



MAKING DATA MATTER  
esipfed.org | #ESIPfed

Three large, overlapping triangular images that form a larger triangular shape on the left side of the slide. The top triangle shows the smooth, undulating walls of a slot canyon, illuminated with warm, orange and red light. The bottom-left triangle shows a majestic, snow-capped mountain peak, likely Mount Everest, with rugged, rocky slopes. The bottom-right triangle shows a lush, green forest with a winding river or stream cutting through it.

## Connection Experiments: ESIP's Summer Meeting Experience Building Connections in Virtual Spaces

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**Erin Robinson,  
ESIP Executive Director**

Supported by:



# ESIP VISION

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To be a leader in promoting  
the **collection, stewardship and (re)use**  
of Earth science data, information, and knowledge  
that is responsive to societal needs.



Supported by:



**Brain trust of Earth  
science data professionals**



Multiple Science  
Domains



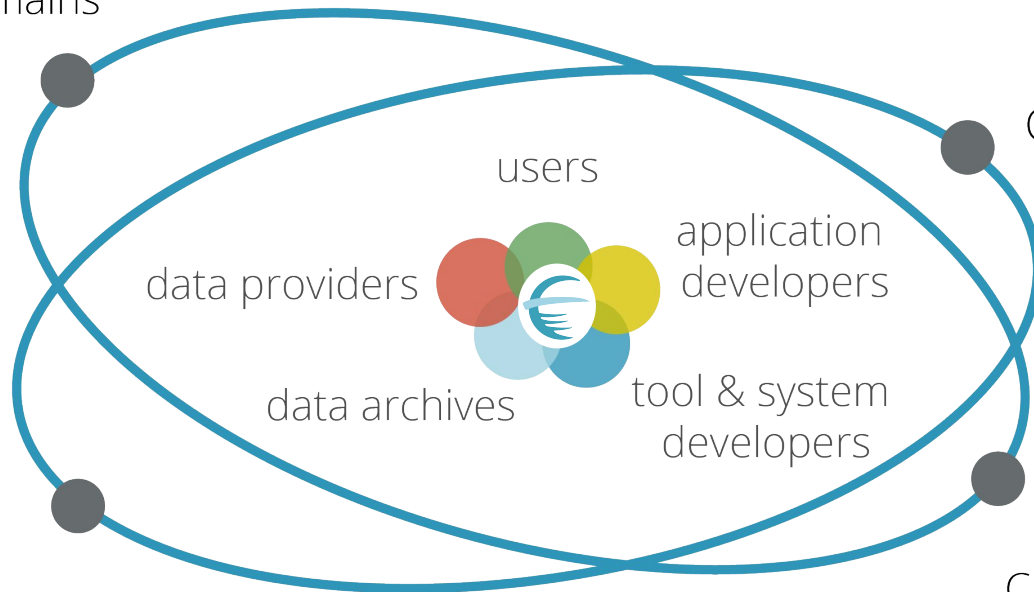
Corporate



Cross-  
Agency



Academia



# TYPES OF ESIP PARTNERS

## TYPE I

DATA AND  
INFORMATION  
DISTRIBUTORS,  
REPOSITORIES, &  
ARCHIVE  
CENTERS



## TYPE II

PRODUCT &  
SERVICE  
PROVIDERS



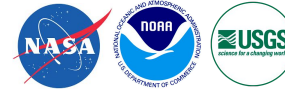
## TYPE III

EARTH SCIENCE  
APPLIED SERVICE  
PROVIDERS



## TYPE IV

ESIP SPONSORS



## TYPE V

COLLABORATIVE  
DATA NETWORKS



Plus 140 more...

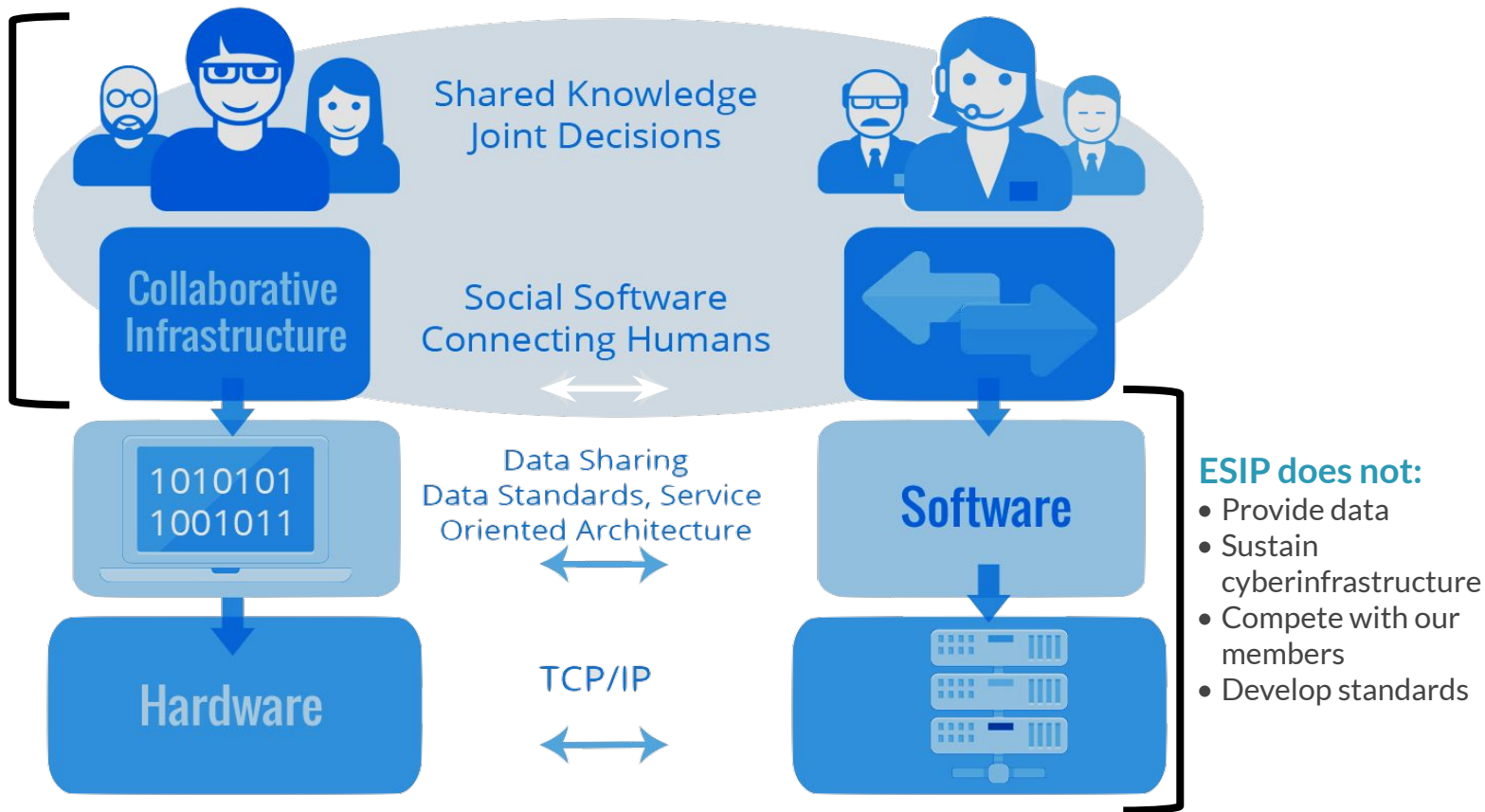


# INFORMATION INTEROPERABILITY STACK



Generate recommendations and work products.

Have a lasting impact in the recommendation of standards.



## THREE APPROACHES

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VIRTUAL  
COLLABORATION

- ▶ Facilitate professional development, outreach, and collaboration opportunities.

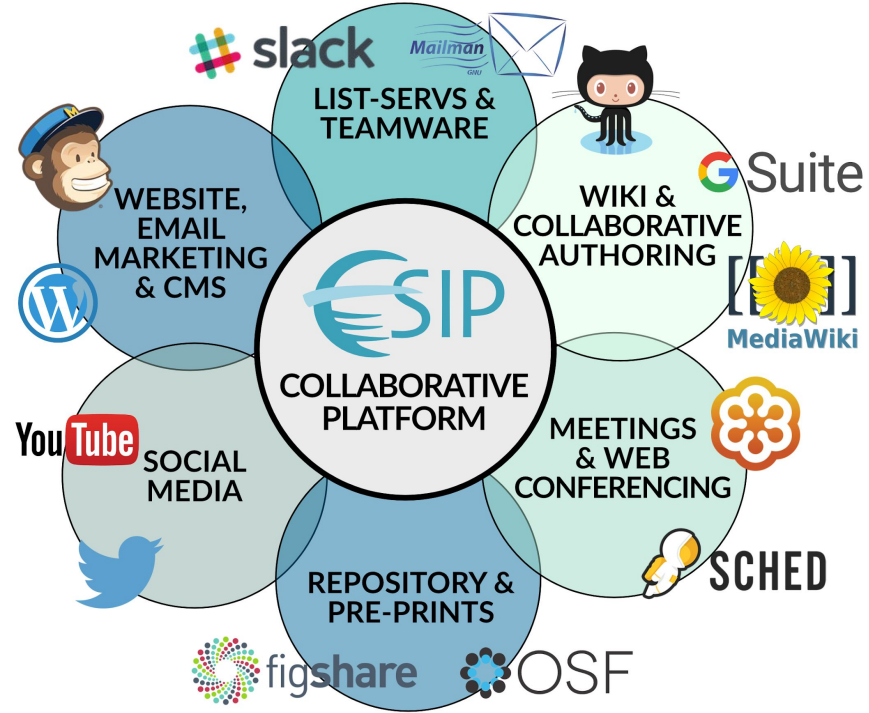
IN PERSON  
MEETINGS

- ▶ Seed innovation and community-generated best practices.

ESIP LAB

- ▶ Provide funding for prototyping, experimentation, and skill development.

# ESIP BACKBONE





# ESIP BACKBONE



**Erin Robinson**  
Outgoing Executive  
Director



**Susan Shingledecker**  
Incoming Executive  
Director



**TBD**  
Operations Director



**Annie Burgess**  
Lab Director



**Megan Carter**  
Community Director

# TRADITIONAL MEETINGS

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# WHAT MAKES ESIP MEETINGS DIFFERENT

- ☐ Plenaries
- ☐ Breakouts
- ☐ Networking Time
- ☐ Unconference Time
- ☐ Co-located Events

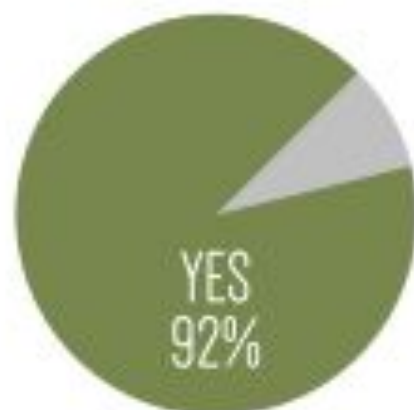




# ESIP MEETINGS


ESIP in-person meetings, held twice each year, help individuals network, share expertise, and make progress on data-related challenges. Meetings are open to all and typically draw 300 attendees from diverse backgrounds.

## WHY DO PEOPLE ATTEND ESIP MEETINGS?

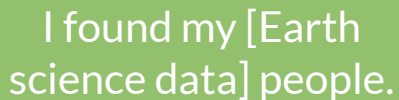


FORMED COLLABORATIONS WITH  
OTHER MEETING ATTENDEES.

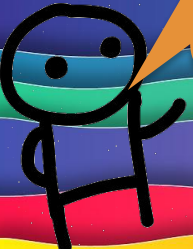
# WHAT THE ESIP COMMUNITY SAYS ABOUT OUR MEETINGS



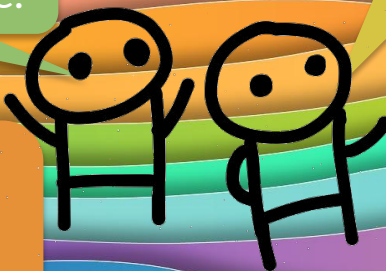
A serious meeting that actually performs a function– the data are slightly more interoperable at end of the meetings.




I found my [Earth science data] people.



Highly skilled people who are a good sounding board for ideas.



ESIP is a gathering place for other groups to convene and co-locate their meetings. Co-located meetings are coveted slots!



Hardest questions I ever got were at ESIP.



Clear professional 'home' for earth science data people.

# Timeline of our Pivot to Virtual Conferences



March -

- Begin contingency planning
- March 13 – Cancelled ESIP-supported meeting planned for April 14-16
- Moved EarthCube Annual meeting to virtual



April

- ESIP Board met and moved next 2 ESIP conferences to virtual
- Researched Virtual Platforms
- Researched Fee structures
- Cancelled second ESIP-Supported Meeting



May

- Reworked our FY20 Budget
- created registration structure for ESIP Summer 2020
- Supported EarthCube Annual Meeting



June

- Board approved FY20 Budget revision
- Trained session leaders in both tech and new facilitation skills

# Questions

## **Evaluation framed around three guiding questions:**

- EQ1: To what extent did the meeting achieve its goals of providing a successful venue for the exchange of knowledge, content, and discoveries about Earth Science and Earth Observation?
- EQ2: To what extent did the online format impact the conference experience?
- EQ3: What are the key takeaways that can productively inform the Winter, 2021 virtual meeting, helping ensure its success, and possibly the future of other ESIP meetings, virtual or in-person.

# Key Data Sets

- Background inventory, discussions with leadership, design documents
- Attendance at 18 sessions and plenaries, research showcase
- Session feedback (smiley forms, n= 389) and participation data
- Surveys: Mid-point satisfaction (n= 71), Final (n= 101)
- Three focus groups (n= 19)
- Individual interviews (n= 10): ESIP though leaders, conference veterans, new attendees, presenters

# Meeting Tech & Design



# Liberating Structures

<http://www.liberatingstructures.com/>

# MEETING AT-A-GLANCE

## WEEK 1

Day 0 - Monday July 15	Day 1 - Tues July 14		Day 2 - Wed July 15		Day 3 - Thurs July 16		Day 4 - Friday July 17	
Biostandards Workshop Developing Community Guidelines for Consistently Curating and Representing Dataset Quality Information	11:30	Welcome & Plenary	11:30	Breakout Sessions	11:30	Plenary	11:30	First Friday Event
	13:00	Break	13:00	Break	13:00	Break		
	14:00	Breakout Sessions	14:00	Breakout Sessions	14:00	Breakout Sessions		
	15:30	Break	15:30	Break	15:30	Break		
	16:00	Breakout Sessions	16:00	Breakout Sessions	16:00	Breakout Sessions		
	17:30	End of Day 1	17:30	Break	17:30	End of Day 3		
			18:00	Australian Plenary				
			19:30	End of Day 2				



**Research  
Showcase**

ESIP SM2020



**FUNDing**

FRIDAY

# MEETING AT-A-GLANCE

## WEEK 1

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Biostandards Workshop	11:30	Welcome & Plenary	11:30	Breakout Sessions	11:30	Plenary	11:30	First Friday Event
Developing Community Guidelines for Consistently Curating and Representing Dataset Quality Information								
	13:00	Break	13:00	Break	13:00	Break		
	14:00	Breakout Sessions	14:00	Breakout Sessions	14:00	Breakout Sessions		

## WEEK 2

Day 5 - Monday July 20		Day 6 - Tues July 21		Day 7 - Wed July 22		Day 8 - Thurs July 23		Day 9 - Friday July 24	
		11:30	Plenary	11:30	Breakout Sessions	11:30	Plenary	11:30	FUNDing Friday & Call to Action Sendoff
		13:00	Break	13:00	Break	13:00	Break		
		14:00	Breakout Sessions	14:00	Breakout Sessions	14:00	Breakout Sessions		
		15:30	Break	15:30	Break	15:30	Break		
		16:00	Breakout Sessions	16:00	Breakout Sessions	16:00	Breakout Sessions		
		17:30	End of Day 1	17:30	Break	17:30	End of Day 3		
				18:00	Australian Plenary		Breakout Sessions		
							Special Event		
				19:30	End of Day 2		Meeting Logistics		

**FUNDing**

FRIDAY

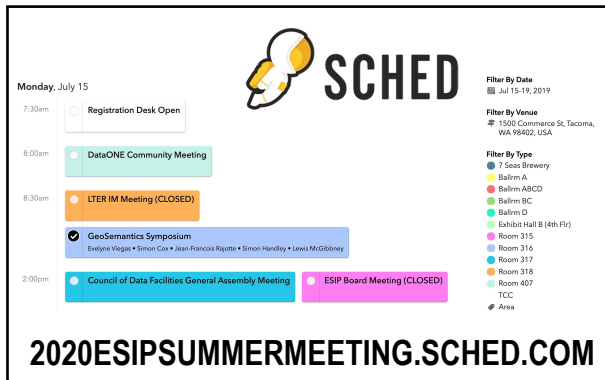


## FUNding

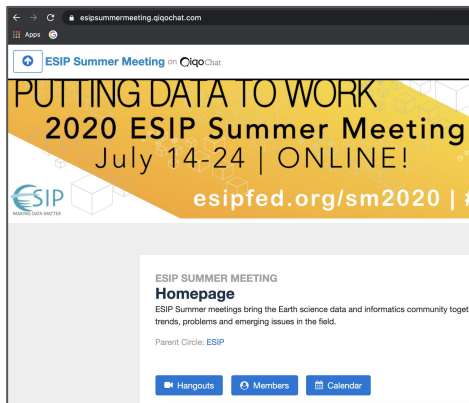
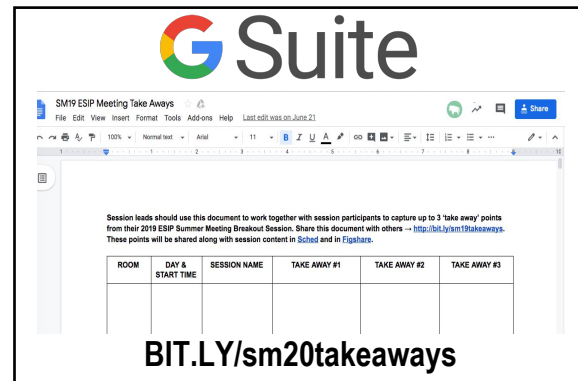
FRIDAY

# MEETING TECHNOLOGY

# zoom



2019 ESIP Summer  
**10,831 Views**  
**2,863 Downloads**



# cvent

<https://esipsummermeeting.qiqochat.com/>



@Esipfed  
#ESIPFed



# PUTTING DATA TO WORK

## 2020 ESIP Summer Meeting

July 14-24 | ONLINE!



[esipfed.org/sm2020](https://esipfed.org/sm2020) | [#esipfed](https://twitter.com/esipfed)



### ESIP SUMMER MEETING

## Homepage

ESIP Summer meetings bring the Earth science data and informatics community together every July to discuss current trends, problems and emerging issues in the field.

Parent Circle: [ESIP](#)

Hangouts

Members

Calendar

Live Chat!

Join Video for Plenary

Help



Hide Breakouts

Admin Controls

11:30 AM ET: Opening Plenary & Raskin Award Presentation

Plenary



\*\*\*Come here for help or use Live Chat! \*\*\*

Help Desk

2ET - ESIP Public-Private Partnership Cluster

Room 2

Announcements

Agenda

Code of conduct

Notes

Sched



Announcements



File Edit View Insert Format Tools Add-ons Help Last edit was made 5 da...



Share



100%

Normal text

Lato

18

B

I

U

A



Daily Announcements



Daily Announcements

- Once you are in the Meeting Room, you must click the big green button on the top "Join Video for Room #" This will launch a Zoom meeting.

Research Showca

Thanks to: AGU100 ADVANCING EARTH AND SPACE SCIENCE

About:

Live Chat!



## Welcome to Hallway Conversation Hangout!

Miss the informal networking with your colleagues? This is the place! Scroll down to find a host of open spaces to start a new group or join a hangout with others already there. Don't forget to press, 'enter' on your hangout of choice, the picture will change and then the green button to join the video if you want to talk.

[Admin Controls](#)[Edit](#)[Quick instructions / troubleshooting](#)Join Video

Or stroll the other gardens below.

## Hallway Conversation Hangout

You are here.

Enter



## FUNding Friday Brainstorm

Enter

(You can set the topic)

## ESIP President

Enter

(You can set the topic)

## Birds of a Feather

Enter

(You can set the topic)

## Fireside Hangout

Enter

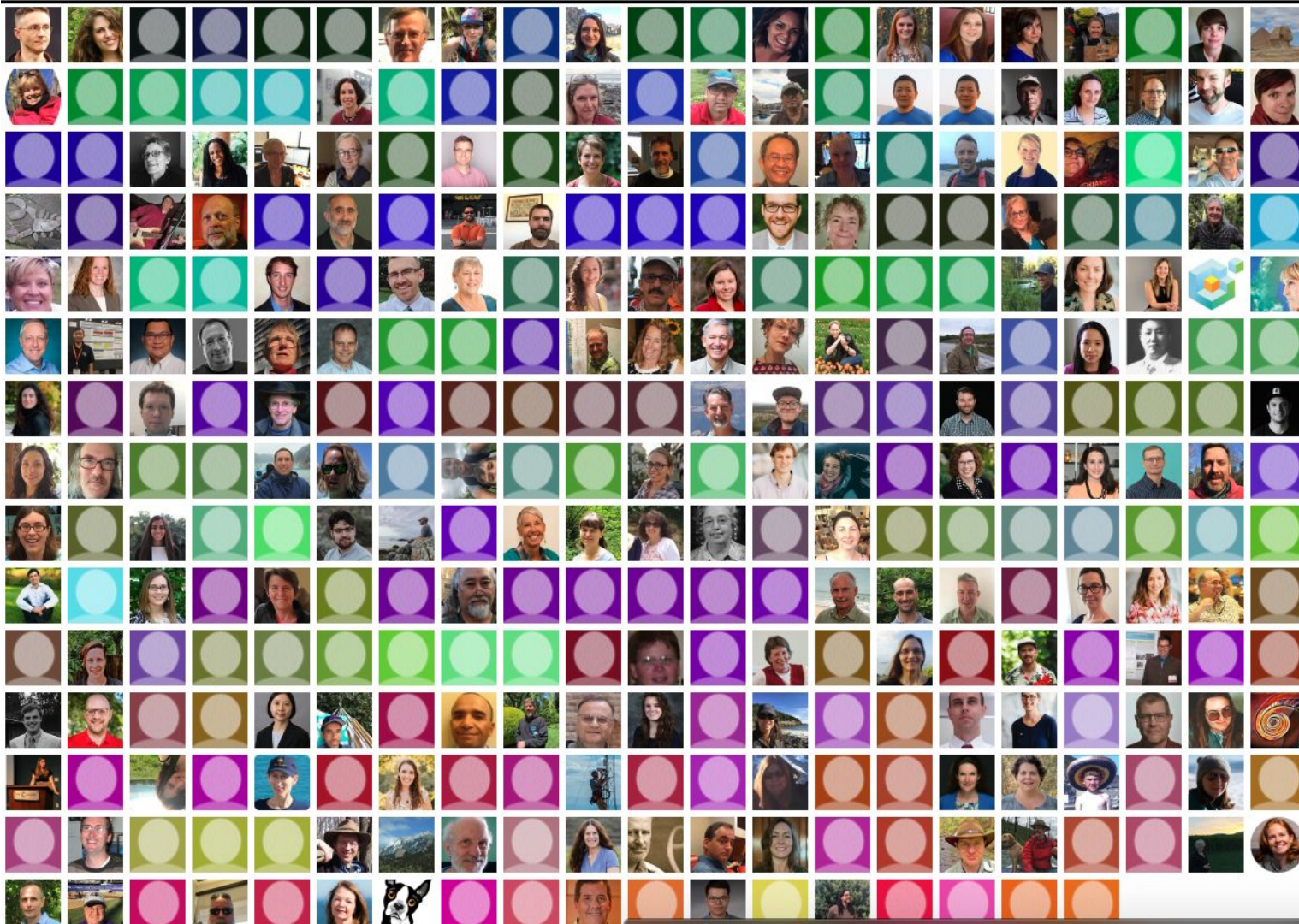
(You can set the topic)

## Jam Session Hangout

Enter







Our first virtual  
group photo...

While we are  
waiting to start,  
please add your  
picture to your  
Qiqochat profile

## I am glad to offer/share...

## I'd like help/collaborators on...



Megan Carter

Collaboration Support, Community Management  
Techniques



Shelley Stall

current status of the ongoing work coming from the  
Enabling FAIR Data project with the journal and repository  
community now being carried on by efforts in ESIP,  
FORCE11, and RDA.

all things concerning data and software sharing, citation,  
and credit. Specifically connecting those searching with  
those doing -- ESIP being a really important community for  
the Earth, space, and environmental sciences.



Lucas Cioffi

As the founder of QiqoChat, I am happy to share my  
lessons learned as an entrepreneur and software developer.

introductions to organizations that need to move an in-  
person conference online.



Erin Robinson

Community management, virtual collaboration,



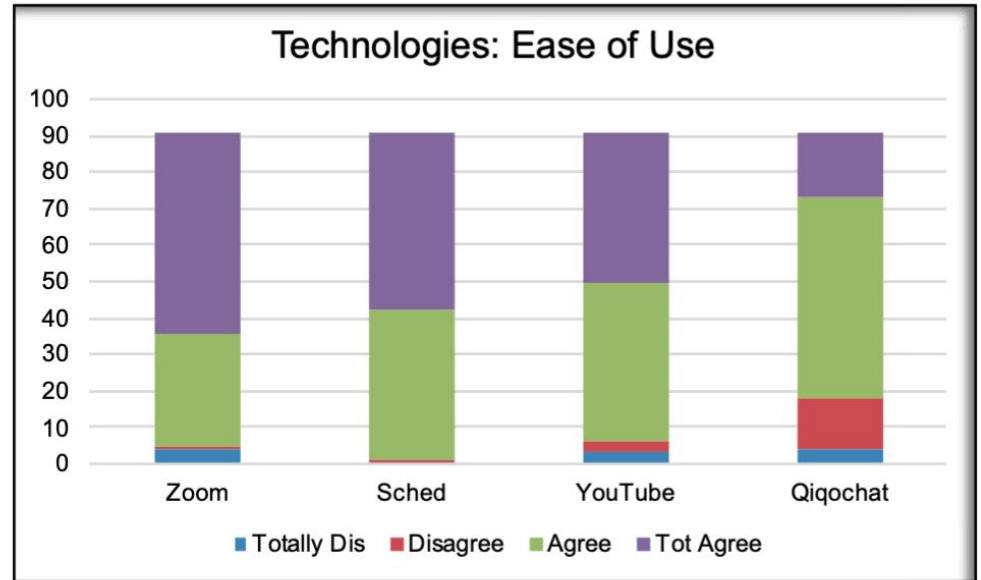
Tamara Ledley

I can facilitate a Climate Solutions Workshop or a World  
Climate Negotiation Simulation game.

getting Earth science data into the hands of teachers and  
students to help them develop a deeper understanding of  
Earth science and technical skills they will need in their  
future careers.

## Technology Use

- Zoom easiest
- Qiqochat least easy, but still rated 72% ease of use



# Pre-Meeting Connections





# ESIP Summer Meeting Tech Training

*We're convening these ESIP Summer Meeting Tech Training sessions to support ESIP Summer Meeting Session Leaders as we convert the 2020 ESIP Summer Meeting from an in-person conference to a virtual conference. We want to bring leaders together for peer-to-peer learning and build skills that will amplify the effectiveness of the content that you are planning. The calls focus on running online meetings and light facilitation support to ensure that we make connections during the ESIP meeting and it's not just a string of one-way webinars. You can [register here](#) (optional).*



# ESIP Session Convener Facilitation Workshop

Charley Haley ([charley@back-loop.com](mailto:charley@back-loop.com)) & Fisher Qua ([fisher@back-loop.com](mailto:fisher@back-loop.com))

## Small Group Intro

Hi -

The ESIP Meeting starts TOMORROW!

I have said a number of times, this ESIP meeting will be different and one of the key ways it will be different is that you won't sit quietly at home passively listening to a webinar without meeting another person. I hope you will make real connections and the first way I am doing that is by sending you a real email to introduce you to 6-8 other people in small groups.

**Small Groups:** I have created 56 groups where I mixed attendees to ensure there are members that are new to ESIP and returning to ESIP meetings, ESIP leaders like a Board member, collaboration area leader, community fellow or staff member. There are a variety of career stages mixed into this group as well. You can think of this like the random people you sit down with at a meeting. You don't have to do anything with this group and this is where my coordination stops. You may never see them again and they might become your next collaborator. That said, I thought likely there will be one of you that will jump in and say hello.

Your group is included below:

Three other quick ideas for your group:

- \* Reply all to this note with a quick hello and a bit about how you got involved with ESIP and maybe a link to your qiqochat profile
- \* If you are leading a session you'd like to share or have contributed a poster to the research showcase - please tell this group!
- \* Pick a coffee break and [one of the Hangouts \(scroll down to see the list\)](#) in Qiqochat and meet virtually in real life!

During Meeting  
Connections

# MEETING BY THE NUMBERS

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**8**  
Plenary  
Sessions



**39**  
Research  
Showcase

**60**  
+ Sessions



**196**  
First Time  
Attendees



**56**  
Teachers

**168**  
+ Speakers



**20**  
International  
Attendees

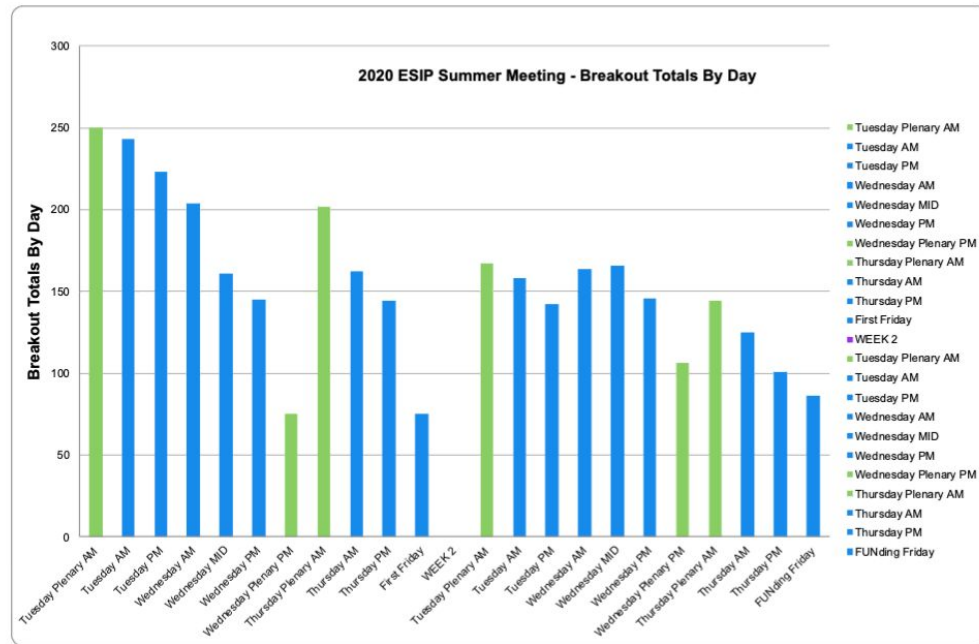


**512**  
Attendees!



# Shape of participation

- Strong beginning of each week
- Week 2 begins at 67% of week 1
- Green: Plenary
- Blue: Breakouts



# ESIP MID-MEETING FEEDBACK

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## The Good



- People attended ~ 2 sessions a day
- People made at least 1-2 new connections and many made more than that
- Liked Zoom breakouts & interactive, facilitated sessions
- Liked session content - avg Sched rating = 9.4
- Going better than expected.
- We are learning.



# ESIP MID-MEETING FEEDBACK

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## The Could Be Better

- Zoom limitations for some Federal employees
- Confused by Qiqochat/Sched combo
- Missing bumping into people/More team building/social
- More time for discussion/Q&A
- Way to opt out of breakouts
- Emails... too many
- We are still learning

A few more focus group participants needed:

<https://doodle.com/poll/c7ht25yrrpdr5mqk>



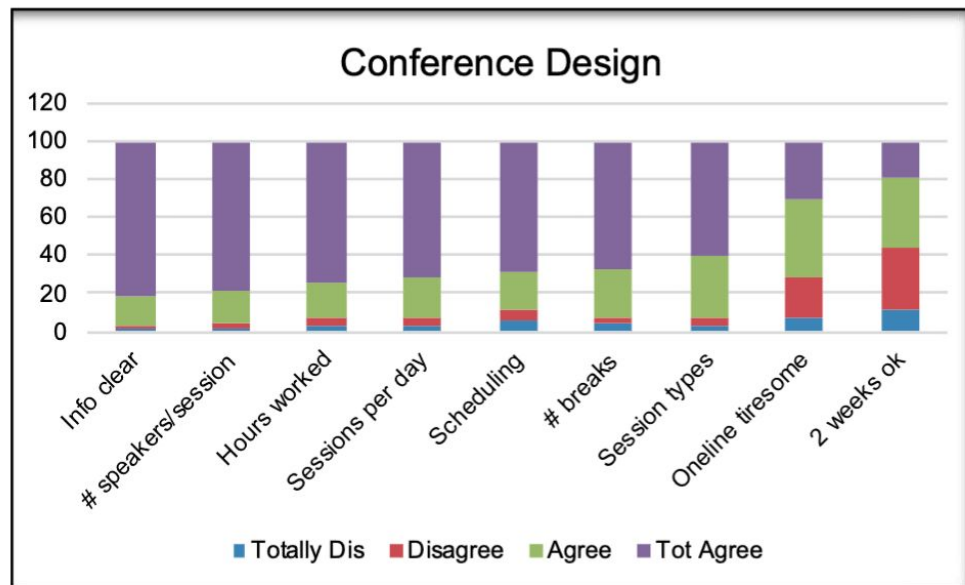
# Conference Design

## Highest approval:

- Clarity of information
- # speakers per session
- Conference hours
- # sessions per day

## Lowest approval:

- 2 week time frame
- Online fatigue

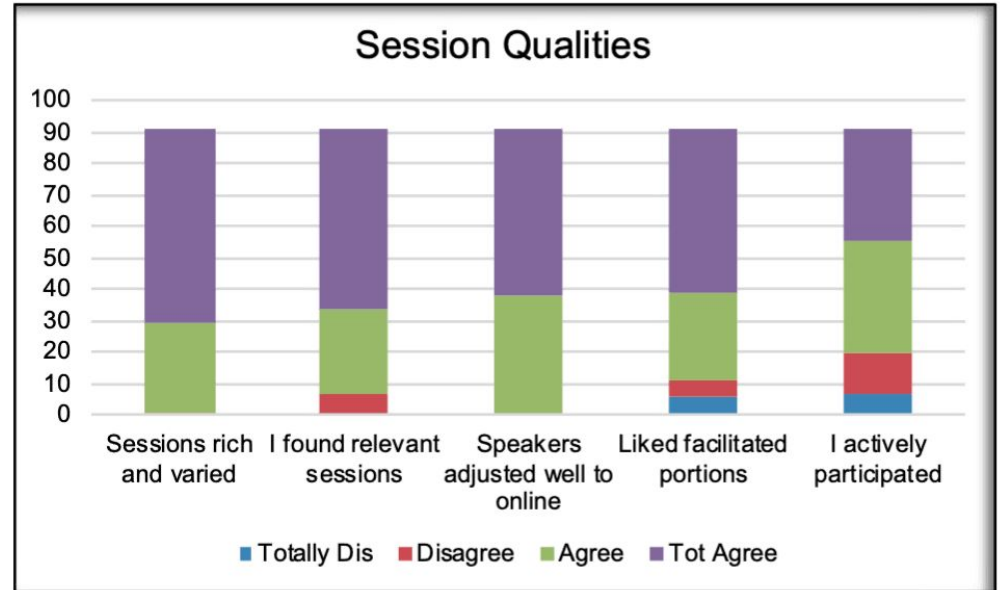


# Session Qualities

All agreement high

Highest rated:

- Rich and varied sessions
- Relevance of sessions





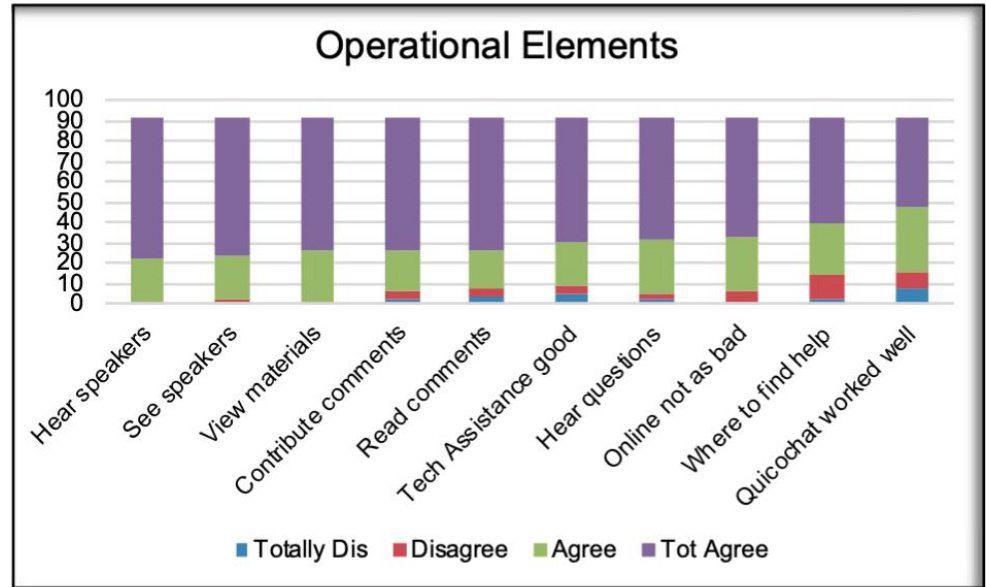
# Operational

## Highest rated:

- Hearing and seeing speakers
- Viewing materials
- Contributing comments

## Lowest rated (still high):

- Qiqohat
- Finding help



# Mid-Final Shifts

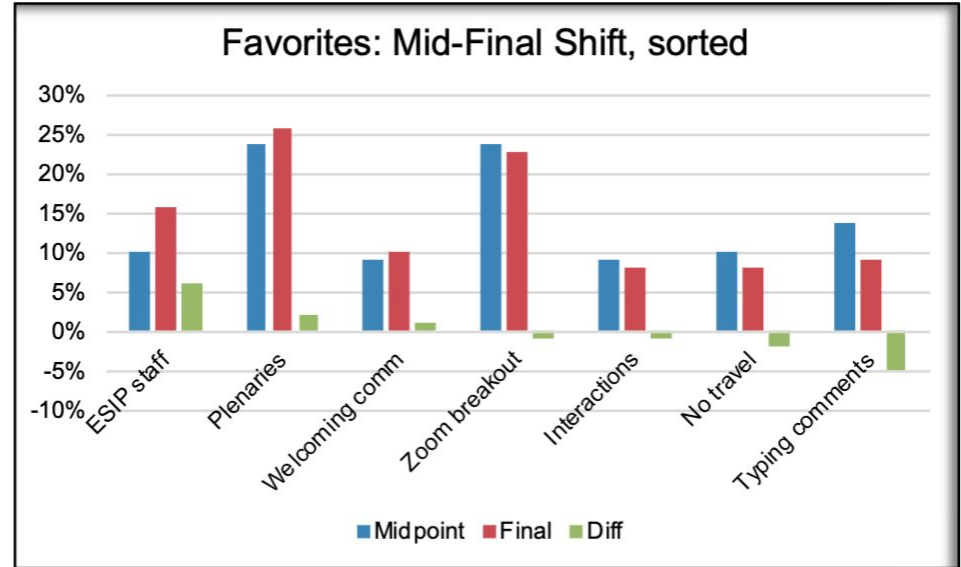
Blue: mid-point, Red: final

Improved in week 2:

- ESIP staff help
- Plenaries
- Community welcome

Declined in week 2:

- Zoom breakout quality
- Personal interactions



# Post-Meeting Connections

# MEETING ARTIFACTS

We use the meeting website to link to :

Session  
Recordings



Cloud Data Optimization: Emerging Best Practices I

When data is shared in the cloud, anyone can analyze it without having to download it or store it themselves, which lowers the cost of new product development, reduces the time to scientific discovery, and can accelerate innovation. However, staging large-scale datasets for analysis in the cloud requires consideration of how data should be prepared and organized to allow fast, efficient, and programmatic access from distributed computing systems. This workshop provides a forum for members of the community to share lessons learned as they explore ways to use the cloud to expand data access. It seeks to encourage dialog between users interested in leveraging data in the AWS Cloud for research and application development for Earth Sciences.

[View Session Recording](#)

Presentations  
in Figshare



## Presentations (10 minutes each)

Full Abstracts can be found in the attached file.

1. **Title:** STAC, sat-utils, and Open Data - Prioritizing Data Use (10 min)

**Presenter:** Dan Pilone (Element 84)

2. **Title:** Radiant ML Hub, A cloud based commons for geospatial training datasets (10 min)

**Presenter:** Hamed Alemohammad (Radiant Earth Foundation)

**Slides:** <https://doi.org/10.6084/m9.figshare.9696446>

3. **Title:** One data format pattern to rule them all (10 min)

**Presenter:** Grega Milcinski (Sinergise)

**Slides:** <https://doi.org/10.6084/m9.figshare.9121991>

Session  
Takeaways



## Session Take-Aways

1. Moving to cloud infrastructure offers a chance to reevaluate best practices, though some of these may not be purely cloud-related (e.g., data formats) but the discussions are coming along for the ride!
2. It is unclear who will own the cloud-optimized datasets and it will likely be different from dataset to dataset. Until (if/when) cloud-optimized formats become the norm, they may often be provided by other groups (or created on the fly).
3. There is a lot of focus on datasets in these conversations, but we need to also focus on tooling/services and education.

Submit to ESIP Figshare: [esipfed.org/figshare](https://esipfed.org/figshare)

Takeaways: [bit.ly/sm20takeaways](https://bit.ly/sm20takeaways)

# MEETING HIGHLIGHTS WEBINAR

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August 13th at 3 pm ET/12 pm PT

DIDN'T GET A CHANCE  
TO ATTEND ALL THE  
SESSIONS YOU  
WANTED TO?



**[esipfed.org/webinars](https://esipfed.org/webinars)**



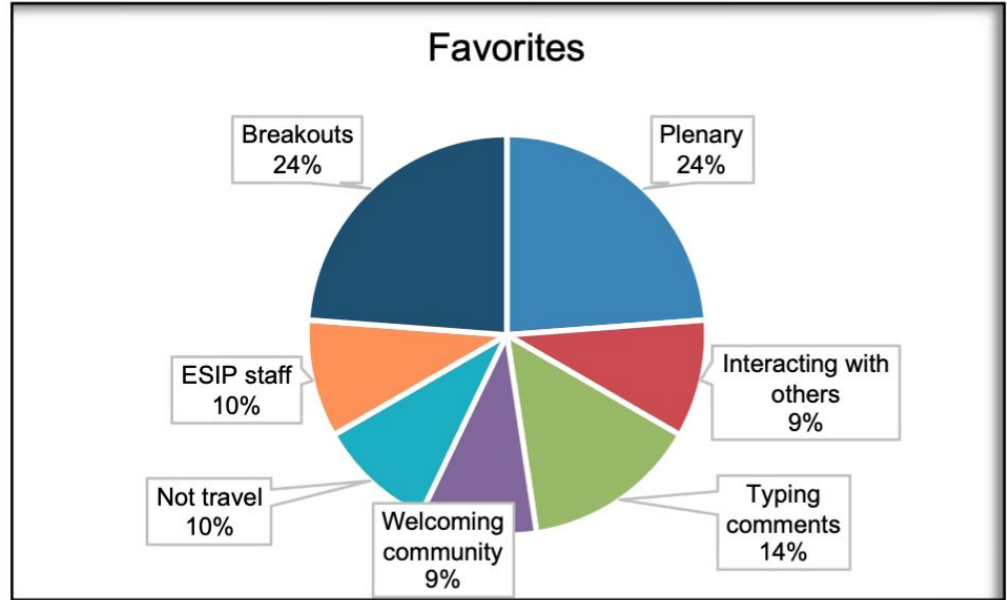
# Key Learnings – Pivot

- Making the decision sooner than later allowed us to provide the community certainty
- It was important for us to be able to use some of the tools/systems we had in place for in-person meetings (Cvent, Sched)
- We repurposed our FY20 travel to support facilitation and tech support
- Rethink special events and ways that people will network
- TONS of training
- Feedback & evaluation are more important

# Favorite Aspects

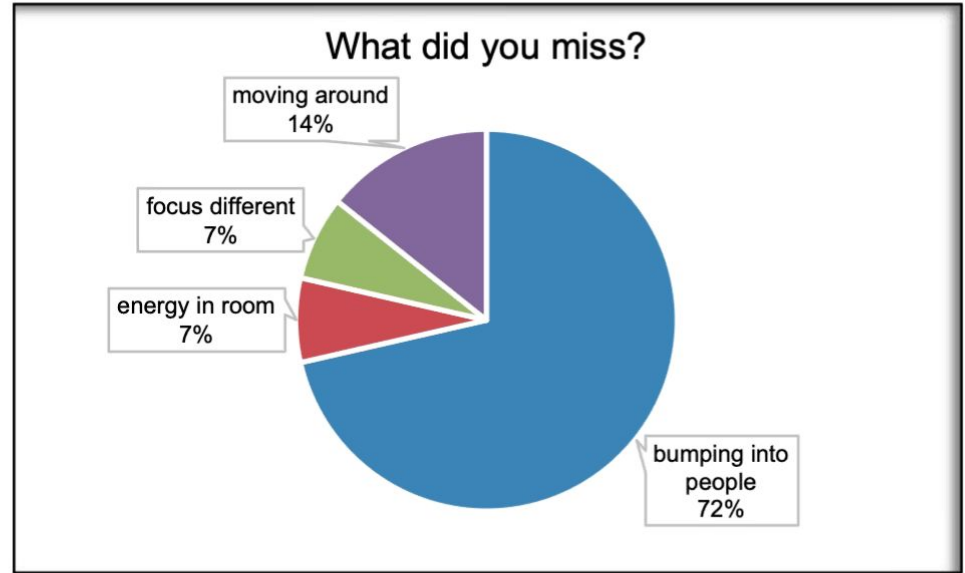
## Top rated:

- Plenary & Breakouts
- Ability to type contributions
- ESIP staff
- Not having to travel



## What was missed (from F2F)

- Bumping into people
- Moving around

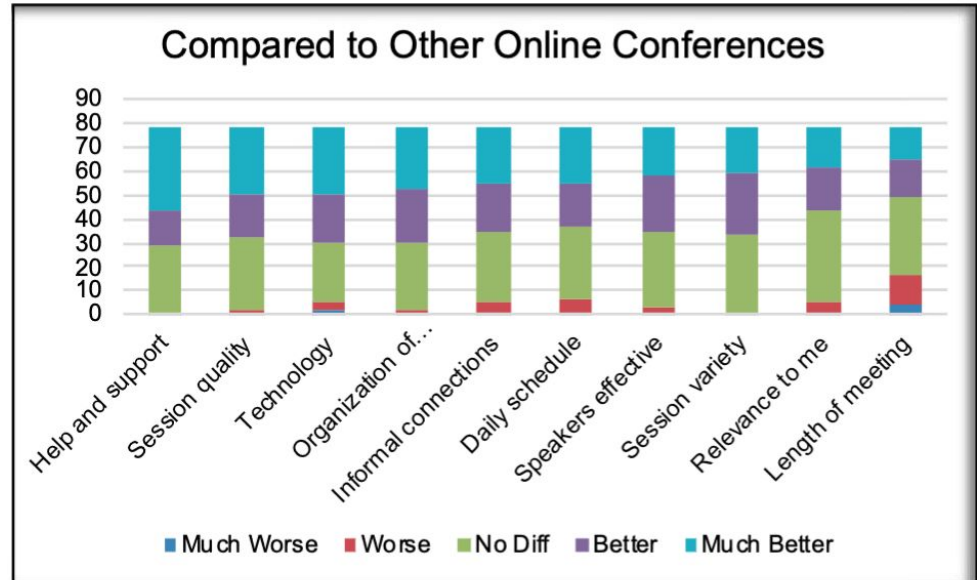


## Compared with other online conferences

All dimensions were at least as  
good if not better

Top rated:

- Support
- Quality
- Technology
- Organization



Question 1: To what extent did the meeting achieve its goals of providing a successful venue for the exchange of knowledge, content, and discoveries about Earth Science and Earth Observation?

- ESIP built an online environment to host and manage their annual conference, which by all measures was successful.
- Using the home 'wrapper' of QiqoChat provided a site and webspace for 512 attendees to learn, contribute, and interact around issues of Earth Science and Earth Observation.
- The meeting achieved all goals and gained knowledge and insight into offering future online meetings.
- Findings will likely influence upcoming online meetings, but help design decisions for future in-person meetings as well



## Question 2: To what extent did the online format impact the conference experience? (What are the affordances, assets, drawbacks, etc.)

- 94% of attendees satisfied with the meeting; online format, impacted the conference experience only slightly, as compared with previous years (in-person)
- Significant elements missing, namely meeting colleagues and bumping into friends, not successfully mimicked online. There were other pieces missing, such as physical movement, having travel time to focus thoughts on the meeting, and being together in a single time zone.
- However, data suggests that:
  - overall focus on sessions and knowledge sharing may have been greater than in-person meetings
  - time was spent more efficiently (you didn't need to walk distances from session to session)
  - people got lost less
  - materials and shared workspaces and documents were more readily available
  - contributions increased as a result of both text and audio questioning formats
  - online format *may* have had more positive impacts than negative.

# Special Events



## ❑ Today: Live Q&A in the Research Showcase Poster & Demo Gallery

### Challenge for the next 30 min:

- ❑ View ~4 presentations, including:
  - 1 that is not in your wheelhouse &
  - 1 by someone you do not know.
- ❑ Ask or leave a question/comment for each you view.

### Focus for each round:

1. Presentations 1-12
2. Presentations 13-25
3. Presentations 26-37
4. Any presentation

# Join Live Q&A and/or Leave Questions

Join Video for Presentation 2

Help



0:00

Hide Breakouts

Admin Controls

Research Showcase Sponsored by AGU

Main Room

\*Come here for help or use Live Chat\*

Help Desk

Environmental Enforcement Watch Project | Cole Alder

Presentation 1


Flow-Conditioned Parameter Grids: A CONUS Hydrologic Parameter Dataset For Mechanistic, Statistical, and Machine Learning Models | Theodore Barnhart

Presentation 2


Remain Open | Allow Response

Presentation

Learn More & Comment



Click here to leave questions or comments




# Flow-Conditioned Parameter Grids:

## A CONUS Hydrologic Parameter Dataset For Mechanistic, Statistical, and Machine Learning Models

Theodore Barnhart, August Schultz, Seth Siefken, T. Roy Sando, and Peter McCarthy  
Wyoming-Montana Water Science Center  
U.S. Geological Survey

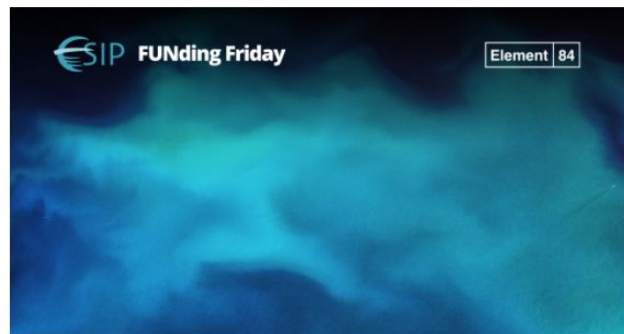
ESIP Virtual Poster Session - July 17, 2020





# What is a Flow-Conditioned Parameter Grid?

Video is off  
(Event admin can turn video on)



Hide Sidebar Admin Controls

FUNDing Friday Main Room
Amber with "Why is this so hard?" Poster 1
Robert with "Semantic Sweep"

Member Posters Student Posters Member Voting Student Voting Rules

One lonely Thursday evening a researcher contemplates data publication from their new COVID work life arrangement

1

A domain repo ..  
- What's a repo?

A FAIR repo ..  
- What's FAIR?

Where should I put my data?

A certified repo ..  
- Now I'm really lost!

How do ESIPers choose a repository?

- Google
- Repo is first recommended by my institution
- Recommendation of colleagues
- Word of mouth, start by asking a data center what I know
- Use my institutional repo
- I'll likely consult my peers
- Repo finder tool
- Use the main sub-domain repository that is available
- Ask my PI and lab mates where they would like data to go
- I look for repositories that are certified by authoritative organizations

<https://1.qiqochat.com/breakout/0/NvDczLZrDnITQHCzckzKPSqUj>

# FIRST FRIDAY & FUNding Friday



**Research  
Showcase**  
ESIP SM2020



BREAKOUT  
& PLENARY  
CONTENT



**FUNding**

FRIDAY

**INFORMAL NETWORKING**





esipfed.org | #ESIPfed

# THANK YOU

ERIN ROBINSON

ERINROBINSON@ESIPFED.ORG

ESIP Meetings  
[ESIPFED.ORG/MEETINGS](https://esipfed.org/meetings)

ESIP Collaboration Areas  
[ESIPFED.ORG/COLLABORATE](https://esipfed.org/collaborate)

ESIP Lab  
[ESIPFED.ORG/LAB](https://esipfed.org/lab)

Supported by:



# Resources – ESIP

- ESIP Summer Meeting: <https://2020esipsummermeeting.sched.com/>
- ESIP Session Breakout Leader Guidance:  
[https://docs.google.com/document/d/1dIIJQyR0-Ky7RbisYjjsxe\\_pXM4JCaL5J8Ca2osStRo/edit](https://docs.google.com/document/d/1dIIJQyR0-Ky7RbisYjjsxe_pXM4JCaL5J8Ca2osStRo/edit)
- ESIP Summer Contingency Plan:  
[https://docs.google.com/document/d/1AJiOHR0JxOktusN6iJXg58ZrDptV3bfS4LgAjHP\\_IUY/edit](https://docs.google.com/document/d/1AJiOHR0JxOktusN6iJXg58ZrDptV3bfS4LgAjHP_IUY/edit)
- Virtual Conference Pricing Justification Background:  
<https://docs.google.com/document/d/1-Xlvnsrmhn95TVg1ueXEiNq0x-oEX0sbANnHN8NqLvQ/edit>

# Resources – Gathered from around the Internet

## Virtual Conference Resources

- A guide to hosting on Zoom:  
[https://docs.google.com/document/d/1KL Rnm6g5YvD8QRSPwwNWq6NPK9FYvMpZPy\\_XEyOmMM/edit#](https://docs.google.com/document/d/1KL Rnm6g5YvD8QRSPwwNWq6NPK9FYvMpZPy_XEyOmMM/edit#)
- [ACM Presidential Task Force on What Conferences Can Do to Replace Face-to-Face Meetings](#)
- [Mozilla Blog: Rapid Virtual Meeting Prototyping in the Age of a Pandemic](#)
- [Liberating Structures](#) (particular recent work on how to turn in-person methods into virtual methods)

## Key Learnings – Registration Fees

- Consider pricing structures for elearning/courses\*
- We based our price on \$25/hour of plenary content and the cost of full use of our platform for the 10 days of our meeting
- We provided comp'd registration for Session Leaders to give to 1-2 new to ESIP speakers

\*Source: <https://helloendless.com/virtual-event-pricing/>