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# **A NEARLY CARBON-NEUTRAL CONFERENCE MODEL**

## WHITE PAPER / PRACTICAL GUIDE

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Air travel to conferences, talks, and meetings can account for a third or more of the carbon footprint for a typical scholar or university. This document both explores this problem and offers a nearly carbon-neutral (NCN) conference alternative, which is completely free of cost, that can reduce these carbon footprints by a factor of 100 or more. The first events to employ this NCN conference approach took place in May ([visit the archived website](#)) and Oct/Nov of 2016 ([website](#)).

Our most recent NCN conference was the June 14-30, 2018 ASLE-Sponsored Symposium A Clockwork Green: Ecomedia in the Anthropocene ([website](#)). [Jump down to Intro.](#)

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## WHITE PAPER

### Introduction

UC Santa Barbara (UCSB) recently calculated the size of its carbon footprint. The assessment not only included the immediate campus and its vehicle fleet, but also a range of facilities and activities that support it, including campus housing. One area in particular stood out.

Roughly one third of UCSB's carbon footprint comes from faculty and staff flying to conferences, talks, and meetings. All this air travel annually releases over 55,000,000 pounds of CO<sub>2</sub> or equivalent gasses directly into the upper atmosphere, where they contribute most to climate change. Putting 55 million pounds of CO<sub>2</sub> into human terms, this is equal to the total annual carbon footprint of a city of 27,500 people in the Philippines. Note that this is more than UCSB's undergraduate, graduate, and faculty populations combined and that many climate scientists recommend that planetary greenhouse gas (GHG) emissions be not much more than the current per capita level of the Philippines.

This issue can also be approached personally. When Peter Kalmus, a climate scientist at NASA's Jet Propulsion Laboratory (and a speaker at UCSB's first nearly carbon-neutral conference), did the math, he found that two-thirds of his annual GHG emissions came from travel to and from conferences and meetings. The remaining third was from his car, electricity use, natural gas for heating his home and cooking, food, sewage, and so forth. Not all scholars travel this much; however, a single roundtrip transcontinental flight releases one metric ton of CO<sub>2</sub> per coach passenger, which is equal to the recommended annual emissions allowance for each person on the planet if we hope to limit global temperature rise to 1.5 degree Celsius (the goal set forth at COP 21).

Although GHG emissions obviously vary across individuals and institutions, this is a major issue for academia. Put bluntly, air travel is, environmentally, academia's biggest dirty little secret. And opting out is generally not much of an option. "Publish or perish" has a less famous corollary: present or perish. At many institutions, conference presentations are tallied up alongside publications at tenure and other merit reviews. From graduate students advised to network at these events to seasoned scholars delivering the keynotes, conference participation is in academia's DNA.

As the U.S. is home to nearly 5000 colleges and universities, tens of thousands of academic conferences take place every year. Some are quite large. The annual Modern Language Association (MLA) convention averages over 7000 participants. And academic conferences are

just the tip of the iceberg. [Some estimates](#) put the total number of participants at all conferences, seminars, and similar meetings in the U.S. alone at over 200 million annually.

Yet, traveling by air is a privilege that few share globally. The overwhelming majority of people on the planet will never step foot in an airplane. Only 5% of the world's population flies annually. Even among Americans, half do not annually fly and just a quarter do so three or more times a year. Unfortunately, academics often find themselves in this last, rarified group because of conference travel. If we were to equate this to ground transportation, we would not be among those walking, biking, or using mass transit, or even those carpooling in hybrid cars. We would be the solitary SUV drivers.

What's worse, the traditional conference has more than just environmental shortcomings. The cost of airfare from anywhere in the developing world to anywhere in North America or Europe is often greater than the per capita annual income in these countries. Consequently, scholars from most of the world's countries, and nearly the entire Global South, have long been quietly, summarily excluded from international conferences. Even in wealthy countries like the U.S., conference participation is, owing to vagaries in funding, a privilege unequally shared.

What's to be done? While attending fewer or only local conferences is an option, at UCSB we have been developing and experimenting with an online, nearly carbon-neutral (NCN) approach for conferences. This model was first implemented in May of 2016 ([visit conference website](#)). A second NCN conference, which featured Bill McKibben as one of its keynote speakers, took place at UCSB in Oct/Nov of 2016 ([website](#)).

Even though online activity has its own carbon footprint, crouching the numbers for UCSB's two pilot conferences revealed that their total GHG emissions were less than 1% of traditional, fly-in events. When asked if this NCN conference approach was successful, 87% of the speakers from the first event responded "yes," 13% "not sure," and 0% "no."

This document was created to help stage NCN conferences based on this UCSB model. It both explores the rationale behind this approach and provides a step-by-step guide for staging such events. An individual familiar with WordPress installations should be able to have a conference space (website) prepared in less than a day.

In a nutshell, here is how this NCN approach works (note that it differs significantly from a typical webinar using Skype or similar technologies):

- 1) Speakers record their own talks. This can be A) a video of them speaking, generally filmed with a webcam or smartphone, B) a screen recording of a presentation, such as a PowerPoint, or C) a hybrid of the two, with speaker and presentation alternately or simultaneously onscreen. Here are examples of [speaker](#), [presentation](#), and [hybrid](#) presentations from the May 2016 UCSB conference. Alternate approaches are also possible, such as [this talk](#) from the conference, which is a short documentary with the talk as a voiceover. Note that even smartphones can now produce videos of broadcast resolution.

2) Talks are viewed on the conference website. Once made available on the conference website, talks can be viewed at any time. Talks are organized into panels (i.e. individual webpages) that generally have three speakers each and a shared Q&A session – just like a traditional conference. As they are prerecorded, videos can be closed captioned for

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greater accessibility, as were all the talks for UCSB's second NCN conference. Visit a [sample panel](#).

3) Participants contribute to an online Q&A session. During the time that the conference is open, which is generally two or three weeks, participants can take part in the Q&A sessions for the panels, which are similar to online forums, by posing and responding to written questions and comments. Because comments can be made at any time in any time zone, participants from across the globe can equally take part in the conference. Jump to a [sample Q&A](#).

While this NCN model is just one of many possible, because this approach has advantages that go beyond helping to mitigate climate change, it makes clear that a range of new technologies have opened up exciting possibilities for reimagining the traditional conference:

1) Without the requirement of travel, scholars can participate from nearly anywhere on the globe, as prerecorded talks can be viewed at any time and text-based Q&A sessions extending over multiple weeks eliminate the challenge presented by world time zones, thereby facilitating truly global interaction. One of the pilot NCN conferences had participants from six continents.

2) This approach is generally more accessible than its traditional counterparts, as A) eliminating travel also eliminates many hurdles to physical accessibility, B) prerecorded talks can be closed captioned for hard-of-hearing individuals, and, C) with respect to the visually impaired, conference websites can be optimized for audio screen readers and talks can also be made available as audio podcasts.

3) Similar to open-access journals, the archive created by NCN conferences (both recorded talks and Q&A transcripts) gives nearly anyone anywhere on the globe, as long as Internet access is available, instant and lasting access to all the cutting-edge material introduced at the event. In contrast, traditional conferences are often closed-door affairs open to only a privileged few. In many respects this online conference archive challenges the need for the print publication of select conference proceedings.

4) On average, the pilot conferences' Q&A sessions generated three times more discussion than takes place at a traditional Q&A. A few sessions generated more than ten or fifteen times more, making clear that, while different from a traditional conference, meaningful personal interaction was not only possible, but in certain respects superior.

5) Because the cost of a NCN conference is considerably less than its traditional counterparts, a range of groups and institutions, such as schools in the developing world currently lacking the significant financial resources required to coordinate international

conferences, are now able to do so. Our pilot conferences were cobbled together largely using free, open-source software.

6) Conference talks can be closed captioned in more than one language. Although this was not done for the pilot conference, future UCSB events are being planned with talks by speakers in their native languages that will be closed captioned in English. In addition, we plan to have all talks captioned in Spanish as well as English, opening up the possibility of a true multilingual conference.

7) Such events can result in far more efficient use of a conference goer's time, as one can quickly scan through the text of a talk or a Q&A session for material of interest. Consequently, this NCN approach allows us to listen to all the talks of interest to us – and none of those that are not – in the order, and at a time, of our choosing ([more](#)).

At first glance it may seem that conducting an online academic conference using real-time video conferencing solutions (such as Skype, Zoom.us, WebEx, GoToMeeting, or Google Hangouts) would be a viable alternative to this NCN approach; however, doing so would risk eliminating nearly all of the above advantages. Unlike real-time approaches, prerecording talks make them more accessible, as they can be conveniently viewed in any country or time zone (#1 above) and can be carefully closed captioned in advance for accessibility (#2), including in additional languages (#6). Asynchronous Q&A sessions taking place over a number of weeks not only allow truly global interaction between participants in different time zones (#1), but also provide a space for more and arguably higher quality discussion (#4), as well as more efficient use of participants' time (7). Moreover, the material presented and generated there can be archived as a lasting reference (#3).

Let's be honest: it is unlikely that an online conference experience will ever replicate face-to-face interaction. Granted. However, given the horrific environmental costs and inherently exclusionary nature of traditional conferences, the time has come to radically rethink this cornerstone practice of our profession. This NCN conference experiment is an attempt to do just that.

### About This Document

Given the urgent need to globally reduce GHG emissions, an early draft of this document was released in June of 2016 less than a month after the pilot UCSB event so that additional NCN conferences could be staged on this model. It was written by UCSB professor [Ken Hiltner](#), © 2016-2018. It includes revisions of early material that I created for the above-mentioned conferences, such as their CFPs, as well as their opening and closing remarks (including the [Q&A session](#) for the opening talk of the May 2016 event and the [Q&A](#) for the Oct/Nov opening talk). Some of the material previously included in this White Paper has been removed, as it will soon appear in my upcoming book *Writing a New Environmental Era: Moving Forward to Nature* (forthcoming from Routledge).

Please feel free to modify the NCN conference approach explored here. As the goal is to create a viable alternative to the traditional conference, improvements to the approach are most welcome. Do experiment. And [let me know](#) what worked (and what didn't) so that future NCN conferences

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can be improved upon. Questions and feedback are most welcome. Please feel free to [contact me](#).

The goal is to encourage as many individuals as possible – either as coordinators or speakers – to take part in NCN conferences. Consequently, a university in the developing world with a limited budget and largely outmoded desktop computers or an individual with a tablet costing under fifty U.S. dollars are as well positioned to take part in such conferences as anyone else. Moreover, since the technology used is relatively commonplace (the Q&A sessions, for example, are similar to online forums), this type of online conference experience proved to be largely intuitive to participants at the UCSB pilot events.

Because it is in part designed to be a practical guide, this document's appendices include resources such as a sample CFP, example emails, and HTML code. As noted above, authoring a conference website should be relatively straightforward for someone familiar with WordPress. Note that many students (graduate and undergraduate alike) often have the ability, as WordPress is an exceptionally popular website and blogging platform. Note too that a conference of this sort could be run from an existing WordPress website, as were the pilot UCSB conferences.

Nearly carbon-neutral (NCN) conferences have the potential to largely supplant their traditional counterparts. If we hope to meet the ambitious goals for climate change mitigation set by the COP21 in Paris in 2015, we all need to get to work rethinking a range of personal activities that we often take for granted. With respect to academia, conference travel is environmental enemy #1 and an excellent place to start.

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## PRACTICAL GUIDE

### Introduction

Taken as a whole, the UCSB May 2016 experience revealed that coordinating a NCN conference was arguably much simpler (and certainly less expensive) than a traditional, fly-in event, especially as there is no need to coordinate air and ground transportation, hotel accommodations, catering, venue and audio-visual setup, conference dinners, and so forth. It does, however, require a modicum of digital expertise.

Consequently, what follows is somewhat technical. If you are familiar with self-hosted WordPress installations and embedded streaming video services such as YouTube, this will likely seem straightforward. If not, it would probably be useful to enlist someone to help who has such familiarity. Because WordPress makes it relatively simple to create a website, this

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need not necessarily be someone with formal training or technical credentials. Ask around; many students, both graduate and undergrads, have the necessary skillset.

Incidentally, if you [send us](#) your CFP, we will do what we can to help promote your NCN conference.

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## Website

### Content Management System

The May 2016 UCSB conference website ran on WordPress, which is a content management system (CMS) that is now used by nearly 60% of all websites worldwide that disclose their CMSs. One of the major advantages that WordPress brings to the table is its robust commenting features, a holdover from its origins as a blogging platform, that are simple to adapt for online Q&A sessions. WordPress is also relatively straightforward to use, as well as to extend by way of plugins (see below). Note that this should be a self-hosted WordPress installation, as WordPress.com does not generally allow the installation of plugins. Other platforms, such as Drupal, could certainly be used, but it is arguably far easier to build a conference with WordPress. As noted above, a conference could be incorporated into an existing website, as was done with the UCSB May 2016 event.

### Visual Theme

While WordPress is itself a robust website engine, it needs to have a “theme” installed on top of its backend to make it user accessible. The UCSB May 2016 event used a commercially available theme named “[Enfold](#),” which was modified for the purpose. However, there are range of free themes that would work, such as the 20xx themes by WordPress.org (i.e. [Twenty Seventeen](#)). Any modern WordPress theme should be “responsive,” meaning that it should make the website as accessible on mobile devices as it is on desktop and laptop computers.

The broad range of themes available for WordPress installations is potentially a significant advantage here, as it allows conference websites to take on a variety of appearances, as well as functionality.

### Plugins

One of advantages of the WordPress platform is that it can be extended by way of “plugins.” The UCSB May 2016 conference used four. The first is essential, the other three helpful. The fifth, which is also optional, was added for the Oct-Nov 2016 conference.

- 1) [Subscribe to Comments Reloaded](#). This plugin allows participants to be notified via email whenever a question, answer, or comment is posted to a particular Q&A. Because the email notification contains the new comment in its entirety, it allows participants to both follow the discussion as it is unfolding, as well as decide whether they would like to step in at any point. By way of this plugin, participants can choose to receive email

notifications for as many of the conference Q&A sessions as they like, as well as stop notifications at any time.

2) Remove Nofollow. In an effort to reduce spam, WordPress inserts the “Nofollow”

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attribute to keep comments from containing online links. Unfortunately, this means that legitimate users who would like to embed links in their comments are barred from doing so. This plugin removes that restriction. Because this NCN conference approach requires individuals to register before posting comments (see below), spam is generally not a major danger in this case.

3) Easy Social Share Buttons In order to leverage social media coverage of the conference, this plugin generates a message (such as a tweet) containing information of your choosing about the conference or particular panel. See our sample page for this plugin in operation. Many similar plugins are available, some of them at no cost. You might also consider creating a hashtag for the conference.

4) Soon for WordPress. In order to make the conference feel like an event, prior to its opening a timer is inserted near the top of the landing page to count down to the opening day. Once the conference is started, it is used to count down to its closing. See our sample page for this plugin in operation. While this particular plugin offers a range of countdown options, no cost options are also available.

5) RegistrationMagic. Having participants register both reduces spam and allows their institutional affiliation to be displayed along with their name when they take part in Q&A sessions (institutional affiliation is added to the “nickname” field of WordPress user data). While registration can be manually done for each conference participant (which was the method used for the May 2016 conference), this plugin automates the process.

## Recording the Talks

(Note that some of this material is also included in the sample acceptance email below.)

The May 2016 UCSB conference provided two brief videos with tips on how best to film and upload talks. Please feel free to direct speakers to these. Although viewing them only takes a few minutes, they offer helpful tips to walk speakers through the filming process. The first of the two videos explains how to use an external webcam (which is preferable to the webcams that come with most computers – see below) to film the speakers giving the talk. The second explains how to make a screen recording of a PowerPoint or Prezi presentation accompanied by the speaker’s voiceover. Either of these is a perfectly acceptable alternative for a conference talk.

Some speakers may, however, be interested in going a step further by producing a video that merges the webcam video of them speaking with a screen recording of their PowerPoint or Prezi presentation (or movie clips, live shots of a website, etc). If they are interested in this approach, on the same webpage that has the above two talks there is an introductory video to a software product called ScreenFlow. Please note that there are many such programs available and that we are in no way endorsing this particular product. It is, however, a powerful yet relatively simple tool

that allows users to simultaneously record the webcam video of them talking and a video of whatever is happening on their computer screen, such as a PowerPoint or Prezi presentation. It then allows them to edit the two so that they can produce a video that switches back and forth between them.

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Using a program such as ScreenFlow might be an appealing option for some individuals; however, not everyone may want to tackle the learning curve of a new piece of software (moreover, ScreenFlow is not free, although there are similar software options that are). This is perfectly understandable. As noted above, a simple webcam talk or screen recording of a presentation is perfectly fine.

Regarding format, the video file should either be an .mp4 or .mov. The resolution should be 720p (i.e. 720 x 1,280 pixels) or 1080p (1080 x 1,920). Anything higher, such as 2k or 4k resolution, is unnecessary. One of the reasons that we are suggesting using an external webcam (which is outlined in the abovementioned video) is that many of the webcams that come with computers do not offer resolutions this high. Apple's newest MacBook, for example, only offers 480p resolution (640 x 480). Because even 720p offers three times the pixels of 480p, and 1080p provides nearly seven times as many, using an external webcam will generally result in a far superior video. One of the reasons that Skype talks often look grainy is that they are shot with low-resolution webcams. If speakers use a relatively new external webcam it will most likely record at 720p or 1080p. Moreover, most video recording programs that come preinstalled on computers, like Apple's Quicktime, will automatically save the video as either a .mp4 or .mov file.

Another option is to have speakers film their talks using a smartphone, which often have included apps for video recording and high-resolution cameras of excellent quality (usually of better quality than the webcams included with most laptop computers). Because smartphones take a relatively small amount of energy to run, even when compared to an energy efficient laptop, such an approach to video recording will have a very small carbon footprint. Note that it is preferable that the smartphone be positioned horizontally so that the video orientation is landscape rather than portrait. Also, note that many smartphones have two cameras: one facing the user and one outward facing, the latter generally being by far the better quality of the two and hence the one to use. Employing an inexpensive tripod mount, with perhaps someone to assist the speaker, may be desirable.

If the idea of recording the talk seems a little daunting to speakers, they might consider getting someone to help. Many academic departments have students, both graduate and undergrads, who are surprisingly computer/technology savvy. Some may even have their own video cameras and editing software. It might be worth having speakers ask around to find such a person.

## Video Streaming Source

### Choice of Streaming Service

Although it is possible to stream videos directly from a WordPress website, services such as YouTube and Vimeo are generally preferable, as they maintain robust server

networks that ensure uninterrupted viewing – even if a range of individuals across the globe are viewing the same talk at the same time.

We have experimented with two video streaming services for our NCN conference approach: Vimeo for the May 2016 UCSB conference and YouTube for the 2016 Oct/Nov conference. Here are sample panels using each: [Vimeo](#), [YouTube](#).

We have concluded that YouTube is preferable for a number of reasons:

- 1) YouTube is free. In contrast, the required Vimeo Pro account for a conference costs \$199 or \$399 per year, depending on type.
- 2) YouTube, by way of its parent company Google, is making an effort to use sustainably produced electricity, efficient data centers, and to recycle their e-waste. As Vimeo does not at the time of this writing have transparent sustainability policies, it is unclear if (and seems unlikely that) they are implementing any such policies.
- 3) YouTube uses voice recognition software to automatically generate closed captioning. While the accuracy of this service is by no means perfect, it nonetheless guarantees that all conference talks are closed captioned for deaf or hard-of-hearing individuals. Moreover, speakers can manually add improved closed captioning, ensuring its accuracy. Although closed captioning can be added to videos uploaded to Vimeo (see below), as this must be done by each speaker (or someone entrusted with the job), there is no assurance that this will happen with all or even most talks, unless conference coordinators take this job upon themselves.
- 4) YouTube has an incredibly robust global server network, with local versions of the service in more than 80 countries.

If the “direct approach” to using YouTube outlined below is used, there are two additional advantages:

- 5) Speakers can upload their talks directly to YouTube. As this is not possible with Vimeo, and because videoed talks are generally too large to email, they must first be uploaded to a cloud source, such as Dropbox, which charges \$99 per year for a Pro account, before they can be uploaded to Vimeo.
- 6) Because a second cloud service (such as Dropbox) is not required for file transfer, using a unified approach like YouTube, which skips a transfer/storage step, should result in energy savings.

For these reasons, we recommend using YouTube as a conference streaming source. However, since Vimeo is a viable option that has been proven to work, we have also included information here on its use.

YouTube

There are two approaches to using YouTube as a streaming source.

1) The direct approach:

This approach, which was used for the 2016 Oct/Nov UCSB conference, is

simplest as it allows speakers to directly upload their talks to YouTube. Consequently, it does not require video files to first be uploaded to a cloud source such as Dropbox, which adds complexity and expense to the process. In order to upload their talks, speakers must first create their own YouTube accounts (which are cost-free). Using the process outlined below, all talks are then aggregated together on a YouTube conference playlist.

A particular feature (which can be seen as either a drawback or advantage) of this approach is that speakers can take down their own YouTube talks at any time, either during the conference or after. If conference coordinators desire to create a lasting archive of the event, this may not be desirable. In the second YouTube approach outlined below, video files are transferred to the conference coordinators, who then upload them to a single conference YouTube account. If desired, a separate conference archive can also be created (see below). However, if a speaker requests that his or her talk be removed from the conference website and archive, conference coordinators may nonetheless wish to honor this request. If speakers have not signed a release transferring rights, they may well be legally bound to honor such a request.

Because we imagine that the overwhelming majority of speakers will not take down their talks (and we did not want to be in a position where we might have to contest them doing so), we employed this approach for the 2016 Oct/Nov UCSB conference.

The following steps are necessary for this “direct approach”:

- A) Create a YouTube account and conference playlist.
- B) Open the conference playlist and under “playlist settings/collaborate” select this option: “Collaborators can add videos to this playlist.” This will generate a link that will allow collaborators (i.e. conference speakers) to add their videos to your conference playlist.
- C) Share the above link with your conference speakers.
- D) Once speakers have created their own accounts and uploaded their talks to YouTube, the video ID numbers can be swapped into the embed codes in your conference panel webpages (see [sample panel HTML](#)). Make sure that speakers have verified their accounts so that videos longer than 15 minutes can be uploaded ([info](#)).

E) As noted above, YouTube will automatically create closed captioning shortly after a talk is uploaded. However, for more accurate captioning, it is desirable to have speakers (or someone that they entrust with the job) manually enter the closed captioning. YouTube provides detailed

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instruction on how to do this on their page on [community-contributed subtitles and closed captions](#). Note that speakers must add this closed captioning directly to the talk in their personal YouTube account.

## 2) The archive approach:

If conference coordinators desire to have all talk videos uploaded to their own conference YouTube account, this approach can be employed.

A) Create a Dropbox Pro or similar cloud account. Once speakers have recorded their talks, they will need to get them to you so that you can upload them to YouTube. Because the video file will likely be too large to email, using a cloud service such as Dropbox is necessary. Given the size and quantity of videos, a Dropbox Pro account (\$99 per year) is needed. Aside from the cost issue, this can be a very time-consuming process.

B) Create a conference Dropbox folder and give each speaker access to it.

C) Create a YouTube account and conference playlist.

D) Once speakers have uploaded their talks to the Dropbox folder, upload the files from this folder to your YouTube account.

E) Once the talks have been uploaded to YouTube, the video ID numbers can be swapped into the embed codes in your conference panel webpages (see [sample panel HTML](#)).

F) As noted above, YouTube provides automatic closed captioning that can subsequently be improved upon.

## Vimeo

The following steps are needed to use Vimeo as a conference video streaming source:

1) As with the above approach, first create a Dropbox Pro account. While other services could be used, an advantage of a Dropbox Pro account is that they have partnered with Vimeo to allow video files to be automatically uploaded to their service. As the video files will generally be over 1 gigabyte in size, this eliminates a time-consuming step.

2) Create a conference Dropbox folder and give each speaker access to it.

3) Create a Vimeo Pro account and conference collection. As is noted above, such an account costs \$199 or \$399 per year, depending on type.

4) Once speakers have uploaded their talks to the Dropbox folder, upload the files to your Vimeo collection.

5) Once the talks have been uploaded to Vimeo, the video ID numbers can be swapped into the embed codes in your conference panel webpages (see [sample panel HTML](#)).

6) Because Vimeo does not employ voice recognition software to automatically generate closed captioning, a third-party solution must be used, such as [Amara](#), which provides free closed captioning software that allows anyone to caption videos. Because it does not generally require a steep learning curve, Amara can be relatively quickly learned by speakers and student interns. Like Dropbox, Amara has partnered with Vimeo to simplify integrating the two, which makes captioning videoed talks, both for greater accessibility and to translate into additional languages, relatively simple. See our [sample page](#) for a video embed from Vimeo that is captioned in four languages by Amara.

## Audio Podcasts

Using a service such as SoundCloud can make conference talks available as audio podcasts, which makes them easy to listen to on the go. More importantly, a SoundCloud conference playlist can bring all of the talks together in one relatively convenient place for blind or visually impaired individuals. Offering the talks as audio podcasts has potential environmental advantages as well, as audio files take far less storage and bandwidth than video. Moreover, audio podcasts are generally played on mobile devices with relatively small energy requirements.

[SoundCloud](#) podcasts are available on their website, as well as through free [iOS](#) and [Android](#) apps for mobile devices.

It would be ideal if YouTube would provide the option to only stream audio, as video uses approximately 10 to 20 times more bandwidth – and obviously requires significantly more energy. However, YouTube does not presently offer this type of functionality, seemingly because they do not want viewers to listen without watching ads. (YouTube Red, a paid service, does allow subscribers to listen to YouTube videos on mobile devices without video, but it is likely that the data stream still includes video.) Consequently, a separate podcast service, such as SoundCloud, may be the best option at this time.

Unfortunately, creating and uploading SoundCloud podcasts is time-consuming and adds expense. Here are the steps:

- 1) Create a SoundCloud Pro Unlimited account (\$135 per year) and conference playlist. Note that this account could be used for multiple conferences.
- 2) Download each of the talks from either your YouTube or Dropbox account as MP4 files.

3) Convert each of the talks from an MP4 video file to an MP3 audio file either using video editing software or a service such as [Zamzar](#).

4) Upload each talk to the SoundCloud conference playlist.

5) If desired, create a conference webpage for podcasts ([here is an example](#)).

## Closed Captioning

As noted above, both YouTube and Vimeo have provisions for closed captioning. Although having captions automatically generate by YouTube's voice recognition software is appealing, the ideal solution is to have speakers (or someone that they employ) manually add the captioning.

Because it was unclear if speakers would be willing to take the time to add this accessibility feature, speakers from the May 2016 UCSB conference were polled after the event for their feelings on the matter: 87.5% of those that responded answered "yes" when asked "would you (or someone that you entrusted with the job) be willing to use Amara to add closed captioning to your talk?" Consequently, the best course of action at the present may be to ask participants if they would be willing to closed caption their own talk.

## Talk Transcripts

As [noted above](#), we hope to include talk transcripts at all future NCN conferences ([sample](#)).

These transcripts are directly derived from YouTube's closed captioning scripts for its videos. To access these scripts, simply go to a YouTube video and under "More" select "Transcript." It is then a simple matter to cut and paste the script into a panel's webpage.

The closed captioning that YouTube automatically creates using its voice recognition technology leaves much to be desired in terms of accuracy. Fortunately, YouTube makes it editable, making it easy to correct for errors that creep in. In order to see how this works, we have created a short (5-minute) video to walk speakers through this very straightforward process. It can be [accessed here](#). Please do consider encouraging this editing, as it not only creates an accurate transcript, but ensures quality closed captioning for those that rely on it.

Note that it is preferable to have the full transcripts on the panel webpage, as the transcript and videoed talk will be indexed together by the search engines employed by Google and Bing. In other words, if a Google search reveals text from a promising paper, ideally the user should be sent to the page that has the text of the talk along with the video and Q&A session. Uploading the transcript as a separate file, such as a PDF, would keep this from happening.

In order to have a text box sufficiently wide to keep the closed captioning from awkwardly wrapping lines, the panel page layout needs to be changed from three fourths of the page devoted to the video embed and one fourth to the text on the right to instead be two thirds and one third, respectively. On our [sample page](#), we converted the text to the right of the video to a scrolling box.

## Video Archive

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Although both YouTube and Vimeo should archive the conference talks for as long as the account is active (assuming the second YouTube “archive approach” outlined above is used), it may be desirable to download and archive the MP4 files to a RAID 1 server maintained by a university in order to create a backup archive.

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## Conference Registration

The Q&A sessions for the May 2016 UCSB conference employed the powerful commenting features of WordPress. Because archived Q&A sessions may well be cited by scholars, it is necessary to correctly attribute the statement to the individual that made it. Consequently, each participant at the conference registered by supplying his or her name, email address, and institution affiliation on an [online form](#). Email address and affiliation were individually confirmed before registering individuals at the conference, thereby helping to ensure that proper attribution of comments could be made. In order to differentiate the Q&A session from a typical online forum, no avatars were displayed. Registered participants were given WordPress “subscriber” status on the conference website a day or two before the conference opened. As is [noted above](#), the [RegistrationMagic](#) plugin may be used to automate the registration process.

Academic conferences are not generally open to the public. Although it sometimes happens that a non specialist wanders into a talk, this is more exception than rule. After much deliberation, it was decided that, while the talks and Q&A sessions would be available for the public to view at the May 2016 UCSB conference, only students and faculty (i.e. anyone with a current .edu email account or who could demonstrate that they were currently a student or faculty member of a university or similar institution) should be able to take part in the Q&A. Other conference coordinators may, of course, decide differently. In order to test the necessity of this approach, the Oct-Nov 2016 UCSB conference removed this requirement.

## Appendices

### Sample CFP

(After introducing the conference theme, the following material could be inserted. Feel free to copy and adapt any of this sample CFP.)

Please note that our goal is to – as much as possible – have a nearly carbon-neutral conference. Even a relatively small academic conference can generate the equivalent of 20,000 pounds or more of CO<sub>2</sub> (chiefly from travel). To put that number in perspective, this is the total annual carbon footprint of ten people living in India, thirty-three in Kenya. We believe that a conference that takes up the issue of climate change while simultaneously contributing to the problem to such a degree is simply unconscionable.

Consequently, this conference will largely occur online. During the conference, which will take place over three weeks, talks will be available for viewing on the conference website. Q&A will also take place online during this period, as participants and registered attendees will be able to pose questions to speakers via online comments and speakers will be able to

reply in the same way. Both the talks and Q&A sessions will remain up on the website as a permanent archive of the event.

Note that a conference using this format was staged at UC Santa Barbara in May of 2016. As that [conference's website](#) contains a complete archive of the event, please visit it if you have questions relating to how this conference will work. In particular, the [opening remarks and the accompanying Q&A session](#) help explain the rationale for this approach while also demonstrating it.

While we realize that this approach will not replicate the face-to-face interaction of a conventional conference talk and Q&A, we hope that it will nonetheless promote lively discussion, as well as help build a community of scholars with intersecting research interests. An advantage to this approach is that individuals who would not otherwise be able to become involved in the conference (owing to distance, financial limitations, and so forth) will be able to fully take part. There will be no registration fee for the conference. Although this online conference will have its own carbon footprint, as data centers and web activity also require energy, we expect that it will only be a small fraction of that of a conventional conference, likely just 1-3%.

Instead of traveling to the conference to attend panels and deliver a talk, speakers agree to do the following:

- 1) Film yourself giving a talk of 15-17 minutes. The webcams that come with desktop and laptop computers have improved dramatically over the past few years. Aftermarket webcams with noise cancelling microphones, which can be purchased for under \$50, can often provide even better quality. It is also the case that most computers have video recording software preinstalled, such as Apple's QuickTime. Consequently, it is now possible, and relatively easy, to record a talk of surprisingly good quality in your home or office. How easy is it and how good is the quality? A sample talk that explains the concept and process in detail can be found here: <http://ehc.english.ucsb.edu/?p=12048>.
- 2) Take part in your online Q&A session by responding to questions raised by your talk. You will automatically receive an email each time a new question is posed. Only registered conference participants (this includes speakers, as well as others who register for the conference) will be posing questions.
- 3) View as many of the talks as possible, posing questions of your own to speakers. This is especially important, as this is how you will meet and interact with other conference participants. As with any academic conference, our goal is help establish relationships and to build a community. In this case, since travel has been removed from the equation, our hope is that this community will be diverse and truly global.

Abstracts of 250 words and a brief biographical note should be submitted by \_\_\_\_\_ to \_\_\_\_\_. While we welcome international submissions, the talks should either itself be in English or subtitled (see below) in English. The Q&A will be in English. You should also note

that you have viewed the sample video and agree both to the above conference requirements and to allow your filmed talk to be posted to the conference website, as well as our Vimeo, YouTube, and SoundCloud accounts. As noted above, the talks will become part of a permanent conference archive open to the public.

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Amara provides free closed captioning software that allows anyone to caption videos. As they note on their website, Amara makes it possible “(and free) to caption and translate your videos...Amara is built by a nonprofit, 501c3 organization. We are driven by the mission to reduce barriers to communication and foster a more democratic media ecosystem.” Because it does not require a steep learning curve, Amara can generally be quickly learned. Since our goal is to have a conference that is accessible as possible, please consider using Amara to add closed captioning to your talk or have someone (perhaps a student intern) do it for you. If you will not be able to closed caption your talk, please note this when submitting your abstract.

Abstracts are due by \_\_\_\_\_.

Participants will be informed if their submissions have been accepted by \_\_\_\_\_.

Videos of the talks will be due by \_\_\_\_\_.

The online conference will take place from \_\_\_\_\_ (generally, this should be a three-week period).

Please send any questions to \_\_\_\_\_.

#### Sample acceptance email with conference conditions

(Feel free to copy and adapt any of this sample email.)

Dear \_\_\_\_\_,

I am delighted to inform you that your proposal has been accepted for \_\_\_\_\_, our nearly carbon-neutral conference.

The next step will be for you to film your talk and get it to us by \_\_\_\_\_ (the sooner the better, as this will give us more time to work out any technical difficulties).

Apologies in advance for the lengthy email that follows, but we want to make sure to adequately detail how this unusual process and conference will work.

There are two brief videos with tips on how best to film and upload your talk available online from a previous conference of this type. You can watch them at [http://ehc.english.ucsb.edu/?page\\_id=12523](http://ehc.english.ucsb.edu/?page_id=12523). Please do spend a few minutes viewing them (they are very short), as they should offer some helpful tips to walk you through the filming process. The first of the two videos explains how to use an external webcam (which is preferable to the webcams that come with most computers – see below) to film yourself giving the talk. The second explains

how to make a screen recording of a PowerPoint or Prezi presentation accompanied by your voiceover. Either of these is a perfectly acceptable alternative for your talk video.

You may, however, be interested in going a step further by producing a video that merges

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the webcam video of you talking with a screen recording of your PowerPoint or Prezi presentation (or movie clips, live shots of a website, etc). If you are interested in this approach, on the same webpage that has the above two talks we have included an introductory video to a software product called ScreenFlow. Please note that there are many such programs available and that we are in no way endorsing this particular product. It is, however, a powerful yet relatively simple tool that allows you to simultaneously record the webcam video of you talking and a video of whatever is happening on your computer screen, such as a PowerPoint or Prezi presentation. It then allows you to edit the two so that you can produce a video that switches back and forth between them as you like.

Using a program such as ScreenFlow might be an appealing option for some individuals; however, we realize that not everyone will want to tackle the learning curve of a new piece of software. Moreover, ScreenFlow is not free (although there are similar software options that are). This is perfectly understandable. As noted above, a simple webcam talk or screen recording of a presentation is perfectly fine.

Regarding format, your video file should either be an .mp4 or .mov. The resolution should be 720p (i.e. 720 x 1,280 pixels) or 1080p (1080 x 1,920). Anything higher, such as 4k resolution, is unnecessary. One of the reasons that we are suggesting using an external webcam (which is outlined in the abovementioned video) is that many of the webcams that come with computers do not offer resolutions this high. Apple's newest MacBook, for example, only offers 480p resolution (640 x 480). Because even 720p offers three times the pixels of 480p, and 1080p provides nearly seven times as many, using an external webcam will generally result in a far superior video. One of the reasons that Skype talks often look so grainy is that they are shot with low-resolution webcams. Don't worry if all this seems technical and a little confusing. If you use a relatively new external webcam it will most likely record at 720p or 1080p. Moreover, most video recording programs that come preinstalled on computers, like Apple's Quicktime, will automatically save the video as either a .mp4 or .mov file. Please confirm that your video is either 720p or 1080p.

Another option is to film your talk using a smartphone, which generally come with apps for video recording and high-resolution cameras of excellent quality. Note that most smartphones have two cameras: one facing the user and one outward facing, the latter usually being the better quality of the two and hence the one to use. Employing a smartphone on an inexpensive tripod mount, with perhaps someone to assist you, is a very real option – and, as smartphones take a very small amount of energy to run, even when compared to an energy efficient laptop, this would translate to a tiny carbon footprint for the filming process.

If the idea of recording your talk seems a little daunting, you might consider getting someone to help. If your department is like ours, there are many students, both graduate and

undergrads, who are surprisingly computer/technology savvy. Some may even have their own webcams and editing software. It might be worth asking around to find such a person.

Once you have recorded your talk, you will need to get it to us. Because your video file will likely be too large to email, we will send you access information for a Dropbox folder. Once you upload your video to Dropbox (which is a simple process), we will take it from there, transferring it to our Vimeo account and streaming from there to the conference website.

The conference talks will be available at three separate places online. Why three? Each has its own advantages, especially as one of our goals is to make the conference as accessible as possible to a variety of variously abled individuals.

- 1) The Conference Website will likely be the most convenient place to view the talks for most people, as the balance of the conference material will reside there along with the talks. Moreover, and importantly, the Q&A will only take place at the conference website.

- 2) Vimeo is our primary cloud repository for videos. The talks on the conference website will be streaming from this service. Because Vimeo maintains a robust server network, this ensures uninterrupted viewing – even if a range of individuals across the globe are viewing the same talk at the same time. Finally, Vimeo provides for a pleasant high-definition and ad-free experience.

- 3) SoundCloud makes the talks available as audio podcasts, which makes them easy to listen to on the go. More importantly, our SoundCloud conference playlist will bring all of the talks together in one relatively convenient place for blind or visually impaired individuals. The SoundCloud podcasts will be available on their website, as well as through their free apps for mobile devices.

Given that some conference goers may be visually impaired and hence will not be able to see the talk, it is a good practice to briefly explain what is on screen if you are using a PowerPoint, Prezi, or some other type of presentation. This is something that you may well already do somewhat automatically. For example, you might say, “The next image is of...” or “As we can see by the inclusion of \_\_\_\_\_ in the lower right of the screen...” Similarly, given that some viewers will be reading lips, try to enunciate clearly whenever possible when onscreen.

Note that the talks will actually reside in just two of the above three places, as the conference website only streams the talks from Vimeo. While the talks reside in two places, energy is primarily expended only when the talks are accessed. Consequently, having the talks in two places does not increase the total carbon footprint by a similar factor. Moreover, offering the talks as audio podcasts on SoundCloud means that they take far less storage and bandwidth than a video. Additionally, audio podcasts are generally played on mobile devices with tiny energy requirements. Finally, even though the talks will be archived in two places online, our carbon footprint should be far, far less than a typical fly-in conference.

In sending us your video, you agree to have it posted to the above three places. We plan on leaving the talks up on the above sites, where they will be viewable by the public, with no plans on taking them down in the near future. In sending us your video, you agree to allow it to remain up on the above websites. Also note that, since the videos will be viewable by the public, you should have permission or rights to use any material that you show in your video.

Please encourage your colleagues and students to participate in the conference! If they go to this page \_\_\_\_\_ and supply us with their name and email address, we will give them access to the Q&A sessions. As a speaker, you will automatically be given complete access to all the Q&A sessions. A day or two in advance of the online conference beginning, you should receive access privileges directly from WordPress (if you do not, check your spam folder).

The online conference will take place from \_\_\_\_\_ (generally, this should be a three-week period).

Please send any questions to \_\_\_\_\_.

Apologies again for this long email. we just wanted to answer as many questions in advance as possible. However, if you have more, feel free to send them to us directly at the below email address.

Looking forward to seeing you at the conference!

#### Sample email explaining conference registration

(Feel free to copy and adapt any of this sample email.)

Hi Everyone,

In the next day or so, you should receive access privileges directly from WordPress (if you do not, check your spam folder) that will allow you to take part in the Q&A sessions for any and all panels. Each of the speakers is encouraged to help start off their particular Q&A session with a brief comment. Nothing fancy, a short statement noting that you would like feedback is just fine. Alternately, you could elaborate on your objectives, bring up questions that still remain in your mind, explain where you hope to go next with the idea, and so forth. It is entirely up to you. A benefit of making such an opening statement is that, when posting it, you will have the option of selecting “Notify me of followup comments via e-mail.” If selected, you will be notified via email whenever a question, answer, or comment is posted to your particular Q&A session (and only your Q&A, though you also have the option to subscribe to any sessions to which you make a comment). Because the email notification will contain the new comment in its entirety, as well as a direct link to your panel, you can both follow the discussion as it is unfolding, as well as decide whether you would like to step in at any point. Since the conference website is optimized for mobile devices, you could even respond directly from a smartphone. You can choose to stop these email notifications at any time.

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Because the Q&A sessions will close at the end of the conference, all email notifications will also end at this time.

Thanks!

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## Panel HTML

Each conference panel usually contains from 2-4 speakers with a shared Q&A session. An HTML template is included here for creating a panel (i.e. a WordPress “post”) on the conference website. Note that this is a post with “Allow comments” enabled, rather than a page. Feel free to modify it as desired. You need not, of course, use this template, but it may help simplify creating a post. Note that it includes short code for the easy-share buttons plugin and modified embed code for Vimeo. This is for a full-width (i.e. 960px+) post without sidebar. For Youtube, [click here](#) for a sample post using this HTML; [here](#) to view and copy HTML. For Vimeo, [click here](#) for post using this HTML; [here](#) to view HTML. Please note that the HTML for YouTube and Vimeo are not interchangeable, though feel free to customize either.

## Acknowledgements

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