience. This issue can make it more difficult to recruit speakers who are early in their careers: graduate students, postdoctoral scholars, and assistant professors. Similar privacy concerns exist for in-person conferences, but remote lecture series make it easier to screenshot, record and share content. Work with speakers to assuage any privacy concerns. For DASL, we ask each speaker whether they would like their talk recorded or not. We share recordings with speakers and, with permission, other academics and educators. Otherwise, lectures are only studied in aggregate such as for publicizing recommended resources for the community.

From summer 2020 on, purposeful disruption of Zoom meetings, or “zoom-bombing”, has become a widespread phenomenon. Access to greater security controls and adoption of a more circumspect culture surrounding sharing of Zoom URLs have attenuated the risk of disruption, but it is important to stay vigilant, especially on social media. Review Zoom and University recommendations to ensure meeting security and reduce the possibility of disruption by unwanted parties.

Assess lecture engagement and collect feedback

Pay attention to what elicits engagement from speakers and audience members. What do speakers and audience members focus on? Do talks end on time? Consider whether the breadth and depth of the lectures are realistic for the target audience. If attendance changes, investigate possible reasons, including conflicts with important classes, meetings, or other lectures. If possible, create concrete metrics to quantify successes. How many individuals attended? How many questions were asked?

It is often helpful to hear feedback from target audience members, which is nontrivial for a remote lecture series. Executive team members should make an effort to speak with target audience members directly to learn about how they decide to attend and what they like and dislike. Whether the lecture conflicts with other events, relates to attendees' interests, or is given by a familiar speaker are common factors. Consider surveying target audience members to gain a more comprehensive understanding. Regardless, remote lecture series can facilitate data-driven approaches to evaluating progress even without surveying participants. Talk metadata, such as Zoom participant lists, are usually more easily recorded and downloaded on virtual platforms than in person. Executive team members should reflect on engagement regularly to address shortfalls or adapt to changes in target audience preferences.

How to administer a remote lecture series

In this section, we will outline the tools available to help you administer a remote lecture series. Depending on the volume, frequency, and breadth of the remote lecture series, the amount of work involved can be immense. Effective operations require managing candidate speakers, target audience members, and the executive team itself. Otherwise essential communications might be lost. Most communication with candidate speakers can be achieved by email. Engaging the target audience is best served by employing a multitude of platforms such as email lists, online calendars, a publicly accessible website, and a video conferencing platform like Zoom. Strong communication amongst executive team members can be achieved using email lists, Slack, and Google suite.

Email lists (e.g., Google Groups)

Communication among executive team members is paramount. If an executive team consists of more than 1-3 individuals, we recommend creating an executive team email list. Creating a list makes organizing more robust to turnover and changes in size of the executive team over time. The executive team email list facilitates running regular meetings and discussing any cancellations or additions to the lecture series.

Ensure that a suitable email list exists for announcing and promoting lectures to potential audience members. If existing email lists are too broad, too narrow, inaccessible, or only tangentially related, create your own! Instructions to subscribe to the list should be included in all email advertisements and forwarded to more well-established email lists at participating institutions. Once the audience email list is established, it can be used to advertise additional events consistent with the mission statement, whether forwarded from executive team members or partner groups.

Website (e.g., Squarespace, Mailchimp)

Maintaining an internet presence helps to advertise events, build credibility, and consolidate information about the lecture series. Target audience members can learn more about the mission of the organization, the schedule of events, and the executive team. For a website to be successful, it must be easy to read and navigate. We host the DASL website using Squarespace, which offers varied templates and does not require any web development experience. Most website design platforms charge on a monthly basis.

Virtual meeting platform (e.g., Zoom, Gather)

Adoption of Zoom has skyrocketed in academia and worldwide. As of April 2021, 46% of workers across 17 global markets use Zoom on a regular basis [1]. The corresponding increase in Zoom literacy makes Zoom meetings an attractive option for remote lecture series, but it is not the only way to hold remote seminars. Limits to the number of attendees mean that alternative platforms can either substitute or complement Zoom meetings. For example, YouTube Live allows hosts to stream seminars and sidestep Zoom license restrictions on the number of attendees. Questions can be accepted by Google Forms or Google Chat to allow for bidirectional communication.

Zoom is the default choice for remote academic meetings, but full consideration must be given to the numerous custom options and functionalities. Because the freely available basic version of Zoom restricts meetings with more than 2 participants to 40 minutes, we will focus on licensed versions only. Zoom licenses are currently available for two types of sessions: Meetings ($20 per month per license) and, for Meeting license holders, Webinars ($79 per month per license). Standard Zoom Meetings are limited to 100 participants, but purchasing a large meeting license increases meeting capacity. Zoom Webinars cap participants between 500 and 50,000 depending on the license. Both forums allow specified hosts to administer and record the session, but whereas all participants in Zoom Meetings can share audio and video, only panelists (who can be chosen in advance) and attendees (who must be individually granted permission) can share audio and video. Other notable features for Zoom Webinars include a specialized Q&A interface and email reminders. We recommend reviewing the differences in functionality on Zoom's website [2] and checking what licenses your institution already makes available (including by Enterprise, Education, and Healthcare bundles).

After choosing between the Zoom Meeting or Zoom Webinar format, other access and security settings must be decided. Mandatory registration simplifies the process for registrants to add event details to their personal calendars, but might dissuade some target audience members who do not want to commit in advance or fill in text. We recommend hosts use the following settings for Zoom Meeting: enabling a waiting room, disabling participant screen sharing and whiteboard, setting a meeting password, muting participants upon entry, restricting access to authenticated users, turning off notifications when a participant joins from a waiting room, and blocking removed users from rejoining. Zoom Webinars have additional options for managing Q&A such as whether to show answered questions only or all posed questions and whether to allow attendees to upvote questions. Chat can be utilized in either format; fielding questions via Chat alone is usually manageable, especially when fewer than 100 participants are expected.

How to share Zoom credentials poses additional considerations. Zoom acknowledges that sharing Zoom links publicly on social media poses a risk of disruption, either by inattentive users or malicious ‘Zoom-bombers’, but it does not offer a blanket recommendation against sharing links publicly [3]. In any case, assuming passwords have been enabled, we recommend sharing a link with embedded password via trusted email lists. On public facing websites and social media, links with embedded passwords should be shared with no more than a few days notice. With this in mind, creating a new meeting for each Zoom Meeting is more prudent than hosting a recurring meeting with one set of credentials for all lectures in the series. Alternatively, passwords can be withheld from public sites in favor of contact details for someone who can provide access to meeting passwords.

Be mindful of common pitfalls during hosting Zoom sessions. Hosts must either be present or specify a backup host to ensure that participants can be admitted and that the Zoom session can be recorded. Make clear to speakers in advance the expectation for any required or optional recording of the lecture. Give speakers co-host status in Zoom Meetings to ensure that speakers have access to screen sharing when screen sharing privileges have been revoked for general attendees. Designate additional co-hosts to ensure that someone can administer the Waiting Room or Chat while the host is speaking or engaging with a speaker.

Other virtual platforms can offer distinct user experiences. Gather is a space-based virtual platform that ties participants to a mobile avatar. Users can move their avatar through a two-dimensional map and interact with other users via avatars or embedded applications. This allows small groups of users to congregate and chat at will instead of pooling all participants in one video chat or navigating separate sessions or breakout rooms. This format has been successful in virtual poster presentations and meet-ups, but currently suffers from low familiarity amongst Zoom users.

Streaming video service (e.g., YouTube)

YouTube offers a simple interface for uploading talk recordings or promotional materials to a central online hub. Talks are managed via YouTube Studio. Note that YouTube places several restrictions on the length of each video and the amount of content per day, especially for new accounts. When uploading, be mindful of copyrighted audio or video that might be present in presentations; YouTube will screen footage to identify content violations.

The most important choice is the accessibility setting of each video. Currently YouTube supports three types of videos: “private”, which individual accounts must be granted permission to view; “unlisted”, which are accessible by a shareable link but do not appear in YouTube search results; and “public”, which can be accessed by search or browsing its corresponding YouTube channel. Sharing private videos can spare speakers or leadership from downloading large files. Sharing unlisted videos allows speakers to share lectures with colleagues or family members without making personal or sensitive content publicly searchable. Sharing public videos via a centralized channel can amp up engagement.

Uploading talks to YouTube offers other benefits beyond raw talk recordings. YouTube automatically generates captions for any uploaded videos, which improves lecture accessibility and facilitates review of lecture content. YouTube can store extensive metadata about lectures, including a date, time, title, description, category, as well as organize presentations into playlists. There is also high familiarity with YouTube streaming in the broader public, whereas file download interfaces can confuse some potential viewers.

YouTube Live can substitute or complement Zoom if audience audio and video sharing is not essential. YouTube Live requires some preparation; accessing it directly requires being familiar with operating a streaming encoder, which in turn requires a sufficiently powerful computer and fast, stable internet to encode and upload live video. Disruptions are less easily remedied than interruptions of video conferencing sessions because there is less direct feedback from attendees. Although audience members cannot share audio or video, they can submit questions by live chat or another platform (e.g. Google Forms). Currently, YouTube Live is free to use and has no limits on the number of people streaming the event. Zoom facilitates YouTube Live streaming by offering an option from within Zoom to encode and stream Zoom sessions [4].

Event management services (e.g., Eventbrite, Whova, Zoom Events)

An email list and website can effectively communicate events, but additional management features can help if the lecture series is new, standalone, or composed of separate but interrelated sessions. Event management services provide a webpage for your event and facilitate collection of information about registrants. If no suitable webpage or mailing list exists yet, the webpage access granted by an event management service can be helpful for easily sharing information about remote lectures.

Event management services offer finer-scaled control of access to remote lectures. It is possible to cap the number of registrants who receive access to virtual meeting log-in credentials, limit the valid times individuals can register to gain access to the event, require attendees to report relevant information like institutional affiliation, and share calendar invitations and reminders with attendees.

Even when a series of lectures is planned, an event management service may be a favorable alternative to hosting a website. Building an attractive, centralized location for participants to look up past and upcoming events and learn more about the lecture series is nontrivial, and is often too much information for a regular email posting. A fully functional Eventbrite lecture series homepage could be drafted in 5 minutes for free plus 5 minutes for each additional event, whereas hosting a webpage and adding talk information might take a few hours to fully set up and 5-10 minutes of editing per lecture, while paying $20 per month.

Note that basic event management service features may be incorporated into virtual platforms. For example, Zoom's required registration functionality for licensed users allows tracking of registrants, asking a slate of common or custom questions, and adding a lecture series logo or header to the registration page. Whether the richer functionality of dedicated event management services is worth the expense is up to executive team preferences and event complexity.

Cloud-based file-sharing services (e.g., Google Drive, Dropbox)

Cloud-based file sharing services are critically important for lecture series executive teams larger than one or two people. File-sharing makes it possible to maintain up-to-date schedules for lectures in real time. Beyond the lectures themselves, file-sharing simplifies sharing information about scheduling logistics: tracking correspondence with candidate speakers and storing speaker details like affiliation, photo, and talk title. For larger executive teams, a directory of team members can be warranted.

Cloud-based file storage also facilitates sharing content with speakers and audience members. Shared folders can house templates for announcing lectures, inviting speakers, and drafting flyers. Placing lecture recordings in a shared folder provides near instantaneous access. File-sharing services can also generate shareable links so that individual lectures can be sent to speakers.

Cloud-based shared folders can serve as a repository for any other miscellaneous content. Lecture series nominations, logos, surveys, speaker feedback, and funding information can all be stored in a central, transparent hub.

Cloud-based calendar service (e.g., Google calendar)

Cloud-based calendar services offer a straightforward way to share lecture details. Target audience members can subscribe to a calendar or add individual calendar events via email. Google Calendars can be embedded in a website, although readability may be a concern. Calendars remove ambiguity in start times across time zones and make links to remote lectures easier to find. Consider keeping a separate executive team calendar to manage internal events. We have found that noting events on a calendar has limited effectiveness at promoting events. Calendars better serve individuals who are already motivated to attend.

Cloud-based document editing (e.g., Google Docs Editors)

Google's office suite is particularly suited toward sharing across large groups. Below are some examples of how we have used the various applications:

1. Google Docs
    a. Taking minutes from executive team meetings
    b. Composing checklists for host responsibilities (see supplement)
    c. Storing email templates
2. Google Sheets
    a. Maintaining an executive team directory
    b. Drafting a schedule of lecture titles, dates, and speaker details
    c. Listing candidate speakers
3. Slides
    a. Creating and editing a flyer template
    b. Crafting introductory slides for each lecture
4. Forms
    a. Accepting email list subscriptions
    b. Soliciting nominations
    c. Surveying speakers
5. Apps scripts
    a. Adding lecture details in a Google Sheet to a Google calendar

Document merge applications (e.g. Document Studio on Google Workspace Marketplace)

Document templates with demarcated custom entries are helpful, but new document merge applications can automate filling of emails, flyers, and forms. Many applications available on Google Workspace Marketplace read a Google Sheet of content plus a template document and replace header names enclosed with double curly braces in the template with the Google Sheet entry. Every completed row can generate a new document with the correct information. When updated information is entered into a spreadsheet, it is easier to review compared to filling in blanks in a template with other, unchanging content. Free applications may limit the number of document merges per day (to ten or fewer), but this does not impede advertising of academic lecture series, which rarely take place more than once a week. We are not aware of tools capable of automated processing of photos. After filling Google Sheet content into a Google Slide, we manually upload photos to the merged document and crop and resize as needed.

Online anonymous scheduling tools (e.g., when2meet, Doodle, Google Forms)

Coordinating meetings among decision-makers is a perennial challenge in professional circles. Ask executive team members how they prefer to schedule meetings. If the executive team is small or if most members have flexible schedules, iteratively suggesting times by email may be the best approach. For mid- or large-sized teams, it might be difficult to settle on an acceptable option without using a scheduling tool. For target audiences, it is best to keep surveys as simple as possible to maximize response rates.

Doodle (https://doodle.com/create) offers basic functionality for choosing time slots for free, whether selecting several one-on-one meetings or voting on regular meeting times. Polls are easily shared via a url. Respondents can answer anonymously if desired.

When2meet (https://www.when2meet.com) offers a compact interface for participants to fill in full schedules. Surveying Days of the Week, which is agnostic to specific dates, is an attractive way to choose a time for a recurring meeting, whether it is weekly or less frequent.

Google Forms (https://docs.google.com/forms) is adaptable for choosing meeting times when the number of potential days or times is small. The “Checkbox grid” question type can query a few time windows across many dates or many time windows across a few days. Google Forms instantaneously summarizes answers and scales to hundreds of respondents or more.

Consider which team members are most difficult to schedule. You can cut down the time other team members spend on filling out schedules (e.g. exhaustively highlighting windows on when2meet) by limiting time slots to those compatible with the most inflexible, and emailing the others directly or with a Google Form. Ensure that the provided time slots correspond to respondents’ actual availability; students might prefer times later than 5 PM. Ask a few team members in advance to gauge interest in the earliest and latest feasible times. Also, be mindful that respondents’ time conflicts will change over time, such that resurveying every few months might be necessary.

Social Media (e.g., Twitter, Instagram)

Social media offers a more informal way of communicating with target audience members. Twitter serves as a hub for scientists at all career stages, so establishing a presence on Twitter and posting about upcoming lectures can organically broaden your audience. Use hashtags to highlight key words and raise awareness. Retweet messages from executive team members and lecture series partners to build a brand beyond your own content and messaging. Instagram is another possible option for raising awareness and engagement. Advertising of seminars on Instagram is not common per se, but a quick search yields millions of posts tagged with “#seminar.” Thus, Instagram may be an option, especially to engage younger audiences.

Team communication software (e.g., Slack)

Slack enables group and private messaging among executive team members and, if desired, target audience members. Why use Slack instead of email? Slack groups conversations into channels that can be viewed retrospectively by new members. Consolidating team members on Slack also allows easy communication when team members do not know others’ email addresses or whom to consult for a specific topic of concern. As might be expected, we find that Slack declines in usefulness as an executive team matures. Once executive team members learn their roles and who to ask for help, other modes of communication may be preferred over Slack.

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DASL Weekly checklist

Co-host(s):

- ❏ **Day of session**
  - ❏ Join the DASL session hosted by your co-host 15 minutes early to confirm that the link is working and get set up as co-host
  - ❏ After speakers are briefed, let participants in from the waiting room, and continue to do this throughout the session
  - ❏ If someone has accidentally unmuted in the middle of a talk, you can force them back to muted state

Host:

- ❏ **Prepare for the session**
  - ❏ Email the speakers 2 weeks ahead of time, asking for information. For example:

    Dear Dr. Griffith,

    Thank you so much for working with Gabriela and signing up to speak at DASL on March 9th. We are very excited to have you join us. When you have a minute, could you please provide us with the following information so that we can prepare the talk materials:

    - Your talk title,
    - Your position and lab,
    - A headshot for the flyer, and
    - The way you'd like your name presented (full name, full name with middle initial, other name, etc.).

    We will also be in touch one week before the talk to schedule an optional dry-run. Please feel free to email me back with any questions you have!

    Looking forward to hearing from you,
    Jon and the DASL Team

  - ❏ Set up a scheduled meeting on Zoom with a password
  - ❏ Add the talk information to the DASL Schedule Spreadsheet
  - ❏ Add the DASL talk to the DASL San Diego calendar with the zoom link
  - ❏ Update intro slides in time for the dry-run.
    - ❏ Update names of speakers
    - ❏ Update emails of speakers
    - ❏ Update headshots
    - ❏ Add a preview of the next week or any other announcements
  - ❏ Create talk flyers.
    - ❏ Flyer Tasks (alternatively, use document merge on flyer template):
      - ❏ Modify speaker preferred names (include “, PhD” if postdoc and pronouns if speaker requests it)
      - ❏ Modify speaker title (I’ve been using Postdoctoral Scholar and Graduate Student to stay consistent)
      - ❏ Modify Lab
      - ❏ Modify Talk title
      - ❏ Modify Date of talk
      - ❏ Modify zoom url (without password)

                - [ ] Put your email address for passcode
                - [ ] Replace headshots
                - [ ] Crop so it looks good. Make sure both headshots are the same size.
                - [ ] With the headshot selected: Object -> Rasterize -> Other: 100 ppi (This will make the file size small enough to get through the listserv)
                - [ ] Save as .ai.
                - [ ] Save as .pdf (Make sure it's < 1MB)
        - [ ] Write and schedule an announcement email (with flyer attached) for 8AM on the Thursday before the talk.
        - [ ] Schedule an announcement email for 8AM on the Monday before the talk, and put TOMORROW in the subject line
        - [ ] After the first announcement is sent on Thursday:
            - [ ] Forward it to any departments or listservs that you advertise to
                - [ ] Biomedical sciences
                - [ ] Biological sciences
                - [ ] Bioinformatics
                - [ ] Chemistry and Biochemistry
                - [ ] Bioengineering
                - [ ] LJI
            - [ ] Ask the DASL General Slack to Forward it to their respective lists
            - [ ] Forward it to the following contacts to ask them to send it to their lists:
                - [ ] Salk
                - [ ] SBP
                - [ ] Scripps Research
        - [ ] Send a separate email to the speakers with the zoom information (just in case they aren't on any of the mailing lists) and ask them if they can join the zoom ~10 minutes early on the day of the lecture
    - [ ] **Day of session**
        - [ ] Start your Zoom Call 15 minutes early
        - [ ] Have your intro slides open and ready for screen share
        - [ ] Let the speakers into the room before anyone else (unless the speakers don't get there early) to ask any last questions you may have.
        - [ ] Make the speakers co-hosts.
        - [ ] Tell speakers to ignore the waiting room pop-up notifications.
        - [ ] Start sharing your intro slide screen. Make sure the annotations are turned off on the security option.
        - [ ] Start allowing people in from the waiting room once the speakers are ready
        - [ ] Assign other DASL organizers as co-hosts to help you let people in from the waiting rooms.
        - [ ] At 12:00 welcome everyone to DASL and say that you will start in 2 minutes so everyone gets in from the waiting room.
        - [ ] At 12:02
            - [ ] Start recording (locally to your computer)

- ❏ Start the intro slides and go through them
    - ❏ Introduce the first speaker: say their name, title, lab.
    - ❏ Describe procedure for asking questions (put in the chat at anytime, will be addressed at the end of the talk)
    - ❏ Record the session in full screen with the speaker's camera only in the top right corner.
  - ❏ Stop recording right before you start to introduce the second speaker.
  - ❏ Start recording again before you introduce the second speaker (this will result in two recording files).
  - ❏ Some time during the talks put this in the chat:

    Want to be sure to get the link every week? Fill out this Google form and we will subscribe you! https://forms.gle/yf4mUkNPEqjXSpnD6

    Please nominate speakers for future sessions here. https://forms.gle/zVHu9ruadRRmXhgL6
  - ❏ Recordings will save once the meeting is ended.
- ❏ **After session**
  - ❏ Rename and upload recordings to Google Drive
  - ❏ Email each speaker and give them a link to the recording.
  - ❏ Once you get confirmation that you can share it, update the schedule spreadsheet.
  - ❏ Highlight the row in the schedule spreadsheet a different color so you can feel accomplished.