

2022 ESIP July Meeting (July 19th-22nd, 2022)

[July 2022 ESIP Meeting: Schedule](#)

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Human atlas of Earth science information: a use case for Federated Knowledge Graphs

Tuesday, July 19 • 11:00am - 12:30pm ET

More info on Sched Session Page: <https://sched.co/12esR>

Attendance & Check in

Add your Name / affiliation / pronouns / location / social media to a bullet

- Doug Newman / NASA ESDIS
- Doug Fils / Ocean Leadership
- Aleksandar Jelenak / NASA EED-3/HDF
- Ruth Duerr / Ronin Institute/ she/her / metro Denver.
- Ali Krzton / Auburn University / Auburn, AL
- Ted Habermann / Metadata Game Changers / Colorado
- Robert R. Downs / SEDAC /
- Jennifer Wei /ESDIS/GES DISC
- Hazem Mahmoud / NASA LaRC ASDC
- Brandon Shelton / NOAA CIRES-Boulder / he/him / metro Denver
- Sara Lafia / University of Michigan / ESIP Fellow w/Semantic Tech Committee
- Joan Damerow / Lawrence Berkeley National Laboratory / she/her / Berkeley, CA
- Charles Vardeman/ University of Notre Dame/ Notre Dame, IN
- David Neufeld / NOAA CIRES / Boulder, CO
- Vijay Uniyal / NOAA CIRES / Boulder, CO
- Yaxing Wei / ORNL DAAC
- Jim Coll / CISESS
- Nick Doty / NASA ESDIS
- Chris MacDermaid / Xentity / GeoPlatform
- Peisheng Zhao /GES DISC
- Melissa Cragin / SDSC / EarthCube Coordination Office
- Kate Rose / NOAA NCEI

Agenda

At session start:

- **Welcome**
 - Invite attendees to share their name/affiliation/location in the breakout notes above
 - Invite others to contribute to this document (if desired)

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- Assign any other roles needed - be sure to have someone monitoring the Zoom chat
- **Community Participation Guidelines Reminder**
 - By participating in this session, you agree to adhere to the ESIP [Community Participation Guidelines](#)
 - Report an Issue: <https://www.integritycounts.ca/org/esip>
- **Goals of this Session**
 - Reviewing the current state and future of ESIP's usage based discovery tool.
 - Put forward the case for linking/federating knowledge graphs together:
 - i. An overview of GES_DISC work on graph-based search engines
 - ii. The GES_DISC citation repository
 - iii. Co-citations at SEDAC
 - Lay foundation for attempting to solve the 'federated knowledge graph' problem

Resources for this session (link supplementary docs or presentations here)

-  Knowledge graph primer
- Introduction to knowledge graphs: <https://www.youtube.com/watch?v=y7sXDpffzQQ>
- Google and Knowledge graphs: <https://www.youtube.com/watch?v=mmQl6VGvX-c>
- Knowledge graphs and earth science (ESIP):
<https://www.youtube.com/watch?v=8NcU1VT5XcY>
- Knowledge graph guide:
<https://towardsdatascience.com/a-guide-to-the-knowledge-graphs-bfb5c40272f1>
- Practical usage of query traversal languages (While specific to Gremlin, this guide gives an extremely intuitive and comprehensive look at the power of graph databases and graph query traversal techniques):
<https://kelvinlawrence.net/book/Gremlin-Graph-Guide.html>
- An interesting aside on the foundation of graph theory:
https://en.wikipedia.org/wiki/Seven_Bridges_of_K%C3%B6nigsberg

Before session close:

- **Capture 3 Takeaways & Shared insights**
 - Questions:
 - i. Vinny
 - No decentralization yet. Very silo'd. How do we achieve this? Early days.
 - Metrics from UBD? Is it being used? How is it being used? Usability?
 - How do we use it?
 - DataCite (PID graph) being leveraged?
 - ii. Armin

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- What knowledge are users gaining from the knowledge graph?
- This approach reduces burden on users to have domain knowledge
- iii. Irina
 - Comparing, deduplicating, completing metadata across sources?
 - Publications are a great benchmark dataset
 - Meaning of “publication” in DataCite? versus Dataset → associated Publications (Crossref event data)
 - Working with APIs (e.g., WoS) given that they throttle usage?
- iv. Bob
 - Advanced information about disciplinary usage from citation information for SEDAC data sets
 - RPI students using datasets, will follow up
 - Value derived?
- v. Doug
 - Ontology development, unique identifiers for concepts?
 - Community use cases for dataset search? Usability?
 - Recall and precision? Ideas for measuring relevance?
- What did we discover?
- How can we help each other?
- What knowledge and resources do we have to share?
- Important remaining questions?
- **Closing circle**
 - Share any reminders
 - Come to our next Cluster Call? on **THIS DAY & TIME**. Here’s what you can expect to see when you show up.
 - Shout-outs & thanks
 - Requests for peer assists

5 ways to stay involved with ESIP

- Join the conversations on our [ESIPFed Slack Channel](#) and say hello on #general.
- Keep up with the latest from in and around ESIP by signing up for the [ESIP Update](#) or the mailing list of this group.
- Share your feedback, questions, and suggestions with our Twitter community [@esipfed](#) and [#esipfed](#).
- Hop on an [ESIP Telecon](#) that interests you - no need to RSVP!
- If you’re in-person with us, be sure to check out the Research Showcase Poster and Demo Reception on Wednesday night!

Feedback

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Paste in Zoom Chat notes that you would like to save here