

# ROR in Repositories workshop

Open Repositories 2023

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# Preparation

# Preparation

For the hands-on exercises in this workshop, please make sure you have

- A laptop (not a tablet)
- **Either** a command-line tool **or** a browser plugin that shows human-readable JSON
  - Firefox: no plugin needed
  - Chrome: JSON Formatter (or any other)
  - Safari: PrettyJSON for Safari (or any other)
- A Postman account: <https://identity.getpostman.com/signup>

Please also open the Participant Notes at <https://bit.ly/ror-repos-notes> to introduce yourself, take notes, and ask questions!

# What we will cover

- What is ROR and how can it help repositories? (40 minutes)
- Hands-on with the ROR API (40 minutes)
- Break (10 minutes)
- Making connections with ROR in DataCite DOI metadata (40 minutes)
- Collaborative discussions and feedback (50 minutes)






# Presentations

40 minutes

**What is ROR and  
how can it help  
repositories?**



**ROR makes information about  
research organizations cleaner and  
easier to exchange among  
information systems so that  
research outputs can be reliably  
associated with organizations.**

# What problems does ROR solve?

- Many different variants of organization names in user-entered, free text data make internal reporting difficult and produce inconsistent search results
- Research institutions have a hard time tracking the output of their researchers
- Funders have a hard time tracking research outputs they have funded

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 Typeahead Demos

This example queries the [ROR API](#) as the user types and generates suggestions based on the query results. The URL for this query is:

```
https://api.ror.org/organizations?query=
```

This example uses [Twitter typeahead.js](#) and [jQuery](#), however, it can be created using a variety of typeahead plugins, including those for specific JS frameworks.

## Basic institution name typeahead

**Institution name**

*Begin typing to activate a suggestion list. Please choose an institution from the list, if available. If your institution is not listed, continue typing to enter its name manually.*

**Data returned from ROR API**

## Including department-level information

Use ROR to capture the the "top level" organization (ex: University of Wisconsin-Madison). If you also need to capture department, college or other sub-unit information, provide a separate free-text field.

# What opportunities does ROR enable?

- Repositories can use ROR to ensure that organization information is consistent at the point of user entry
- The ROR API matching service and numerous third-party scripts and machine learning models enable legacy text-only data to be easily matched to ROR IDs
- Data scientists and software developers can build analytic and tracking tools that capture consistent and disambiguated organization information from repository and publishing systems



## Share

- Email
- Twitter
- Facebook

Stellenbosch University <https://ror.org/05bk57929>958  
Works1,059  
Citations ?15,362  
Views ?4,104  
Downloads ?

Founded 1866

## Links

[Homepage](#)  
[Wikipedia](#)  
[Twitter](#)

## Other Identifiers

[GRID grid.11956.3a](#)  
[Crossref Funder ID 10.13039/501100004477](#)  
[ISNI 000000012214904X](#)  
[Wikidata Q1066492](#)

## Geolocation

33° 55' 58.0" S 18° 51' 51.0" W

South Africa

Education

<https://ror.org/05bk57929>

## 958 Works

## Filter Works

Type to search...

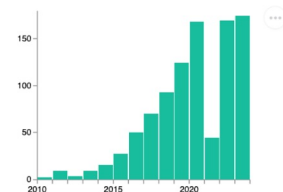
x

Q

## Authors ?

- |   |    |
|---|----|
| <input type="checkbox"/> Al-Jaishi, Ahmed A.    | 22 |
| <input type="checkbox"/> Martin, Mathilde       | 12 |
| <input type="checkbox"/> Mangin, Dee            | 12 |
| <input type="checkbox"/> Charrier, Isabelle     | 11 |
| <input type="checkbox"/> Schünemann, Holger J.  | 9  |
| <input type="checkbox"/> Haynes, Delia A.       | 7  |
| <input type="checkbox"/> Conserve, Donaldson F. | 6  |
| <input type="checkbox"/> Goodey, Gregory        | 6  |
| <input type="checkbox"/> Laermans, Jorien       | 6  |
| <input type="checkbox"/> Hahnel, Mark           | 6  |

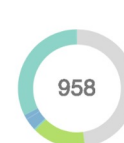
## Publication Year



## Work Type



## License

Data from: Fitness costs of rapid cold-hardening in *Ceratitis capitata*

C Helene Basson, Casper Nyamukondiwa &amp; John S Terblanche

Version 1 of Dataset published 2011 in [DRYAD](#)

Rapid cold-hardening (RCH) is a unique form of phenotypic plasticity which confers survival advantages at low temperature. The fitness costs of RCH are generally poorly elucidated and are important to understanding the evolution of plastic physiology. This study examined whether RCH responses, induced by ecologically relevant diel temperature fluctuations, carry metabolic, survival or fecundity costs. We predicted that potential costs in RCH would be manifested as differences in metabolic rate, fecundity or survival in flies which have hardened versus those which have not, or flies which have experienced more RCH events would show greater costs



## Amanda French

Were you the primary advocate of implementing ROR at your organization?



## Tom Morrell

I would say yes, but we had lots of other librarians who were also very excited and interested in this. Because it's going to be helpful not only for discoverability by making our metadata better, but it'll also be really helpful for reporting. One of the types of reports that we have to do often is compliance reports for funders, and we track who's collaborating with who. At the moment those are challenging to put together, because you need to know everybody's affiliation, and trying to match up what a given affiliation is when you have random strings that are coming in from publications is really challenging. So we have librarians who are very excited about the possibility of actually having identifiers for these affiliations. That makes a lot of the reporting stuff a lot easier.

# What is ROR?

ROR (pronounced "roar" like a lion 🦁) is the  
Research Organization Registry.

ROR is "**a global, community-led registry of  
open persistent identifiers for research  
organizations.**"

[ROR search home page](#)[R https://ror.org/05bk57929](https://ror.org/05bk57929)

## Stellenbosch University

### ORGANIZATION TYPE

Education

### OTHER NAMES

Universiteit van Stellenbosch, University of Stellenbosch, SU,  
Universiteit Stellenbosch

### WEBSITE

<http://www.sun.ac.za/english>

### RELATIONSHIPS

Related Organization(s)

[Red Cross War Memorial Children's Hospital](#)

[Tygerberg Hospital](#)

### LOCATION

Stellenbosch (GeoNames ID [3361025](#))

South Africa

### OTHER IDENTIFIERS

GRID [grid.11956.3a](#)

ISNI [0000 0001 2214 904X](#)

Crossref Funder ID [501100004477](#)

Wikidata [Q1066492](#)

Is there an issue with the data on this record? [Submit a curation request](#)

# What is a "registry"?

[ABOUT](#)[REGISTRY](#)[COMMUNITY](#)[BLOG](#)[DOCUMENTATION](#)

103,872 Organizations

Are we missing an organization you're looking for? [Submit a request to add it](#)

Record status

- ☒ Active  
☐ Inactive  
☐ Withdrawn

[Apply](#) [Clear](#)

<https://ror.org/019wvm592>

## Australian National University

### ORGANIZATION TYPE

Education

### OTHER NAMES

ANU

### WEBSITE

<http://www.anu.edu.au/>

### LOCATION

Canberra (GeoNames ID 2172517)

Australia

### OTHER IDENTIFIERS

GRID grid.1001.0

ISNI 0000 0001 2180 7477

Crossref Funder ID 501100000995

Wikidata Q127990

### RELATIONSHIPS (6)

[View details](#)

<https://ror.org/02bfwt286>

## Monash University

### ORGANIZATION TYPE

Education

### LOCATION

Melbourne (GeoNames ID 2158177)

Australia

ROR is a **registry**, meaning that it is fundamentally a list. There are currently over 100,000 research organizations listed in the registry.

<https://ror.org/search>

# What is a "persistent identifier"?

 <https://ror.org/05bk57929>

**Stellenbosch University**

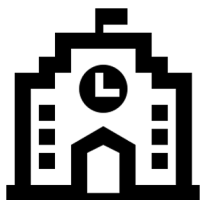
ROR is not just a list of names, however: it is a list of alphanumeric **identifiers** that can help systems disambiguate research organizations. These identifiers will **persist** over time, unlike an ordinary URL.



ORCID for researchers



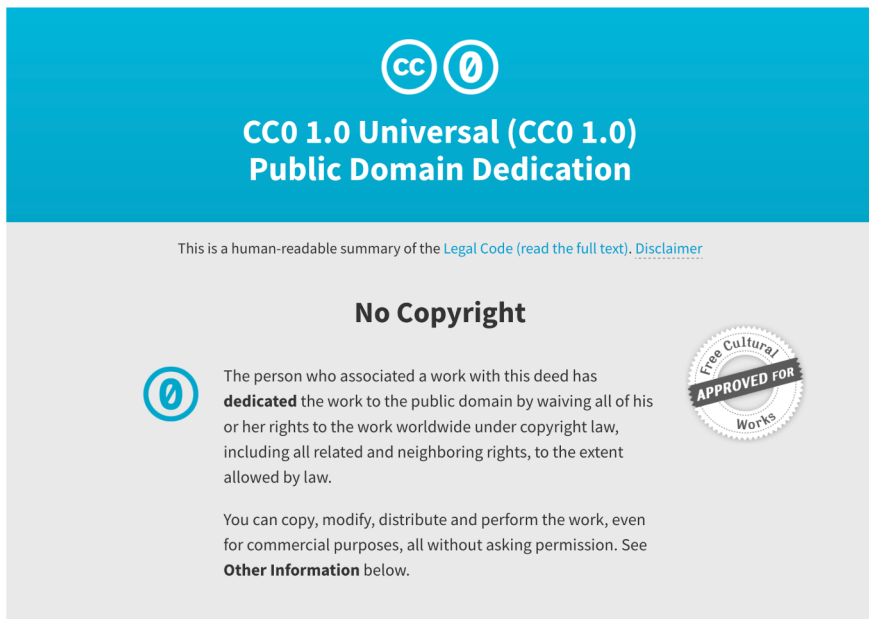
DOI for research outputs



ROR for research  
organizations



# What does "open" mean?



The image is a screenshot of the Creative Commons CC0 1.0 Universal Public Domain Dedication license page. At the top, there is a blue header with the CC logo and the text "CC0 1.0 Universal (CC0 1.0) Public Domain Dedication". Below the header, there is a line of small text: "This is a human-readable summary of the [Legal Code](#) ([read the full text](#)). [Disclaimer](#)". The main content area has a light gray background. On the left, there is a circular icon with a zero inside. To the right of the icon, the text reads: "No Copyright" followed by a paragraph: "The person who associated a work with this deed has **dedicated** the work to the public domain by waiving all of his or her rights to the work worldwide under copyright law, including all related and neighboring rights, to the extent allowed by law." Below this paragraph, there is another paragraph: "You can copy, modify, distribute and perform the work, even for commercial purposes, all without asking permission. See **Other Information** below." To the right of the text, there is a circular seal that says "Free Cultural Works" and "APPROVED FOR".

CC0 1.0 Universal (CC0 1.0)  
Public Domain Dedication

This is a human-readable summary of the [Legal Code](#) ([read the full text](#)). [Disclaimer](#)

**No Copyright**

The person who associated a work with this deed has **dedicated** the work to the public domain by waiving all of his or her rights to the work worldwide under copyright law, including all related and neighboring rights, to the extent allowed by law.

You can copy, modify, distribute and perform the work, even for commercial purposes, all without asking permission. See **Other Information** below.

Every identifier in the ROR registry is part of an **open** record released into the public domain under a CC-0 Public Domain dedication. The ROR API and the ROR dataset of 100,000+ organizations with IDs and metadata are entirely free to use with no cost or restrictions.

# What is a "research organization"?

- ROR defines “research organization” as any high-level organization that conducts, produces, manages, or touches research.
- ROR identifies organizations that have a formal relationship – an “affiliation” – with researchers, including but not limited to **employers, educators, funders, publishers, and scholarly societies.**
- ROR currently lists well over 100,000 research organizations from around the world.

# What is a "research organization"?

## Common organization types that are **in scope** for ROR

- Universities and colleges
- Companies that are involved in research
- Private foundations
- Government agencies
- Hospitals and healthcare centers
- Laboratories
- Nonprofits
- Research institutes and facilities
- Scholarly societies

## Common research entities that are **out of scope** for ROR

- Departments and wholly dependent subdivisions within organizations
- Companies that are not involved in research
- Single-person consultancies
- Pre-collegiate schools
- Journals
- Projects (see RAiD!)

# What does "global" mean?

```
▼ countries:
  ▼ 0:
    id: "us"
    title: "United States"
    count: 30882
  ▼ 1:
    id: "gb"
    title: "United Kingdom"
    count: 7365
  ▼ 2:
    id: "de"
    title: "Germany"
    count: 5098
  ▼ 3:
    id: "cn"
    title: "China"
    count: 4810
  ▼ 4:
    id: "fr"
    title: "France"
    count: 3945
  ▼ 5:
    id: "jp"
    title: "Japan"
    count: 3920
```

- ROR contains records for 229 countries
- All ROR records are multilingual and support non-Latin character sets

```
▼ labels:
  ▼ 0:
    label: "המכללה האקדמית להנדסה אורט בראודה"
    iso639: "he"
  ▼ country:
    country_name: "Israel"
    country_code: "IL"
```

# What does "community-led" mean?

- ROR was developed over three years of workshops from 2016-2019 and working groups in which 17 organizations outlined requirements for an open organization identifier.
- ROR is operated as a collaborative initiative by **California Digital Library, Crossref, and DataCite** as part of each organization's ongoing operational budget. **ROR does not depend on grants or on fees** for its sustainability, and it cannot be transferred to a commercial entity.
- All major changes to ROR's schema, technology, and governance are submitted for [community comment and review](https://ror.org/about).

# What does "community-led" mean?

- ROR is a **curated** registry, meaning that anyone can [request a change](#) to a ROR record or the addition of a new ROR record and all such requests then go through [a review process](#).
- ROR is not a membership organization and charges no fees, so it is not necessary to “join” ROR in order to add a record or request changes to a record.
- Simple change requests are approved or denied by the ROR Metadata Curation Lead. More difficult requests are sent to the international volunteer [ROR Curation Advisory Board](#).

# What does "community-led" mean?

- ROR is a collaborative, open infrastructure initiative and service.
- ROR itself is not an independent organization or legal entity.
- ROR is committed to following the [Principles of Open Scholarly Infrastructure](#) (POSI).
- ROR cannot be governed by, purchased by, controlled by or sold to a commercial entity.
- The ROR governing organizations agree to not transfer control of any aspect of ROR or the ROR system to a commercial entity.



# What tools does ROR offer?

- The ROR REST API - <https://api.ror.org/organizations>
- The ROR browser search interface - <https://ror.org/search>
- The ROR dataset - <https://doi.org/10.5281/zenodo.6347574>
- The ROR OpenRefine Reconciler - <https://ror.readme.io/docs/openrefine-reconciler>
- ROR scripts for searching and matching - <https://github.com/ror-community/ror-utilities>

**See all ROR technical documentation at <https://ror.readme.io>**

**Repositories and  
repository  
systems that  
have integrated  
ROR**

# Repositories and systems that use ROR

- CaltechDATA, InvenioRDM, California Institute of Technology
- CaltechTHESIS, ePrints, California Institute of Technology (Caltech)
- CERN - INSPIRE, InvenioRDM, CERN
- ChemRxiv, American Chemical Society
- Dryad, California Digital Library (CDL)
- Dryad2Dataverse, University of British Columbia (UBC)
- figshare, Digital Science
- Global Change Information System (GCIS) 2.0, U.S. Global Change Research Program
- InvenioRDM, CERN
- NASA ADS Abstract Service, Harvard-Smithsonian Center for Astrophysics
- Ocean Networks Canada
- Open Science Framework (OSF), Center for Open Science (COS)

# Repositories and systems that use ROR

- ORCID
- PANGAEA
- PerúCRIS, CONCYTEC
- RADAR, FIZ Karlsruhe - Leibniz-Institut für Informationsinfrastruktur GmbH
- ScholarWorks, Digital Commons, Boise State University
- ScieELO Preprints, Open Preprint Systems (OPS), São Paulo Research Foundation
- Science Data Bank, Computer Network Information Center (CNIC)
- Sherpa Romeo and Juliet (JISC)
- Smithsonian Research Online, Smithsonian Institution
- SPARC Portal, SPARC Science
- SPIN Funding Opportunities Database and InfoEd eRA Suite, InfoEd Global
- Spiral - Imperial College London's repository, DSpace, Imperial College London

# ROR in InvenioRDM

Zacharodimos Zacharias (Zach)

Ø1ggx4157

OR2023 - ROR workshop, 2023-06-12

**Who remembers where do I work?**

# Identifiers in the wild

**DRIVING LICENSE**



**ID: 012 345 678** **CLASS C**


Name  
**NAME SURNAME**

Address  
**123 ANYWEa STREET  
CITY, 34567-890**

Date of birth  
**02/02/1985**

Sex: M Eyes: BRO Ht: 6-00

**PASSPORT**



Type  
**P**

Surname  
**DOE**

Given names  
**JANE**

Nationality  
**DOLORE**

Date of birth  
**DD MM YYYY**

Place of birth  
**LOREM IPSUM**

Date of issue

Code  
**ABC**

Passport No  
**AA0001122**

Sex  
**F**

Authority  
**Laboris Nisi**

Date of expiration  
**DD MM YYYY**

Signature of Bearer  
*J. Doe*

**S.C DOCUMENT OF REGISTRATION  
S.C DEPARTMENT OF MOTOR VEHICLES**

PLATE CLASS RP1 TITLE 770920230103730

ISSUE DATE 6/25/2012 EQUIPMENT NO. 40

PLATE EXP 06/2014 FLEET NUMBER 0

**VIN 1GGWH93FR176889**

YEAR 1984



MODEL EL CAMINO  
VEHICLETYPE 5  
EMPTYGVW 32/6000  
CUSTOMER NO

123 SHADY LANE  
ANYTOWN.



# Identifiers in the wild

**Greece**

**Postcode**

**Postcode type and position**

5 digits to the left of the locality name, with a space between the 3rd and 4th digits.

**Coding method**

**1 5 1 2 4**

destination post office

prefecture or city with more than 50,000 inhabitants

**Position of the address on the envelope**

Bottom right-hand corner

**Alignment of address lines**

Left-aligned

Mr. George PANAGIOTOU  
1, D. GOUNARI STREET  
151 24 MAROUSI  
GREECE

**GERMAN SOCIAL SECURITY NUMBER**

**THIS IS WHAT IT MEANS**

Local pension office number

Last name's initial

Check digit


**12 123456 A 123**

Birth date DD/MM/YYYY

0-49: male  
50-99: female

**VIN NUMBER**

Country	Vehicle type	Engine	Restraint	Check digit	Plant	
1	G	1	Y	Z	2	3
J	9	P	5	8	0	3
4	2	7				
Manufacturer	Body type	Series	Model	Model year	Serial number of the vehicle	



**We care about UX** ❤️

# What is Zenodo?

Cross-domain digital repository for the long tail of research.

Computer science,  
Biodiversity, Humanities,  
Chemistry, ...

.pdf, .zip, .gz, .h5,  
.avi, .tiff, .png,  
.ipynb, .r, ...

- Launched in May 2013, by OpenAIRE & CERN
- Hosted at the CERN data center
- Free

## Data availability

An anonymized version of the data is made publicly available due to ethical considerations. The data are available from the Zenodo repository with permission from Microsoft.

## Code availability

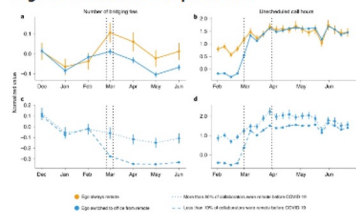
The code supporting this study is available for academic purposes. The code is available from the Zenodo repository with permission from Microsoft Corporation.

## References

1. Bloom, N. A. *Working From Home and the Future of U.S. Economic Growth Under COVID* (2020); <https://www.yoda.io/research/v=jtdFIZx3hyk>
2. Brynjolfsson, E. et al. *COVID-19 and Remote Work Data*. Technical Report (National Bureau of Economic Research, 2020).
3. Barrero, J. M., Bloom, N. & Davis, S. 60 million hours per day: how Americans use time saved at home. Working Paper (Univ. Chicago Becker-DeMunnich Center for Behavioral & Economic Analysis, 2020); [https://bfj.uchicago.edu/content/uploads/2020/09/BFJ\\_WP\\_2020132](https://bfj.uchicago.edu/content/uploads/2020/09/BFJ_WP_2020132)
4. Dingel, J. I. & Neiman, B. How many jobs can be done at home? *Public Econ.* **189**, 104235 (2020).

Sections **Figures** References

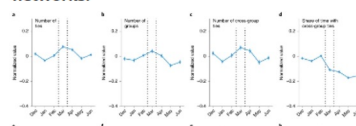
Fig. 1: Time trend comparisons.



[View in article](#)

[Full size image >](#)

Fig. 2: Time trends for collaboration networks.



# InvenioRDM - A better & customizable Zenodo

- Turn-key research management repository
- Better & customizable Zenodo

The image shows the InvenioRDM 'New upload' page. The main interface includes a search bar, a user profile (lars.holm.nielsen@cern.ch), and a 'New upload' section with a 'Files' tab. It shows storage availability (0 out of 100 files, 0 bytes out of 10.00 Gb) and a 'Drag and drop file(s)' area. A warning message states: 'File addition, removal or modification are not allowed after you have published your upload.' The 'Basic information' section is partially visible, showing a DOI field and a 'Resource type' dropdown.

An 'Add creator' modal is open in the foreground. It features the ROR logo and the following fields:

- Person** (selected) / **Organization**
- Family name \***: Nielsen
- Given name(s)**: Lars Holm
- Name identifiers**: 0000-0001-8135-3489
- Affiliations**: CERN, Add CERN, European Organization for Nuclear Research (CERN)

At the bottom of the modal are buttons for 'Cancel', 'Save and add another', and 'Save'.

# Challenges without ROR

**Affiliations**

World Health Organization ✕ WHO ✕ Wrld Health Organization ✕

- Arbitrary - non curated metadata
- Cannot cross reference resources
- Cannot produce reliable statistics

**So we need ROR ❤️**

# Creator data model

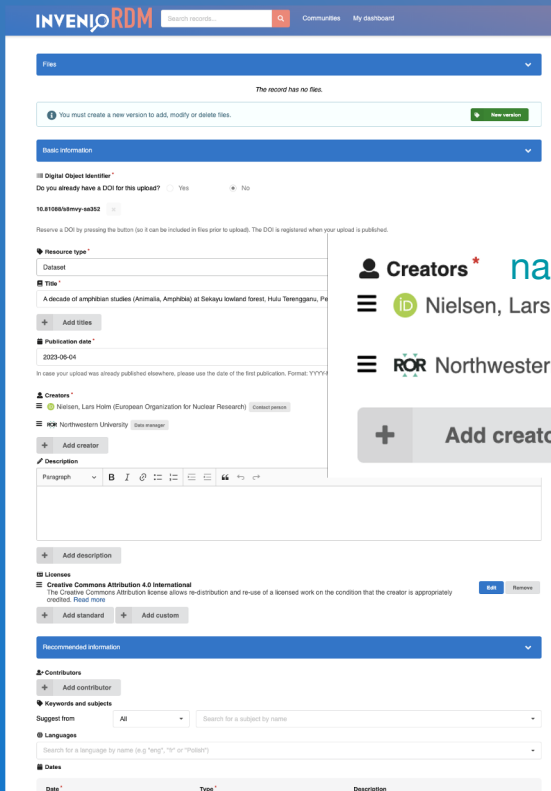
```
"creators": [  
  {  
    "affiliations": [  
      {  
        "name": "European Organization for Nuclear Research"  
      },  
      {  
        "id": "000e0be47",  
        "name": "Northwestern University"  
      }  
    ],  
    "person_or_org": {  
      "identifiers": [  
        {  
          "scheme": "orcid",  
          "identifier": "0000-0001-8135-3489"  
        }  
      ],  
      "type": "personal",  
      "name": "Nielsen, Lars Holm",  
      "given_name": "Lars Holm",  
      "family_name": "Nielsen"  
    }  
  },  
]
```






```
"creators": [  
  {  
    "person_or_org": {  
      "identifiers": [  
        {  
          "scheme": "ror",  
          "identifier": "000e0be47"  
        }  
      ],  
      "type": "organizational",  
      "name": "Northwestern University"  
    },  
    "role": {  
      "id": "datamanager",  
      "title": {  
        "de": "DatenmanagerIn",  
        "en": "Data manager"  
      }  
    }  
  }  
]
```



# Upload form



- Upload form is already big
- Creators can be a big list!
- Try to minimize space!

 Creators	name	affiliation	role	
	Nielsen, Lars Holm	(European Organization for Nuclear Research)	Contact person	Person
				<button>Edit</button> <button>Remove</button>
	Northwestern University	Data manager		Organization
				<button>Edit</button> <button>Remove</button>
<div> Add creator</div>				



# Creator modal

**Add creator**

☒ Person ☐ Organization

**Family name \***

**Given names**

**Name identifiers**

**Affiliations**

**Role**

Person

**Add creator**

☐ Person ☒ Organization

**Name identifiers**

**Affiliations**

**Role**

Organization

# Creator modal - autocomplete names

- Search by name, identifier or affiliation

Resource type\*

Title\*

+ Add titles

Publication date\*

2022-01-20

In case your upload was already published elsewhere, please use the date of the MM-DD, YYYY-MM, or YYYY. For intervals use DATE/DATE, e.g. 1939/1945.

Creators\*

+ Add creator

Description

Paragraph ▾ **B** *I*

Delete

Visibility\*

Full record

Public

Restricted

Add creator

☒ Person ☐ Organization

Search for persons by name, identifier, or affiliation...

Family name\*

Tarocco

Given names

Nicola

Name identifiers

0000-0002-2227-1229 ✕

Affiliations

CERN ✕

Role

Select role ▾

✕ Cancel

✓ Save and add another

✓ Save

# Creator names vocabulary

```
"hits": [  
  {  
    "identifiers": [  
      {  
        "scheme": "orcid",  
        "identifier": "0000-0003-1087-832X"  
      }  
    ],  
    "links": {  
      "self": "https://inveniordm.web.cern.ch/api/names/33c61-erv18"  
    },  
    "id": "33c61-erv18",  
    "revision_id": 1,  
    "affiliations": [  
      {  
        "name": "California Institute of Technology"  
      }  
    ],  
    "updated": "2023-04-13T13:41:23.496041+00:00",  
    "given_name": "SAIF",  
    "name": "AATI, SAIF",  
    "created": "2023-04-13T13:41:23.460813+00:00",  
    "family_name": "AATI"  
  },  
]
```

Data coming from ORCID dump 

See [How do I get the public data file?](#)

# Creator modal - affiliations

**Add creator**

☒ Person ☐ Organization

Search for persons by name, identifier, or affiliation...

**Family name \*** **Given names**

Family name Given names

**Name identifiers**

e.g. ORCID, ISNI or GND.

**Affiliations**

Search or create affiliation\*

**Role**

Select role

**Affiliations**

European Organization for Nuclear Research x Northwestern x

Add Northwestern

Northwestern University (NU)

- Search for / add an affiliation
- Add multiple affiliations
- Remove one or all and start over!

**Affiliations**

European Organization for Nuclear Research x Northwestern University x EPFL x

Add EPFL

# Creator affiliations vocabulary

```
"hits": [  
  {  
    "links": {  
      "self": "https://zenodo-rdm.web.cern.ch/api/affiliations/02ex6cf31"  
    },  
    "updated": "2023-05-30T12:57:09.856137+00:00",  
    "id": "02ex6cf31",  
    "name": "Brookhaven National Laboratory",  
    "revision_id": 1,  
    "acronym": "BNL",  
    "title": {  
      "en": "Brookhaven National Laboratory"  
    },  
    "identifiers": [  
      {  
        "identifier": "02ex6cf31",  
        "scheme": "ror"  
      }  
    ],  
    "created": "2023-05-30T12:57:09.798815+00:00"  
  },  
  ]  
]
```

- Data coming from ROR dump



See [How do I get the ROR data dump?](#)

# Creator modal - add multiple creators

Add creator

☐ Person ☒ Organization

Name \*

Northwestern University

Name identifiers

000e0be47 ✕

Affiliations

Search or create affiliation\*

Role

Data curator ✕

✕ Cancel

✓ Save and add another

✓ Save

Add creator

☐ Person ☒ Organization

Name \*

Organization name

Name identifiers

e.g. ROR, ISNI or GND.

Affiliations

Search or create affiliation\*

Role


Select role

✕ Cancel

✓ Save and add another

✓ Save

👤 Creators \*

☰  Nielsen, Lars Holm (European Organization for Nuclear Research) Contact person Edit Remove

☰  ROR Northwestern University Data manager Edit Remove

+ Add creator

Order creators

Organization added

# ROR information to DataCite



Karlskirche Wien

Published May 22, 2023 | Version 1.0.0

## full material for plans and sections of Karlskirche, Vienna Austria

E251-1 FOB Baugeschichte Bauforschung<sup>1</sup> ; Stampfer, Lukas<sup>1</sup> ; Triesch, Benedikt<sup>1</sup>

Hosting institution: Verein der Freunde der Wiener Karlskirche

### Details

#### DOI

DOI 10.48436/6zhbf-z9785

#### Resource type

Dataset

#### Publisher

TU Wien

### Export

DataCite JSON

Export

# Why is this useful?

TU Wien <https://ror.org/04d836q62>

14,465  
Works

326  
Citations ?

128  
Views ?

21  
Downloads ?

Founded 1815

Links

[Homepage](#)

[Wikipedia](#)

[Twitter](#)

Other Identifiers

GRID grid.5329.d

Crossref Funder ID [10.13039/501100004729](#)

Crossref Funder ID [10.13039/100007223](#)

ISNI [0000000419370669](#)

Wikidata [Q689400](#)

Wikidata [Q757615](#)

Geolocation

48° 11' 55.032" N, 16° 22' 14.772" W

[Austria](#)

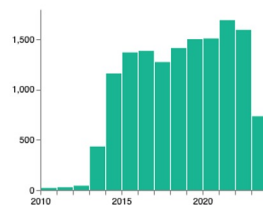
[Education](#)

[DataCite Consortium Organization](#)

<https://ror.org/04d836q62>

## 14,465 Works

Publication Year



Work Type



License





# Lessons learnt

```
"creators": [
  {↔},
  {
    "person_or_org": {
      "identifiers": [
        {
          "scheme": "ror",
          "identifier": "000e0be47"
        }
      ],
      "type": "organizational",
      "name": "Northwestern University"
    },
    "role": {
      "id": "datamanager",
      "title": {
        "de": "DatenmanagerIn",
        "en": "Data manager"
      }
    }
  }
],
```

The screenshot shows a web form for creating a new record in a digital repository. The form is divided into several sections:

- Resource type \***: A dropdown menu.
- Title \***: A text input field with a button "+ Add titles" below it.
- Publication date \***: A text input field containing "2022-01-20". Below it is a note: "In case your upload was already published elsewhere, please use the date of the first publication. Format: YYYY-MM-DD, YYYY-MM, or YYYY. For intervals use DATE/DATE, e.g. 1939/1945."
- Creators \***: A section with a button "+ Add creator".
- Description**: A section with a dropdown menu set to "Paragraph" and a rich text editor toolbar with buttons for bold, italic, link, list, quote, and undo/redo.
- Visibility \***: A section with two tabs: "Full record" and "Files only". Under "Full record", the "Public" tab is selected. Under "Files only", the "Public" tab is also selected. A note states: "Public: The record and files are publicly accessible."
- Options**: A section with a button "Apply an embargo" and a note: "Record or files protection must be restricted to apply an embargo."
- Delete**: A red button in the top right corner.

...I work for CERN 😊



# Hands-on with the ROR API

40 minutes

# **Anatomy of a ROR record**

[ROR search home page](#) <https://ror.org/05bk57929>

## Stellenbosch University

### ORGANIZATION TYPE

Education

### OTHER NAMES

Universiteit van Stellenbosch, University of Stellenbosch, SU,  
Universiteit Stellenbosch

### WEBSITE

<http://www.sun.ac.za/english>

### RELATIONSHIPS

Related Organization(s)

[Red Cross War Memorial Children's Hospital](#)

[Tygerberg Hospital](#)

### LOCATION

Stellenbosch (GeoNames ID [3361025](#))

South Africa

### OTHER IDENTIFIERS

GRID [grid.11956.3a](#)

ISNI [0000 0001 2214 904X](#)

Crossref Funder ID [501100004477](#)

Wikidata [Q1066492](#)

*Is there an issue with the data on this record? [Submit a curation request](#)*

# The ROR ID

The basic unit of the ROR registry is the ROR ID, which is in the form <https://ror.org/0262te083>. The ROR ID is the unique identifier for a ROR record containing basic information about a research organization.

# Elements of a ROR record

There are currently **16 top-level elements** in a ROR record. The 15 metadata elements apart from the **id** element, which contains the ROR ID itself, fall into a few basic categories:

- Name fields
  - **name**, **aliases**, **acronyms**, **labels**
- Location fields
  - **addresses**, **country**
- Information about the organization
  - **established**, **types**, **status**, **links**, **wikipedia\_url**
- Related organizations
  - **relationships**
- Corresponding organizational identifiers
  - **external\_ids**
- Deprecated fields
  - **email\_address**, **ip\_addresses**

See <https://ror.readme.io/docs/ror-data-structure> for a table of ROR data elements with definitions. See <https://ror.readme.io/docs/all-ror-fields-and-sub-fields> for a complete list of fields and sub-fields.

```
id: "https://ror.org/05bk57929"
name: "Stellenbosch University"
email_address: null
ip_addresses: []
established: 1866
▼ types:
  0: "Education"
▼ relationships:
  ▼ 0:
    label: "Red Cross War Memorial Children's Hospital"
    type: "Related"
    id: "https://ror.org/04d6eav07"
  ▼ 1:
    label: "Tygerberg Hospital"
    type: "Related"
    id: "https://ror.org/01hs8x754"
▼ addresses:
  ▼ 0:
    lat: -33.933164
    lng: 18.862044
    state: "Western Cape"
```

# Elements of a ROR record

JSON	Raw Data	Headers
Save Copy Collapse All Expand All Filter JSON		
id:	"https://ror.org/05bk57929"	
name:	"Stellenbosch University"	
email_address:	null	
ip_addresses:	[]	
established:	1866	
▼ types:		
0:	"Education"	
▼ relationships:		
▼ 0:		
label:	"Red Cross War Memorial Children's Hospital"	
type:	"Related"	
id:	"https://ror.org/04d6eav07"	
▼ 1:		
label:	"Tygerberg Hospital"	
type:	"Related"	
id:	"https://ror.org/01hs8x754"	
► addresses:	[...]	
▼ links:		
0:	"http://www.sun.ac.za/english"	
▼ aliases:		
0:	"Universiteit van Stellenbosch"	
1:	"University of Stellenbosch"	
▼ acronyms:		
0:	"SU"	
status:	"active"	

▼ wikipedia_url:	"http://en.wikipedia.org/wiki/Stellenbosch_University"
▼ labels:	
▼ 0:	
label:	"Universiteit Stellenbosch"
iso639:	"af"
▼ country:	
country_name:	"South Africa"
country_code:	"ZA"
▼ external_ids:	
▼ ISNI:	
preferred:	null
▼ all:	
0:	"0000 0001 2214 904X"
▼ FundRef:	
preferred:	null
▼ all:	
0:	"501100004477"
▼ OrgRef:	
preferred:	null
▼ all:	
0:	"910541"
▼ Wikidata:	
preferred:	null
▼ all:	
0:	"Q1066492"
▼ GRID:	
preferred:	"grid.11956.3a"
all:	"grid.11956.3a"



# Elements of a ROR record - v2.0!

## Forthcoming v2.0 example

JSON

```
"names" : [
  {
    "value" : "UC",
    "types": ["acronym"],
    "lang" : "en"
  },
  {
    "value" : "UC System",
    "types": ["alias"],
    "lang" : "en"
  },
  {
    "value" : "University of California System",
    "types": ["ror_display", "label"],
    "lang" : "en"
  },
  {
    "value" : "Université de Californie",
    "types": ["label"],
    "lang" : "fr"
  }
]
```

## Forthcoming v2.0 example

JSON

```
"admin" : {
  "created" : {
    "date": "2020-04-25",
    "schema_version" : "1.0"
  },
  "last_modified" : {
    "date" : "2022-10-18",
    "schema_version" : "2.0"
  }
}
```

## Forthcoming v2.0 example

JSON

```
"locations" : [
  {
    "geonames_id" : 5378538,
    "geonames_details" : {
      "country_code" : "US",
      "country_name" : "United States",
      "lat" : 37.802168,
      "lng" : -122.271281,
      "name": "Oakland"
    }
  }
]
```

## Forthcoming v2.0 example

JSON

```
"domains" : [
  "universityofcalifornia.edu"
],
"links" : [
  {
    "type": "website",
    "value": "http://www.universityofcalifornia.edu/"
  },
  {
    "type": "wikipedia",
    "value": "http://en.wikipedia.org/wiki/University_of_California"
  }
],
```

## Forthcoming v2.0 example

JSON

```
"external_ids" : [
  {
    "type" : "fundref",
    "all" : [
      "100005595",
      "100009350",
      "100004802",
      "100010574",
      "100005188",
      "100005192"
    ],
    "preferred" : "100005595"
  },
  {
    "type" : "grid",
    "all" : [
      "grid.30389.31"
    ],
    "preferred" : "grid.30389.31"
  },
  {
    "type" : "isni",
    "all" : [
      "0000 0001 2348 0690"
    ],
    "preferred" : null
  }
],
```

<https://ror.readme.io/docs/schema-v20>

# **Hands-on with the ROR API**

# ROR API Guide and Tutorial

- ROR REST API Guide: <https://ror.readme.io/docs/rest-api>
- ROR Intro to API self-guided tutorial:  
<https://ror.org/tutorials/intro-ror-api/>

The following examples and exercises can be done in a browser or in a command line with **cURL**, as you prefer.

# Intro to the ROR API

- The ROR API is a **REST API** that returns JSON data.
- The ROR API is **entirely free** to use. There are no tiered plans.
- There are **no authentication tokens** or credentials needed to use the ROR API.
- The rate limit on the ROR API is a **maximum of 2000 requests in a 5-minute period**.
- The ROR API is powered by [Django](#) and [Elasticsearch](#).
- Check to see if the ROR API is up by sending a request to <https://api.ror.org/heartbeat>.
- The ROR API is best for use cases that involve querying or retrieving individual records. **If you need to retrieve a large number of records, use the ROR data dump** instead. Data dumps can be retrieved from the [ROR Data collection in Zenodo](#) or the [ror-data Github repository](#).
- You can **install and run the ROR API locally** in Docker. See the README at <https://github.com/ror-community/ror-api> for instructions.
- We strongly encourage ROR API users to sign up for the [ROR Technical Forum](#) in order to receive infrequent (two or three times a month) updates by email about changes to the ROR registry and API.

# Retrieving a list of ROR records

You can [retrieve a list of active organization records](https://api.ror.org/organizations) from ROR along with summary metadata such as counts of organization by country and type with <https://api.ror.org/organizations>.

It is **not possible to retrieve all 100,000+ records** from the ROR API. The maximum number of results is 10,000, and results are paginated.

**Example:** <https://api.ror.org/organizations>

**Exercise: Retrieve a list of ROR records from the ROR API.**

# Retrieving a single ROR record

The ROR API can be used to [retrieve a single ROR record](#).

## Examples:

- <https://api.ror.org/organizations/https://ror.org/0262te083>
- <https://api.ror.org/organizations/ror.org/0262te083>
- <https://api.ror.org/organizations/0262te083>

**Exercise: Retrieve a single ROR ID from the ROR API.**

# Paging

ROR API responses are broken into pages with a maximum of 20 results per page. You can retrieve results beyond the first page by adding `?page=[page number]`

**Example:** <https://api.ror.org/organizations?page=4>

**Exercise: Retrieve a page beyond the first page in a list of ROR records.**

# Filtering

Results can be filtered by record status, organization type, country code, and country name using the **filter** parameter with **status**, **types**, **country.country\_code**, or **country.country\_name**. Filters can be combined with commas.

## Examples:

- <https://api.ror.org/organizations?filter=status:inactive>
- <https://api.ror.org/organizations?filter=types:Facility>
- [https://api.ror.org/organizations?filter=country.country\\_code:ZA](https://api.ror.org/organizations?filter=country.country_code:ZA)
- [https://api.ror.org/organizations?filter=status:inactive,types:Company,country.country\\_code:AU](https://api.ror.org/organizations?filter=status:inactive,types:Company,country.country_code:AU)

**Exercise: Filter a list of ROR records.**



# The three ROR API parameters

- **?query** - Designed for **quick searches of an organization's name** ("World Wildlife Fund") or a commonly used external identifier for that organization (GRID, ISNI, Wikidata, or Funder ID).
- **?query.advanced** - Designed for **complex or highly precise searches** for secondary organizational information such as the organization's location or website.
- **?affiliation** - Designed to **suggest possible matches** in the ROR registry for long, messy text strings ("Anesthesiologie, Albert Schweitzer Ziekenhus, Postbus 444 3300 AK Dordrecht") using several different matching algorithms and to recommend a match (when possible!!) with a "chosen": true flag

ror.org **All search strings must be URL-encoded. See <https://urlencoder.org>.**

# The ?query parameter

The query parameter is a "quick search" of a limited number of fields in ROR records: **name**, **aliases**, **labels**, **acronyms**, and **external\_ids**. The query parameter runs the ROR browser search and is recommended for building typeaheads. Results can be **paged** and **filtered**. Multi-word strings should be enclosed in URL-encoded quotation marks.

## Examples:

- <https://api.ror.org/organizations?query=Concordia>
- <https://api.ror.org/organizations?query=Bath%20College> (note issues!)
- <https://api.ror.org/organizations?query=%22Bath%20College%22>
- <https://api.ror.org/organizations?query=%22grid.453259.c%22>

**Exercise: Use the ?query parameter to search the ROR API. If you like, filter and/or page through the results.**

# The **?query.advanced** parameter

The advanced query parameter allows thorough and precise searching of **any and all ROR record fields**. Complex queries using [field names](#), wildcards, and Boolean operators can be constructed. Results can be **paged** and **filtered**.

## Examples:

- <https://api.ror.org/organizations?query.advanced=name:%22Harvard%20University%22>
- <https://api.ror.org/organizations?query.advanced=addresses.city:Denver>
- <https://api.ror.org/organizations?query.advanced=links:sun.ac.za>

**Exercise: Use the ?query.advanced parameter to search a single ROR field.**

See <https://ror.readme.io/docs/advanced-query-parameter> for more examples and exercises.

# The ?affiliation parameter

The affiliation parameter is designed to **match messy text to ROR records** by searching only name-related fields in ROR (**name**, **aliases**, **labels** and **acronym**) using several different search algorithms, limiting results to records matching any country names or ISO codes in the text, and finally returning (if possible!) its best guess about the mostly likely match with **"chosen": true**.

The affiliation parameter is specifically designed to handle strings with punctuation, special characters, and spaces, so **it is not necessary to enclose multi-term search strings in quotation marks or to escape special characters**. However, all request strings must still be [URL-encoded](#).

The affiliation parameter **does not accept filters** and results **are not paginated**. When filter syntax is added to the end of an affiliation search, the terms will be treated as part of the affiliation search. All results will be returned, not just the first 20, since this approach typically returns a small number of results.

# The **?affiliation** parameter

**Not all ?affiliation searches return a "chosen": true result.** When no result has "chosen": true, the first result is not necessarily the best match for a given affiliation string.

In that case, several results may have the exact same score and/or there may be no match with a high score. A high scoring match (e.g., 0.9) that is not chosen may be a match to only a small portion of the entire affiliation string.

In these cases, **it is best to respect the absence of "chosen": true and leave the string unmatched** or add a layer of human or machine assignment, at your discretion.

# The ?affiliation parameter

## Example:

- Department of Civil and Industrial Engineering, University of Pisa, Largo Lucio Lazzarino 2, Pisa 56126, Italy
- <https://api.ror.org/organizations?affiliation=Department%20of%20Civil%20and%20Industrial%20Engineering%2C%20University%20of%20Pisa%2C%20Largo%20Lucio%20Lazzarino%202%2C%20Pisa%2056126%2C%20Italy>

**Exercise:** Use the ROR ?affiliation parameter to match a ROR ID to a long, messy text string (bonus: use an example from your own repository!) and see if you receive a **"chosen": true** result.

**Explore the ROR API  
on your own ...  
remember to consult  
[https://ror.readme.io  
/docs/rest-api](https://ror.readme.io/docs/rest-api)**



**Break ...**

10 minutes





# Hands-on with the DataCite API

40 minutes



# Collaborative feedback

50 minutes

**(20 minutes)**  
**Break up into**  
**small groups of**  
**5-6 and take**  
**notes on the**  
**following**  
**questions ...**

# ROR collaborative feedback questions

- What benefits would you see from using ROR in your repository?
- What challenges would you encounter with using ROR in your repository?
- What feature requests do you have for ROR?

**(15-20 minutes)**  
**Large group**  
**discussion of**  
**feedback**

# ROR collaborative feedback - bonus!

Take a look at our [Best Practices for ROR in Repositories](#) draft and give us your comments in the document.

Comments open through **June 30th.**





Thank you!

[info@ror.org](mailto:info@ror.org)  
[ror.org](http://ror.org)

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