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.

R https://ror.org/05cvfcr44

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

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**

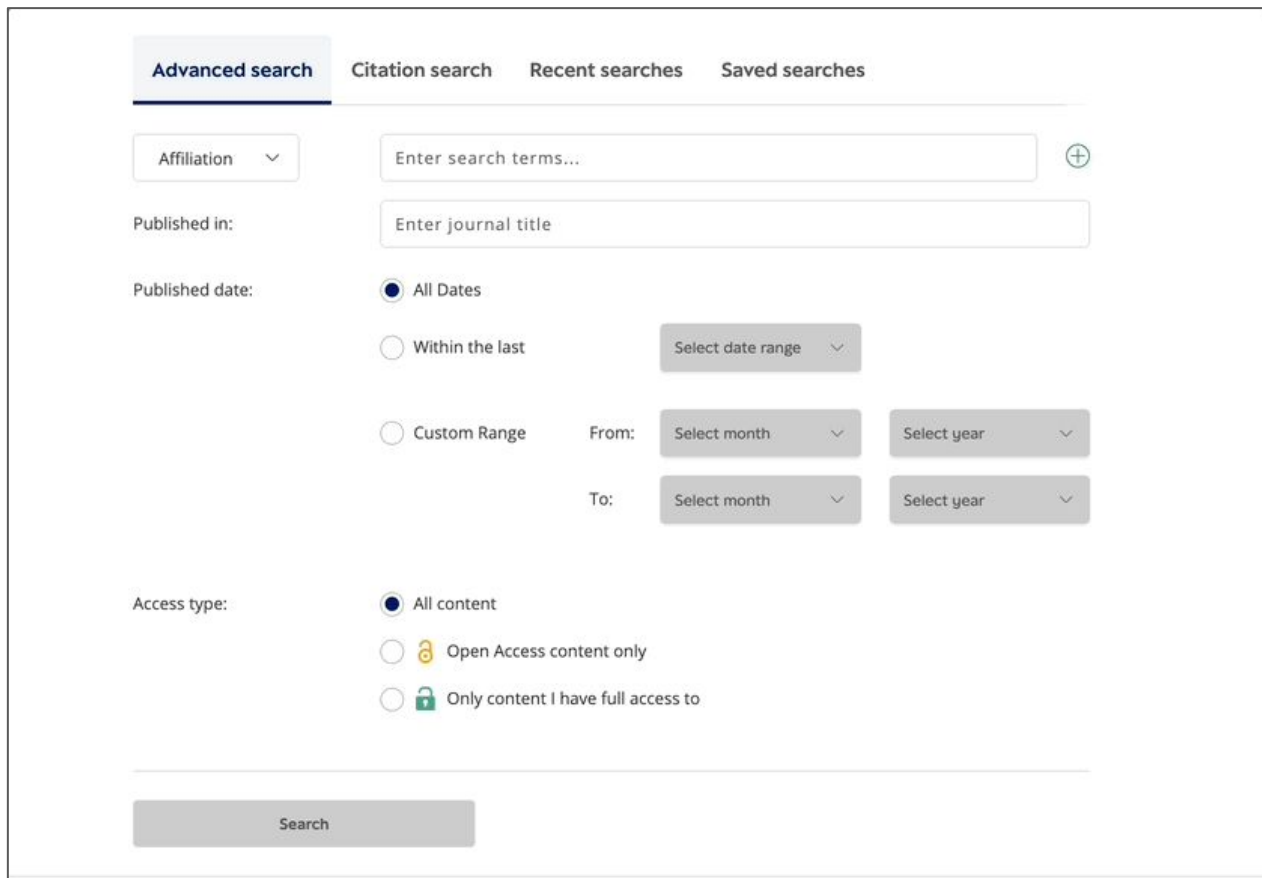**Search and browse ROR records at https://ror.org/search**

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.

ROR

The problem ROR solves: organization names are ambiguous

ROR disambiguates organization names

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.

R̂ https://ror.org/05xq4gr47

Canada–France–Hawaii Telescope

ORGANIZATION TYPES
Facility

LOCATIONS
Waimea (GeoNames ID 5854571), United States

OTHER NAMES
Acronyms
CFHT

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

ROR

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

ROR

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.

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 100006919
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

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Record last modified 2025-05-05. Is there an issue with the data on this record? Suggest a change

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Resource Name ⊘

Massachusetts Institute of Technology Swanson Biotechnology Center Nanotechnology Materials Core Facility ⧉ ▢

RRID:SCR_018674 ⧉ [Login to claim ownership]

PDF REPORT   HOW TO CITE

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 fluorescenct confocal microscope, cryoSEM, cryoFIB, imaging, electron microscope, atomic force microscope, light scattering, nanoparticle sizing, rheometry, ABRF, ABRF

Expand All

This resource	
is listed by	ABRF CoreMarketplace
has parent organization	Massachusetts Institute of Technology; Massachusetts; USA;

Usage and Citation Metrics ⊘

We found 17 mentions in open access literature.

Collaborator Network ⊘

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

ROR

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

ROR

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
    - DIII-D 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
- KBase
- Kansas City National Security Campus
- Atmospheric Radiation Measurement User Facility

ROR

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

User submits research in a system integrated with ROR

→

Organization is selected from a ROR-powered controlled list

→

Shareable metadata includes the ROR ID

→

Systems use the ROR ID to track research by organization
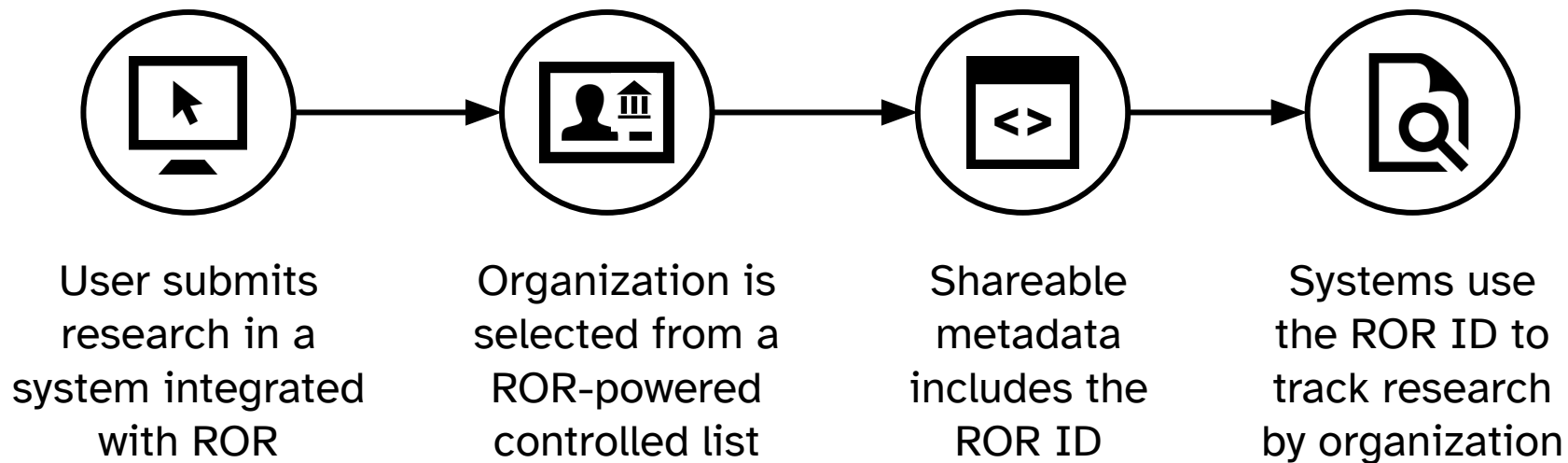
ROR may be invisible in PIDified systems!

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

Systems should enable tracking by facility

A look at ROR in DataCite metadata

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."

ROR

Thoughts on draft recommendations

Recommendation	Response
Provenance - establish provenance traces between facilities, platforms, and instruments and subsequent research data and findings.	ROR IDs might also be used to identify facilities that host datasets, which would be useful for the Provenance use case.
DOIs - Use for instruments, platforms, and facilities	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.
Ensure interoperability among gfacility/instrument PID systems, for example metadata compatibility, or the ability to explicitly designate relationships between PIDs	RRIDs are one of several external identifiers being considered for mapping to and inclusion in ROR records.
Develop services that promote use and tracking of PIDs facilities/instruments	ROR's API and data model allow for filtering by "Facility" organization type

ROR

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

support@ror.org

https://ror.org