

# TECHNICAL INTRODUCTION TO THE ORCID API

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Connecting Research  
and Researchers

GABRIELA MEJIAS

ORCID ENGAGEMENT LEAD – EUROPE

[G.MEJIAS@ORCID.ORG](mailto:G.MEJIAS@ORCID.ORG) [HTTPS://ORCID.ORG/0000-0002-1598-7181](https://orcid.org/0000-0002-1598-7181)

ORCID.org

# IMPLEMENTATIONS

INTEGRATING WITH  
THE ORCID API

+

ENGAGING  
COMMUNITIES

- PLAN
- DEVELOPE/ TEST

- COMMUNICATE!

# ORCID ENABLES



Organizations use the ORCID API to authenticate, collect, display, and connect persistent identifiers for people, places, and things in research workflows



# PLAN

- Are you already using any of the [enabled systems that support ORCID?](#)
- Which system(s) would you like to connect to ORCID? Where does ORCID fit within your existing systems & workflows?
- What information do you want to obtain from/add to your researchers' records?
- What resources do you need? Who is the right people to involve?
- How to communicate your implementation?



# 1. ENABLED SYSTEMS

## Publishing

- Open Journal Systems (PKP)
- Editorial Manager
- ScholarOne Manuscripts
- eJournalPress
- ReView

## Repositories

- Eprints
- Fedora (Elements)
- Haplo

**More in the future!**

## CRIS Systems

- DSpace CRIS
- Vivo
- Converis
- Digital Measures
- Elements
- Faculty180
- InfoEd
- IRMA
- Pure
- Haplo
- Worktribe

<https://members.orcid.org/orcid-enabled-systems>

## 2. CUSTOM INTEGRATIONS

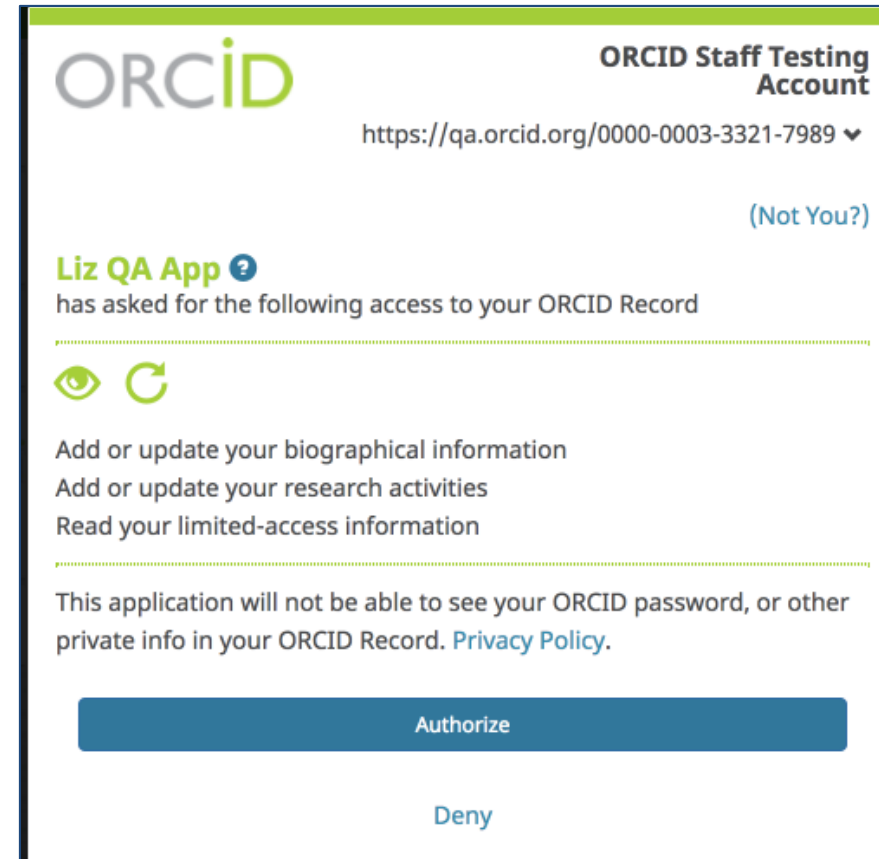
- Check our [technical documentation](#)
- Request [Sandbox](#) / [Production](#) credentials
- Decide how you will use the API and [permissions](#) needed
- [Test & demonstrate your implementation](#)

Case examples: <https://members.orcid.org/resources>

Code examples: <https://members.orcid.org/api/resources/code-examples>

# RESPECT RESEARCHER CONSENT & PRIVACY








- AUTHENTICATION is quick, easy & accurate
- Request & obtain permission to read / write to the ORCID record (trusted parties)
- Sign in + Authorize> ORCID API pushes the iD to your system
- No manual entry!

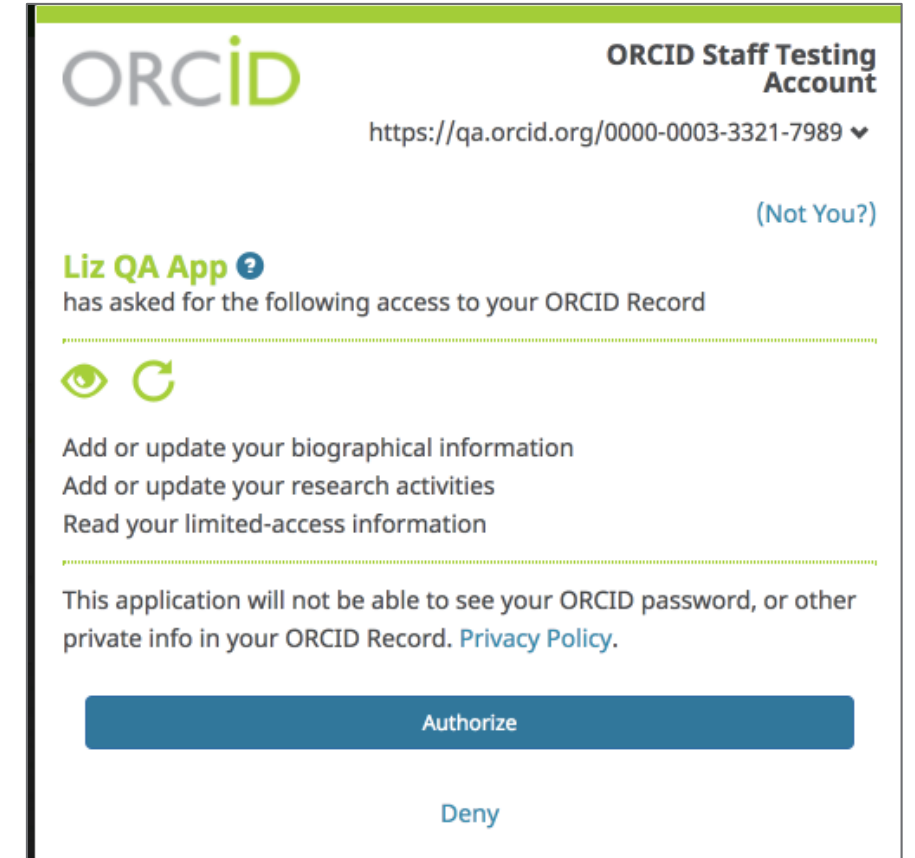


# GET PERMISSION

ORCID registry depends on user-based permissions:

Can I...

- get your iD (*/authenticate*)  
- read limited-access data on your record (*/read-limited*) 
- interact with the activities on your record (*/activities/update*)  
- interact with your biographical information (*/person/update*)  



# AUTHENTICATE

Authenticate ORCID iDs to ensure researchers are correctly identified in your systems



- Use ORCID branded button
- Build authorization URL
- Exchange auth code for an access token
- Store the full token exchange
- Explain why you AUTHENTICATE iDs



# STEP 1: AUTHORIZATION URL

The OAuth call: part I

the base URL, displays ORCID sign in screen

<https://sandbox.orcid.org/oauth/authorize?> \

[client\\_id](#)=APP-E422WM33OPZWKKMQ& \

← who's asking?

[response\\_type](#)=code& \

← what permissions?

[scope](#)=/read-limited%20/activities/update& \

[redirect\\_uri](#)=https://my.URL.org& \

← where the user goes next

[family\\_names](#)=Researcher&[given\\_names](#)=Bob&[email](#)=bobresearcher@mailinator.com&[state](#)=UNI-ID

← extra info to identify user to your system

← personalize the experience

# STEP 2: AUTH CODE & USER FEEDBACK

deny message



ORCID sends the user to your redirect, with a code (and any state parameter) appended to end

`https://my.URL.org?htA3yE&state=UNI-ID` the auth code

- Save the code – you need it for the next step
- Display something useful to the user
  - Authorize: *thanks for your permission!*
  - Deny: *are you sure you don't want to give permission?*



authorize message

Member Organization

No authorization has been given.

**Why did Crossref contact me?**

You may have included your ORCID ID with a recent publication submission. Publishers that are members of Crossref send us publication information and we assign a unique identifier (a DOI) that helps the work be linked, found, and cited. On behalf of your publisher(s), Crossref has developed this update feature to populate your ORCID record automatically.

Your work(s) with a Publisher

→

Publication info sent to Crossref

→

Your auto-updated ORCID record

**May we reassure you?**

1. We will only add info about your works if you've given your ORCID ID to your publisher, and they are a Crossref member.
2. We only store your ORCID ID and info related to your published work(s), no personal information is held.
3. You won't need to search for and add your published work(s) manually in the future.
4. Even if you've already listed works in your ORCID record, this will enrich them with further metadata.
5. You may revoke authorization at any time at <https://orcid.org/account>
6. If anything changes in the future and the publisher sends us corrected info, we will also update and modify your ORCID record automatically.

I changed my mind, authorize Crossref.

Do not authorize Crossref.

# STEP 3A: TRANSFORM THE CODE INTO A TOKEN

Use the code to gain access using the ORCID API

<https://sandbox.orcid.org/oauth/token>

HEADER: accept:application/json

DATA:

client\_id=APP-XT8FBKJRO3MR8WDR

client\_secret=e285575c-4794-464b-a807-6f1c06b63

grant\_type=authorization\_code

code=htA3yE

redirect\_uri=https%3A%2F%2Fmy.URL.org

our API calls always look like  
URLs (RESTful)

what format?

the auth code

confirms that you are  
the right one to get this  
information

## STEP 3B: STORE THE RESULT

The result of the call

`"access_token"` : '6710dfce-6aab-445b-a266-205dd9085273',  
`"token_type"` : "bearer",  
`"refresh_token"` : '2d76d8d0-6fd6-426b-a017-61e0ceda0ad2',  
`"expires_in"` : 631138518, ← your permission – executed contract  
`"scope"` : "/read-limited /activities/update", ← when permission expires (in seconds)  
`"orcid"` : "0000-0002-0491-7882", ← what you can do  
`"name"` : "Bob Researcher" ← iD & name for the person who gave permission



store the response with  
user's info in your system

## DISPLAY

Display iDs to signal to researchers that your systems support the use of ORCID



 <https://orcid.org/0000-0001-2345-6789>

```
<person_name>
  <given_name>Karl</given_name>
  <surname>Ward</surname>
  <ORCID authenticated="true">
    http://orcid.org/0000-0002-4121-9960
  </ORCID>
</person_name>
```

- Store and DISPLAY authenticated iDs following our guidelines
- DISPLAY the authenticated ORCID iDs in metadata
- Explain why you display iDs

## CONNECT

Connect information to ORCID records for trusted sharing with others



▼ Employment (1) ?

+ Add employment

↑↓ Sort

ORCID: Berlin, DE

2017-01-16 to present | Community Team Specialist, Global Employment

☑

Organization identifiers

Ringgold: 385488

ORCID: Bethesda, MD, US

Other organization identifiers provided by Ringgold

ISNI: 0000000446638501

Source: ORCID

☒ Preferred source

- CONNECT information from your system to ORCID records
  - Affiliations: Org. name & address. Recommended: start date & Org. ID
  - Works: Title, work type, work identifier
- Store put codes
- Explain your system connections with ORCID and benefits to researchers

## COLLECT

Collect information from ORCID records to fill forms and support research reporting



### Researcher Database

Name

Sofia Maria Hernandez Garci

ORCID iD

http://orcid.org/0000-0001

Method: GET

Accept: application/vnd.orcid+xml or application/vnd.orcid+json

Authorization type: Bearer

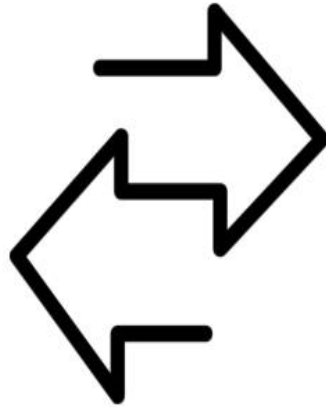
Access token: **[Stored access token]**

URL: [https://api.sandbox.orcid.org/v2.1/\[ORCID iD\]/record](https://api.sandbox.orcid.org/v2.1/[ORCID iD]/record)

- COLLECT information from ORCID records, including Trusted Parties data
- Use the data to populate your system, online forms, etc.
- Explain why you collect ORCID information


## SYNCHRONIZE

Synchronize information between ORCID records and your systems for reporting accuracy and speed



**Gabriela Mejias**

**ORCID ID**

 <https://orcid.org/0000-0002-1598-7181>

- Make CONNECTIONs and COLLECTIONs over time using long-lasting permissions, updating information as it changes \*webhooks\*
- Provide a mechanism to accept and act on correction requests from ORCID users
- Explain the benefits for researchers of synchronization

# ENGAGE & COMMUNICATE

- [Use our outreach resources](#)
- Link to our [Help page](#) & [video tutorials](#)
- Launch & let everybody know: email, social media, newsletter, etc.
- Regular updates & reminders
- Obtain & display your Collect & Connect badges
- [ORCID cookies](#)



# NEW AFFILIATION TYPES!

The screenshot displays the ORCID interface with three sections of new affiliation types. Each section has a header bar with a dropdown arrow, a count, and a help icon, followed by buttons to add new entries and a sort button. The entries are listed with their details, source, and a 'Preferred source' checkbox.

- Education and qualifications (2)**
  - Johns Hopkins University: MD, MD, US  
2013-01 to 2013-11 | Training certificate in Economic Development  
Qualification  
Source: Sofia García  
Preferred source
  - Universidade de São Paulo: Sao Paulo, SP, BR  
2007 to 2012 | PhD Sociology  
Education  
Source: Sofia García  
Preferred source
- Invited positions and distinctions (1)**
  - University of Cape Town: Rondebosch, ZA  
2015-10-01 to 2016-10-01 | Visiting Lecturer (Faculty of Humanities)  
Invited position  
Source: Sofia García  
Preferred source
- Membership and service (1)**
  - Japan Society of Home Economics: Tokyo, JP  
2018 to present  
Service  
Source: Sofia García  
Preferred source

- Qualifications
- Invited positions and Distinctions
- Membership and Service

Available in the UI


Looking for Beta testers! (API 3.0 rc1)




[https://github.com/ORCID/ORCID-Source/tree/master/orcid-model/src/main/resources/record\\_3.0\\_rc1](https://github.com/ORCID/ORCID-Source/tree/master/orcid-model/src/main/resources/record_3.0_rc1)  
<https://orcid.org/blog/2018/10/09/new-feature-alert-upgraded-affiliation-types>

# NEW – RESEARCH RESOURCES

▼ Research resources (1) Sort

radAFM: Coupled radiation source/liquid-cell AFM to study radiation-induced interfacial processes 

Environmental Molecular Sciences Laboratory (Richland, WA, US)  
Joint Genome Institute (Walnut Creek, CA, US)  
2017-07-01 to 2017-09-30  
OTHER-ID: [Project ID 118975](#)  
DOI: [10.25582/proj.2018.50416](#)

Source: Environmental Molecular Sciences Laboratory (EMSL)  Preferred source

- Infrastructure
- Collection
- Equipment
- Service

Join the pilot program! (API 3.0 rc1)



<https://orcid.org/blog/2018/11/02/research-resources-live>

# THANK YOU!

Member Support Centre: Collect & Connect, resources

<https://members.orcid.org>

API documentation, tutorials, sample workflows

<https://members.orcid.org/api>

API XSD, example calls and XML (Github)

<https://git.io/vDRy0>

ORCID API users listserv

<https://groups.google.com/group/orcid-api-users>

ORCID message (XSD) (Github)

<https://git.io/vXw5w>

Bootcamp: ORCID API (Searches, OAuth, create on demand)

<https://orcid.github.io/niso-workshop-2017>

## Questions?

<https://support.orcid.org>