

ROR for FAIR Facilities and Instruments

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FAIR Facilities and Instruments
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What is ROR?

ROR, the Research Organization Registry, is a global, community-led registry of open persistent identifiers for research organizations.

ROR is an established, trusted, widely adopted, no-cost service that is becoming a standard in scholarly communication and scholarly publishing.

ROR is an initiative operated, governed, and sustained by the California Digital Library, Crossref, and DataCite.



NSF National Center for Atmospheric Research

ORGANIZATION TYPES

Facility, Funder

OTHER NAMES

Aliases

National Center for Atmospheric Research (en)

National Science Foundation National Center for Atmospheric Research (en)

Acronyms

NCAR

LOCATIONS

Boulder (GeoNames ID [5574991](#)), United States

WEBSITE

<https://ncar.ucar.edu/>

OTHER IDENTIFIERS

GRID grid.57828.30

ISNI [0000 0004 0637 9680](#)

Crossref Funder ID [100005323](#)

Wikidata [Q934589](#)

RELATIONSHIPS

Parent Organizations

[University Corporation for Atmospheric Research](#)

[Division of Atmospheric and Geospace Sciences](#)

Child Organizations

[NSF NCAR Climate and Global Dynamics Laboratory](#)

[NSF NCAR Atmospheric Chemistry Observations & Modeling](#)

[NSF NCAR Computational & Information Systems Laboratory](#)

[NSF NCAR Earth Observing Laboratory](#)

[NSF NCAR Mesoscale & Microscale Meteorology Laboratory](#)

[NSF NCAR Research Applications Laboratory](#)

[NSF NCAR High Altitude Observatory](#)

Related Organizations

[Rocky Mountain Advanced Computing Consortium](#)

Search and browse ROR records at
<https://ror.org/search>

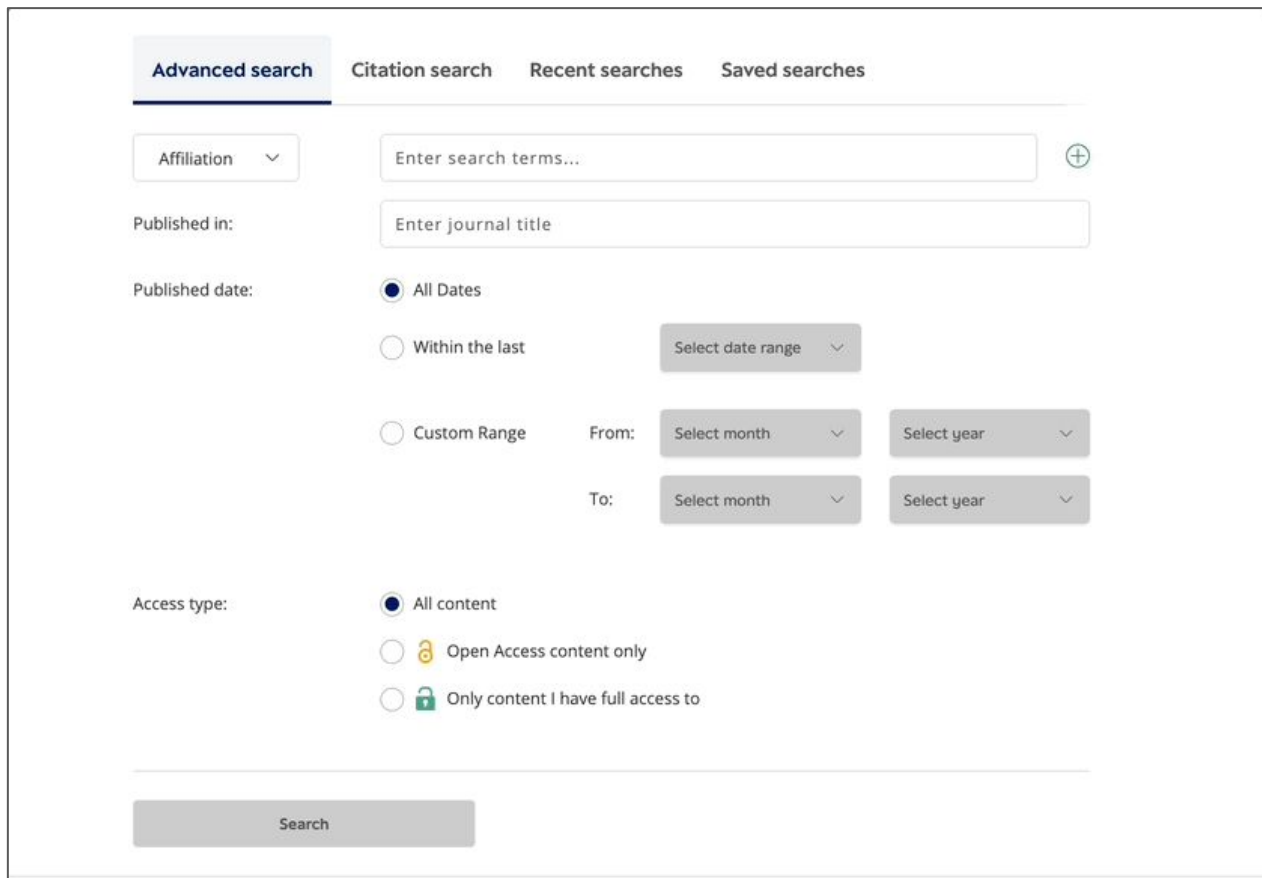
ROR currently includes over
116,000 research organizations
from around the world.

All ROR metadata is CC0 and is
freely available as JSON & CSV
and via a REST API.

Some record data is not displayed in this view. [See JSON view for full record data](#)

Record last modified 2025-06-24. Is there an issue with the data on this record? [Suggest a change](#)

The problem ROR solves: organization names are ambiguous



The screenshot displays the 'Advanced search' tab of the ROR (Research Organization Registry) search interface. The interface is designed to help users find specific research organizations by providing various search filters. At the top, there are four tabs: 'Advanced search' (which is selected and highlighted with a blue underline), 'Citation search', 'Recent searches', and 'Saved searches'. Below the tabs, the search form is organized into several sections. On the left, there is a vertical list of filters: 'Affiliation' (with a dropdown arrow), 'Published in:', 'Published date:', and 'Access type:'. To the right of these filters are the corresponding input fields and options. The 'Enter search terms...' field is a wide text input with a plus icon on the right. The 'Enter journal title' field is a similar text input. The 'Published date:' section includes three radio button options: 'All Dates' (selected), 'Within the last' (with a 'Select date range' dropdown), and 'Custom Range' (with 'From:' and 'To:' sub-sections, each containing 'Select month' and 'Select year' dropdowns). The 'Access type:' section includes three radio button options: 'All content' (selected), 'Open Access content only' (with an open lock icon), and 'Only content I have full access to' (with a closed lock icon). At the bottom of the form is a large grey 'Search' button.

Advanced search Citation search Recent searches Saved searches

Affiliation ▾ Enter search terms... (+)

Published in: Enter journal title

Published date:

☒ All Dates

☐ Within the last Select date range ▾

☐ Custom Range From: Select month ▾ Select year ▾

To: Select month ▾ Select year ▾

Access type:

☒ All content

☐ Open Access content only

☐ Only content I have full access to

Search

ROR disambiguates organization names

The screenshot displays the OpenAlex website interface. At the top, there is a navigation bar with the OpenAlex logo, a 'Works' dropdown menu, a search bar containing 'Search OpenAlex', and links for 'Log In' and 'Sign Up'. Below the navigation bar, a light blue header area contains an 'Unsaved search' dropdown, a bell icon, a gear icon, and a share icon. A large white box with a blue '+' icon and the text 'No filters applied' is visible. The main content area is divided into two columns. The left column, titled 'Works', lists search results. The first result is 'Protein Measurement With the Folin Phenol Reagent' by Oliver H. Lowry et al. (1951), cited by 321,200. The second result is 'R: A language and environment for statistical computing.' by the R Core Team (2014), cited by 299,900. The right column, titled 'Stats', shows '271,100,000 results' and a table of work types.

Type	Count
article	203,100,000
book-chapter	23,390,000
dataset	7,715,000
preprint	7,127,000

When is ROR used for facilities and instruments?

ROR identifies **research organizations**, so when a facility or the organization that manages an instrument is a **well-defined, substantially independent organization** that is associated with **research outputs** (datasets, journal articles, etc.), the facility or the organization managing an instrument is in scope for ROR.

types*

The type of organization based on a controlled list of categories. An organization always has a type. ROR metadata can support multiple types for a given organization. Allowed types are `education`, `funder`, `healthcare`, `company`, `archive`, `nonprofit`, `government`, `facility`, and `other`.

- **education**

A university or similar institution involved in providing education and educating/employing researchers.

- **funder**

An organization that awards research funds or provides in-kind support. All records that are mapped to a Funder ID will be assigned this type, usually in conjunction with an additional organization type.

- **healthcare**

A medical care facility such as hospital or medical clinic. Excludes medical schools, which should be categorized as "Education".

- **company**

A private for-profit corporate entity involved in conducting or sponsoring research.

- **archive**

An organization involved in stewarding research and cultural heritage materials. Includes libraries, museums, and zoos.

- **nonprofit**

A non-profit and non-governmental organization involved in conducting or funding research.

- **government**

An organization that is part of or operated by a national or regional government and that conducts or supports research.

- **facility**

A specialized facility where research takes place, such as a laboratory or telescope or dedicated research area.

- **other**

A category for any organization that does not fit the categories above.

Example: Canada-France-Hawaii Telescope

"Canada-France-Hawaii Telescope Corporation is a 501(c)(3) non-profit research **organization** that hosts a world-class, 3.6-meter optical/infrared telescope." The organization has a ROR ID: the telescope itself does not.

 <https://ror.org/05xq4gr47>

Canada-France-Hawaii Telescope

ORGANIZATION TYPES

Facility

OTHER NAMES

Acronyms

CFHT

LOCATIONS

Waimea (GeoNames ID [5854571](#)), United States

WEBSITE

<http://www.cfht.hawaii.edu/>

OTHER IDENTIFIERS

GRID [grid.440398.2](#)

ISNI [0000 0004 0601 3064](#)

Wikidata [Q1031946](#)

Some record data is not displayed in this view. [See JSON view for full record data](#)

Record last modified 2024-12-11. Is there an issue with the data on this record? [Suggest a change](#)

CFHT is a joint facility of:

- [National Research Council of Canada](#),
 - see also [Herzberg Astronomy and Astrophysics Research Centre](#)
- [Centre National de la Recherche Scientifique of France](#), and
 - see also [CNRS/INSU](#)
- [University of Hawai'i](#).
 - see also [UH/Institute for Astronomy](#)

Canada-France-Hawaii Telescope Corporation is a 501(c)(3) non-profit research organization that hosts a world-class, 3.6-meter optical/infrared telescope. The observatory is located near the summit of Maunakea, a 4200-meter (13,800-foot) dormant volcano located on the island of Hawai'i, host to the 12 [Maunakea Observatories](#). The CFH Telescope became operational in 1979, and has been

How do ROR IDs and RRIDs differ?



ROR

- Organizations only
- Includes government facilities and facilities that are not dependent on a single organization



RRID

- Inputs to research of many kinds
- Includes core facilities that might be a service offering or sub-unit of a single parent organization

Read "Understanding RRID and ROR for Facilities" at <https://doi.org/10.71938/r7ar-eq11>

Example: MIT Nanotechnology Materials Core Facility

The Massachusetts Institute of Technology Swanson Biotechnology Center Nanotechnology Materials Core Facility has an RRID but no ROR ID. The parent organization, MIT, has a ROR ID.

 **Resource Name**

Massachusetts Institute of Technology Swanson Biotechnology Center Nanotechnology Materials Core Facility  

RRID:SCR_018674  [Login to claim ownership](#)

 **Resource Information**

URL: <https://ki.mit.edu/sbc/nanocore>

Proper Citation: Massachusetts Institute of Technology Swanson Biotechnology Center Nanotechnology Materials Core Facility (RRID:SCR_018674)

Description: Provides instruments for materials and nanomaterials research and full service TEM and cryoTEM sample preparation and imaging. Conducts CLEM and cryoCLEM workflows utilizing cryoFluorescence, cryoSEM and cryoFIB with focus on bio samples. Provides equipment and expertise to work with nanomat ...[\[more\]](#)

Synonyms: Bio and CryoEM in the Nanotechnology Materials Core

Resource Type: core facility, service resource, access service resource

Keywords: USEDit, material research, nanomaterial, cryo imaging, cryo fluorescent confocal microscope, cryoSEM, cryoFIB, imaging, electron microscope, atomic force microscope, light scattering, nanoparticle sizing, rheometry, ABRF, ABRF

[Expand All](#)

 **Collaborator Network**


We found 17 mentions in open access literature.

A list of researchers who have used the resource and an author search tool

This resource

is listed by [ABRF CoreMarketplace](#)

has parent organization [Massachusetts Institute of Technology; Massachusetts; USA;](#)

 <https://ror.org/042nb2s44>

Massachusetts Institute of Technology

ORGANIZATION TYPES
Education, Funder

OTHER NAMES
Labels
Instituto Tecnológico de Massachusetts (es)
Acronyms
MIT

LOCATIONS
Cambridge (GeoNames ID 4931972), United States

WEBSITE
<https://web.mit.edu>

OTHER IDENTIFIERS
GRID grid:116068.8
ISNI 0000 0001 2341 2786
Crossref Funder ID 1009066919
Wikidata Q49108

RELATIONSHIPS
Child Organizations
Athinoula A. Martinos Center for Biomedical Imaging
Cambridge-MIT Institute
Institute for Soldier Nanotechnologies
MIT Lincoln Laboratory
MIT Sea Grant
MIT-Harvard Center for Ultracold Atoms
Massachusetts Space Grant Consortium
McGovern Institute for Brain Research
Novartis-MIT Center for Continuous Manufacturing
Ragon Institute of MGH, MIT and Harvard
The NSF AI Institute for Artificial Intelligence and Fundamental Interactions
Whitehead Institute for Biomedical Research
Institute for Collaborative Biotechnologies
Koch Institute for Integrative Cancer Research At MIT
Related Organizations
Broad Institute
Harvard-MIT Division of Health Sciences and Technology
IIT@MIT
Massachusetts Green High Performance Computing Center
Northeast Radio Observatory Corporation
Singapore-MIT Alliance for Research and Technology
Wyss Institute for Biologically Inspired Engineering
Zaragoza Logistics Center

Some record data is not displayed in this view. See [JSON](#) view for full record data
Record last modified 2025-05-05. Is there an issue with the data on this record? [Suggest a change](#)

Facility use cases for ROR

→ Contributor affiliations

- ◆ To identify a facility that employs an author or other contributor to a research output

→ Funding acknowledgements

- ◆ To identify a facility that provided financial or in-kind support as cited in the funding acknowledgements or funding references of a research output

→ Site of research

- ◆ To identify a facility, field station, laboratory, or other organization that is acknowledged in a research output as a place where research was conducted apart from affiliations or funding

→ Hosting institutions

- ◆ To identify a facility that hosts (preserves and/or makes available) a dataset, preprint, or other research output

Hierarchical, lateral, and temporal organization relationships are stored in ROR

<https://ror.readme.io/docs/relationships#/>

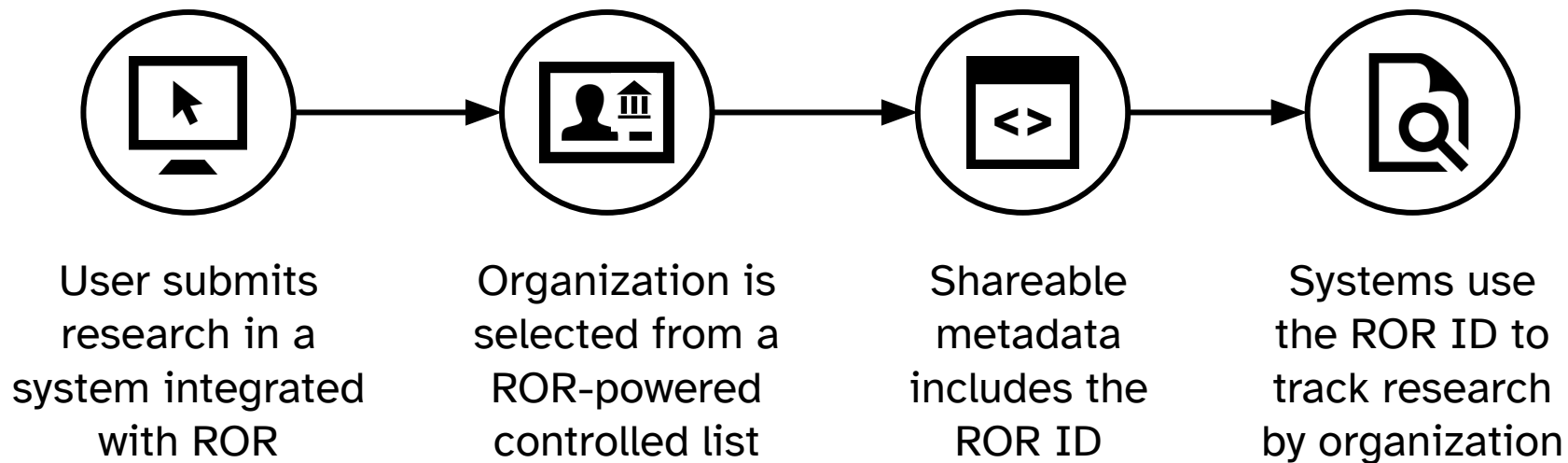
United States Department of Energy

- Advanced Research Projects Agency-Energy
- Ames Laboratory
- Argonne National Laboratory
 - Center for Light Energy Activated Redox Processes
- Brookhaven National Laboratory
 - RIKEN BNL Research Center
- Consortium for the Advanced Simulation of Light Water Reactors
- Fermilab
- Fuel Cell Technologies Office
- Geothermal Technologies Office
- Great Lakes Bioenergy Research Center
- Idaho National Laboratory
- International Partnership for the Hydrogen and Fuel Cell in the Economy
- Joint BioEnergy Institute
- Joint Genome Institute
- Lawrence Berkeley National Laboratory
 - Joint Center for Artificial Photosynthesis
- Lawrence Livermore National Laboratory
- Los Alamos National Laboratory
 - Center for Integrated Nanotechnologies
 - National High Magnetic Field Laboratory
- National Energy Technology Laboratory
- National Nuclear Security Administration
- National Renewable Energy Laboratory
- Nevada National Security Site
- Oak Ridge National Laboratory
 - Joint Institute for Computational Sciences
 - Atmospheric Radiation Measurement User Facility
- Office of Economic Impact and Diversity
- Office of Electricity Delivery and Energy Reliability
- Office of Energy Efficiency and Renewable Energy
 - Vehicle Technologies Office
- Office of Environmental Management
- Office of Environmental Protection, Sustainability Support and Corporate Safety Analysis
- Office of Fossil Energy
- Office of Health and Safety
- Office of Inspector General
- Office of Intelligence and Counterintelligence
- Office of International Affairs
- Office of Legacy Management
- Office of Management
- Office of Nuclear Energy
- Office of Nuclear Safety
- Office of Science
 - Office of Advanced Scientific Computing Research
 - Office of Basic Energy Sciences
 - Office of Biological and Environmental Research
 - Office of Fusion Energy Sciences
 - DIID National Fusion Facility
 - Office of High Energy Physics
 - Office of Nuclear Physics
 - Office of Scientific and Technical Information
 - Office of Workforce Development for Teachers and Scientists
- Office of Space and Defense Power Systems
- Office of Under Secretary of Energy for Science
- Office of the General Counsel
- Pacific Northwest National Laboratory
 - Joint Global Change Research Institute
- Princeton Plasma Physics Laboratory
- SLAC National Accelerator Laboratory
 - Kavli Institute for Particle Astrophysics and Cosmology
 - Linac Coherent Light Source
 - Stanford Synchrotron Radiation Lightsource
- Sandia National Laboratories
 - Center for Integrated Nanotechnologies
 - Sandia National Laboratories California
- Savannah River National Laboratory
- Savannah River Operations Office
- Solar Energy Technologies Office
- United States Energy Information Administration
- Vera C. Rubin Observatory
- KBaE
- Kansas City National Security Campus
- Atmospheric Radiation Measurement User Facility

How are ROR IDs used?

- **ROR IDs are built in to software systems** using ROR's free, open API or by storing the entire ROR dataset locally to power organization name lookups in form fields or to extract named organization entities from files and match them to ROR IDs.
- **Researchers should not need to know the ROR ID of an organization.** ROR IDs are primarily collected, shared, and used by software developers, information professionals, data scientists, and metadata experts.
- **The systems and data scientists using ROR decide how to lump or split research output totals** based on relationships in ROR.

ROR is designed for research workflows



ROR may be invisible in PIDified systems!

DRYAD Explore data | Search | About | Partner with us | Support us | Help | My datasets | User icon

Dataset submission

Checklist

- ☒ Connect
- ☒ Title
- ☒ Authors
- ☒ Description
- ☒ Subjects
- ☐ Support
- ☐ Compliance
- ☐ Files
- ☐ README
- ☐ Related works
- ☐ Agreements

Authors

Drag to reorder

First name: Amanda (Given name)

Last name: French (Family name)

Institutional affiliation: Find as you type... (+ Add affiliation)

Email address: amanda@ror.org (name@institution.org)

☒ Publish email

☒ ID: 0000-0002-4325-1809

Creator: User icon


You can update your email address for Dryad communications from [My account](#)

+ Add group author / + Add author


First author affiliation is required

ROR invisibly powers the "Institutional affiliation," "Research facility," and "Granting organization" lookups in the Dryad dataset submission interface.

















Systems should enable tracking by facility


 **DRYAD**

Explore data |

About | Partner with us | Support us | Help | My datasets | 

Western North American Temperature Atlas (WNATA)

[King, Karen](#) ¹  ; [Cook, Edward](#) ²  ; [Anchukaitis, Kevin](#) ³  ; [Cook, Benjamin](#) ²  ; [Smerdon, Jason](#) ²  ; [Seager, Richard](#) ²  ; [Harley, Grant](#) ⁴  ; [Spei, Benjamin](#) ⁴  



Author affiliations 


- [University of Tennessee at Knoxville](#)
- [Lamont-Doherty Earth Observatory](#)
- [University of Arizona](#)
- [University of Idaho](#)



Research facility: [Lamont-Doherty Earth Observatory](#)

Published Jan 25, 2024 on Dryad. <https://doi.org/10.5061/dryad.70rxwdc4v>








Data files



Jan 25, 2024 version files	20.02 MB
 README.md	651 B
 WNATA_JJATmax_3029gp_dataset.xlsx	20.02 MB

 Download full dataset

Citation  

27 views | 14 downloads | 1 citations

Share:       

License: [Public domain](#)  

Subject keywords

[Paleoclimatology](#), [Natural sciences](#),
[Temperature](#), [temperature reconstruction](#), [tree-ring](#), [western North America](#)

Funding

[National Science Foundation:](#)
BCS-2012482
[National Science Foundation:](#)
AGS-1803995
[National Science Foundation:](#)
BCS-1759629

[Lamont-Doherty Earth Observatory,](#)
Postdoctoral Research Fellowship

A look at ROR in DataCite metadata

```
{
  "type": "dois",
  "attributes": {
    "doi": "10.5061/dryad.70rxwdc4v",
    "prefix": "10.5061",
    "suffix": "dryad.70rxwdc4v",
    "identifiers": [],
    "alternateIdentifiers": []
  },
  "creators": [
    {
      "name": "King, Karen",
      "nameType": "Personal",
      "givenName": "Karen",
      "familyName": "King",
      "affiliation": {
        "0": "University of Tennessee at Knoxville"
      },
      "nameIdentifiers": [
        {
          "schemeUri": "https://orcid.org",
          "nameIdentifier": "https://orcid.org/0000-0002-9148-5562",
          "nameIdentifierScheme": "ORCID"
        }
      ]
    },
    {
      "name": "Cook, Edward",
      "nameType": "Personal",
      "givenName": "Edward",
      "familyName": "Cook"
    }
  ]
}
```


Facility acknowledgements in text

When there is a text-based acknowledgement of a facility, machine learning / AI tools can be used to match the name of the facility to a ROR ID.

Consistency in the form of these acknowledgements helps with automatic extraction.

<https://science.osti.gov/Funding-Opportunities/Acknowledgements>

Peer Reviewed Articles and Technical Papers

For peer reviewed and technical papers, the following acknowledgment of support is required:

For work directly supported by DOE Office of Science Financial Assistance (i.e., Grants and Cooperative Agreements):

Acknowledgment: "This material is based upon work supported by the U.S. Department of Energy, Office of Science, Office of [insert the sponsoring SC Program Office, e.g., Basic Energy Sciences], *[Add any additional acknowledgements or information requested by the sponsoring SC Program Office]* under Award Number(s) [Enter the award number(s)]."

example: "This material is based upon work supported by the U.S. Department of Energy, Office of Science, Office of Basic Energy Sciences Energy Frontier Research Centers program under Award Number DE-SC-0001234."

For work supported by DOE Office of Science funding at a National Laboratory:

Acknowledgment: "This material is based upon work supported by the U.S. Department of Energy, Office of Science, Office of [insert the sponsoring SC Program Office, e.g., Basic Energy Sciences], *[Add any additional acknowledgements or information requested by the sponsoring SC Program Office]* [optional: under contract number XXXXXX]."

For work done at an [Office of Science User Facility](#):

The acknowledgments should include the name of the user facility and should identify the facility as "a DOE Office of Science User Facility."

example: "This research used resources of the Oak Ridge Leadership Computing Facility, which is a DOE Office of Science User Facility."

Thoughts on draft recommendations

Recommendation	Response
<i>Provenance - establish provenance traces between facilities, platforms, and instruments and subsequent research data and findings.</i>	ROR IDs might also be used to identify facilities that host datasets, which would be useful for the Provenance use case.
<i>DOIs - Use for instruments, platforms, and facilities</i>	Crossref's Open Funder Registry (formerly FundRef) IDs are DOIs, and they are sometimes used to identify facilities. ROR, however, is now the preferred identifier for funders. N.B. facility use in Crossref metadata is usually expressed as funding.
<i>Ensure interoperability among gfacility/instrument PID systems, for example metadata compatibility, or the ability to explicitly designate relationships between PIDs</i>	RRIDs are one of several external identifiers being considered for mapping to and inclusion in ROR records .
<i>Develop services that promote use and tracking of PIDs facilities/instruments</i>	ROR's API and data model allow for filtering by "Facility" organization type



Thank you!
Keep ROR-ing and
keep in touch!

support@ror.org

<https://ror.org>