ESS-DIVE Training Sessions

data.ess-dive.lbl.gov

Overview and Agenda

All ESS researchers looking to use ESS-DIVE
will benefit from this training

- Brief overview of ESS-DIVE with Q&A (30 min)
- 3 parallel training sessions (1 hr 30 min)
    - New user bootcamp
    - Project data management
    - ESS-DIVE data and metadata formats
- Google Drive:

  https://drive.google.com/drive/folders/1fTC83n9ohx8eaMvd
  aTetadOKCOrNqoI9

Goals for ESS-DIVE Training Sessions

FAIR Data

Use ESS-DIVE community formats to make your data more visible and reusable

Start publishing your data on ESS-DIVE
Good data management practices

Utilize Project Data Management Capabilities

Project data management tools and support
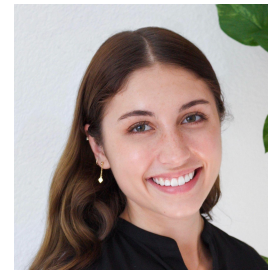
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Presenters

Charuleka Varadharajan

ESS-DIVE Community Engagement and Partnerships Lead
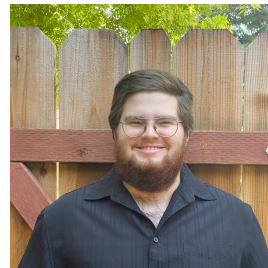

Madison Burrus

Computer Systems Engineer

Emily Robles

Data Management Research Associate

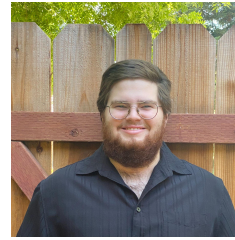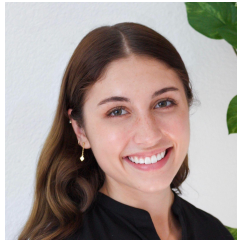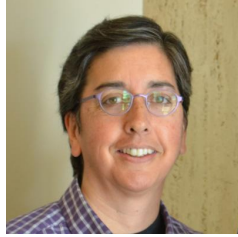**Robert Crystal-Ornelas**

Postdoc Researcher

Dylan O'Ryan

Student Research Assistant

ESS-DIVE Team

ESS-DIVE Leadership

Contact us at any time at ess-dive-support@lbl.gov

What is your primary role in your research group?

Data Collector

Modeler

Other Data User

PI

Data Manager

Familiarity with ESS-DIVE

published datasets previously

future data contributor

downloaded data

attended previous ESS-DIVE presentation

Reasons to publish data

Journal and BER ESS requirements

Most journals are starting to **require** data associated with paper findings, figures, and tables to be **publicly available on a long-term data repository**

Include **DOIs**, such as those issued by ESS-DIVE, in the **Data Availability** section of a paper

💡 **DOI:** Digital Object Identifier

Share your work with the community

Gain **publicity** from data publications, similarly to journal publications

Allow others to use your work for **future studies**

Promote FAIR data practices

Findable, Accessible, Interoperable, and **Reusable**

Data reporting formats and metadata requirements abide by these standards

Where to publish data

Environmental Systems Science Data (ESS-DIVE)

ESS funded projects are required to store data on ESS-DIVE

Accepts observational, experimental, sampling, and modeling data

Environmental Data Initiative (EDI)

NSF Arctic Data Center (ADC)

National Center for Biotechnology Information (NCBI)

United States Geological Survey (USGS) ScienceBase

Earth System Grid Federation (ESGF)

National Microbiome Data Collaborative (NMDC)

1. About ESS-DIVE
Charuleka Varadharajan
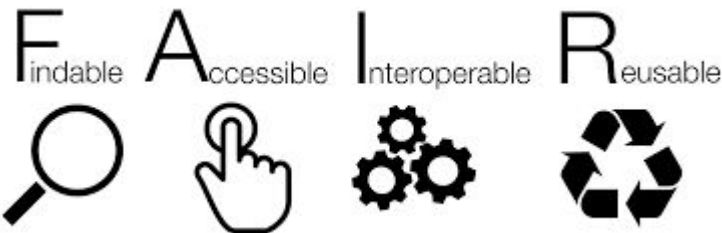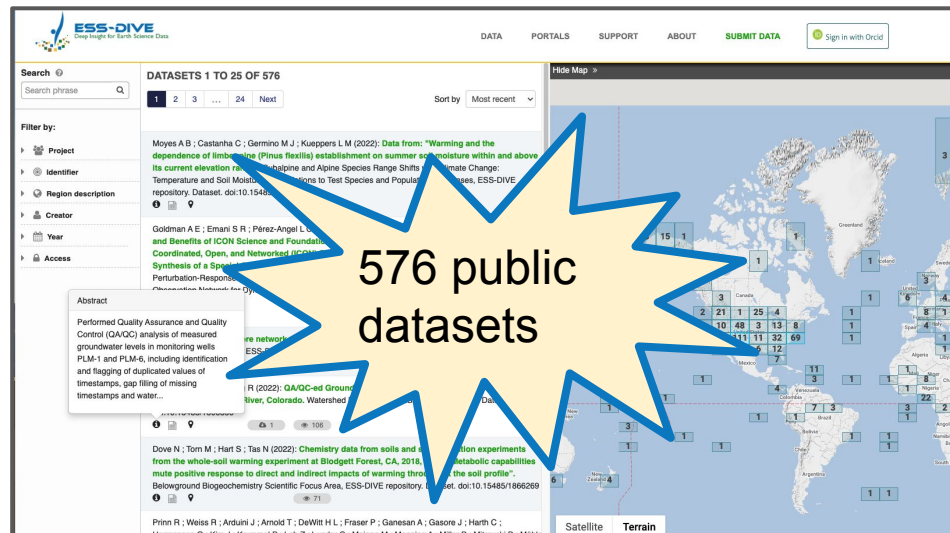
What is ESS-DIVE?

Data Repository to

preserve

expand **access** to

and improve **usability** of

ESS data

Findable Accessible Interoperable Reusable

data.ess-dive.lbl.gov

576 public datasets

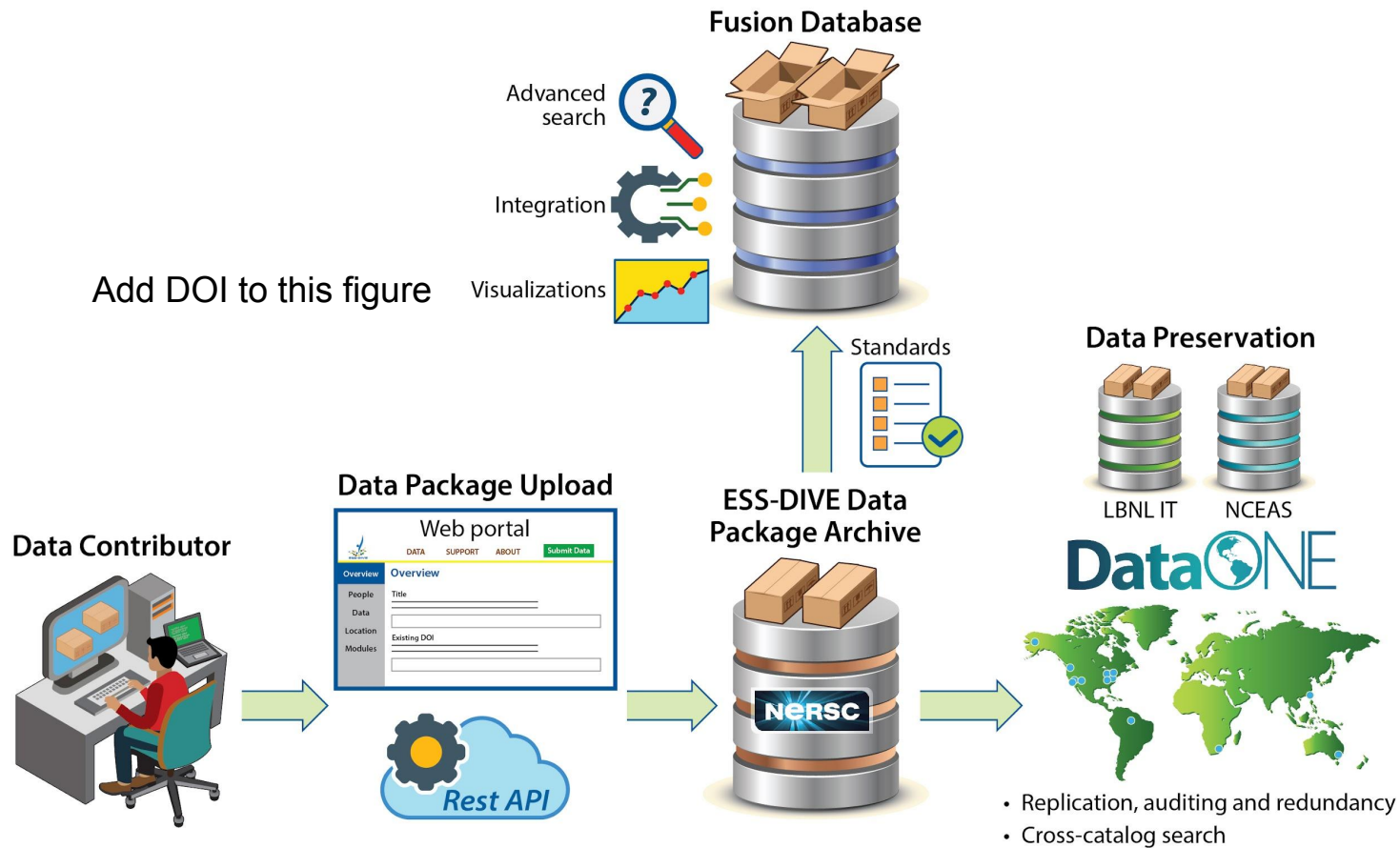**Use of ESS-DIVE is mandatory for ESS project data management plans**

Scope of ESS-DIVE Data

- Data from projects funded by or related to DOE Environmental System Science Program
- Observational, experimental, and modeling activities in the Earth sciences.

Watershed Sciences

Terrestrial Ecology

Coastal Systems

Easy Upload Capabilities & Broad Data Availability

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Supporting and Engaging the ESS Community

WEBSITE, TWITTER, COMMUNITY EMAIL LIST

DOCUMENTATION

TUTORIALS/ ANNUAL WORKSHOP

HELP DESK

MONTHLY WEBINARS

1:1 MEETINGS/ SITE VISITS

COMMUNITY GITHUB

PUBLICATIONS
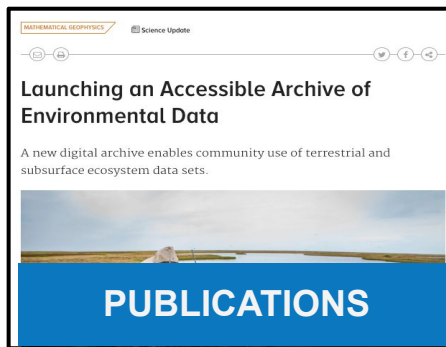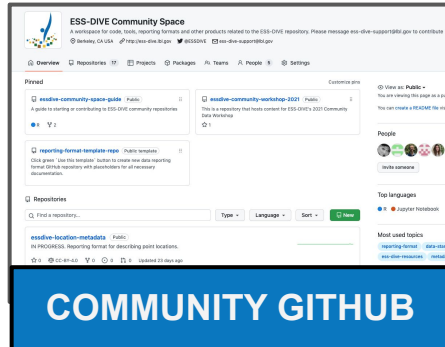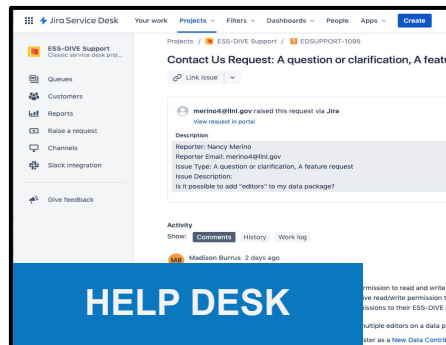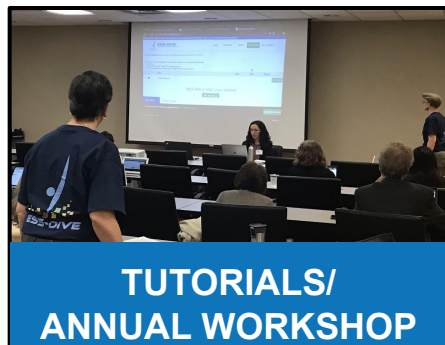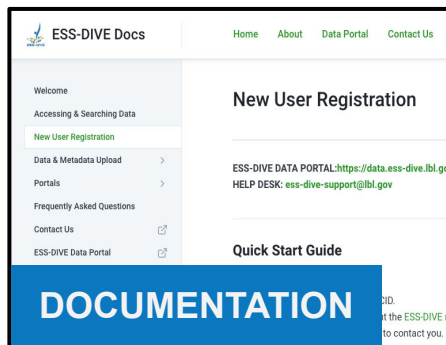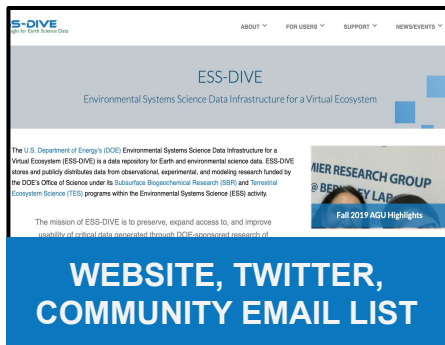
Which of these terms are you familiar with?

Metadata

Data package

Repository

DOI

Persistent identifier

ORCiD

All of the above

What are these?

Components of a dataset (data package)

Data Files: csv, images, code, kml

Dataset

Data Files

Include data files, all data relevant to scientific findings and figures/tables of a paper, or all data necessary for replication of the science

- Measurements
- Model inputs, outputs, code, scripts
- Supporting information, maps, documentation

Metadata

Include information to allow other users to interpret whether your data package is useful to their purposes

- Purpose of the data
- Contents of the data files (results, variables, etc)
- Temporal and geographic information
- Instructions for use

Metadata: Data / info about data

Terms to keep in mind

Data Storage

Repository

- A central location for long term data storage

Published Data

- Data that has been made publicly accessible

Publishing Terms

Metadata

- Descriptive information about data files

Dataset/Data Package

- Combination of data files and metadata

Persistent Identifiers

ORCiD

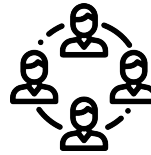- For people; permanent link for your professional activities

DOI

- Persistent identifier that links to data on the internet

https://ess-dive.lbl.gov/acronyms/

ESS-DIVE provides …

Metadata standards for data packages

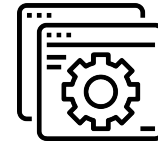Community reporting formats for several ESS data types

Guidance related to data packaging and authorship

Curation of metadata and ensures file readability

Digital Object Identifier and citation text for published data

Long-term data search and download availability

ESS-DIVE is the DOE BER ESS location for long-term data preservation

# 2. Today's Training Sessions
Tutorial Leads

Breakouts

All ESS researchers looking to use ESS-DIVE
will benefit from these trainings

- **New ESS-DIVE Users**: Publish and search on ESS-DIVE

- **PIs and Data Managers**: Manage project data on ESS-DIVE

- **Any researcher**: Learn to use new ESS-DIVE community data formats

New User Bootcamp

New users can learn how to search for ESS-DIVE data and create and publish their own datasets.

- Learn core components of datasets and ESS-DIVE publication requirements

- Create and submit a practice dataset on the ESS-DIVE Sandbox

- Understand how to search for and download data
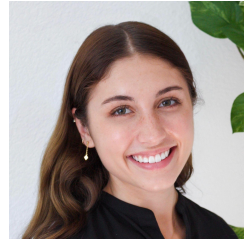
Emily Robles
Data Management Research Associate

Project Data Management Tutorials

PIs and Data Managers can learn about ESS-DIVE support for project data management

- Understand what capabilities ESS-DIVE offers that you can use in a data management plan

- Learn about current and upcoming ESS-DIVE features that you can use to organize your project data and teams

- Become aware of ESS-DIVE outreach efforts to projects

Charuleka Varadharajan
Community Engagement Lead

Madison Burrus
Computer Systems Engineer

ESS-DIVE Data and Metadata Formats

Data managers and data collectors will learn how to make data more accessible and reusable

- Learn about ESS-DIVE data reporting formats

- Hands-on workshop with metadata and CSV file reporting formats

- Hear how 2 DOE projects are applying reporting formats to their data

Rob Crystal-Ornelas
Postdoc

Dylan O'Ryan
Student Research Assistant

Amy Goldman
Earth Scientist

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Connect With Our Team!

To get help:
ess-dive.lbl.gov
✉ ess-dive-support@lbl.gov
docs.ess-dive.lbl.gov

To stay updated:
ess-dive-community@lbl.gov
🐦 @essdive

Acknowledgements

Questions?