

# TECHNICAL INTRODUCTION TO THE ORCID API

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**ORCID**

Connecting Research  
and Researchers

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**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

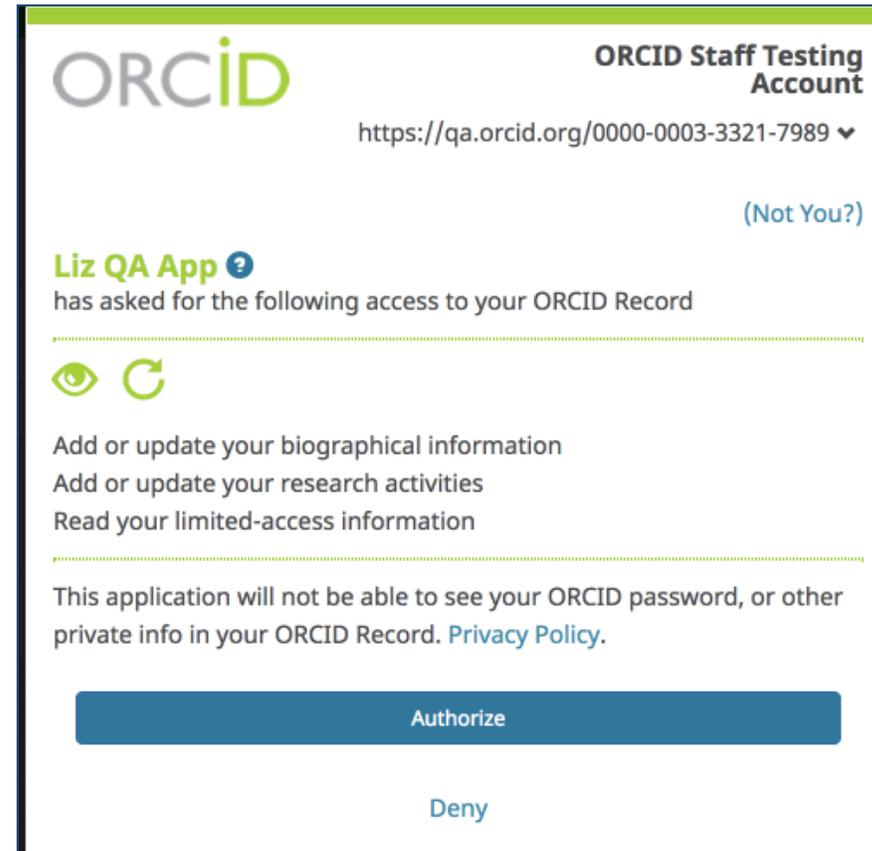
- Check our [technical documentation](#)
- Request [Sandbox](#) / [Production](#) credentials
- Decide how you will use the API and [permissions](#) needed
- [Test & demonstrate your implementation](#)

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!

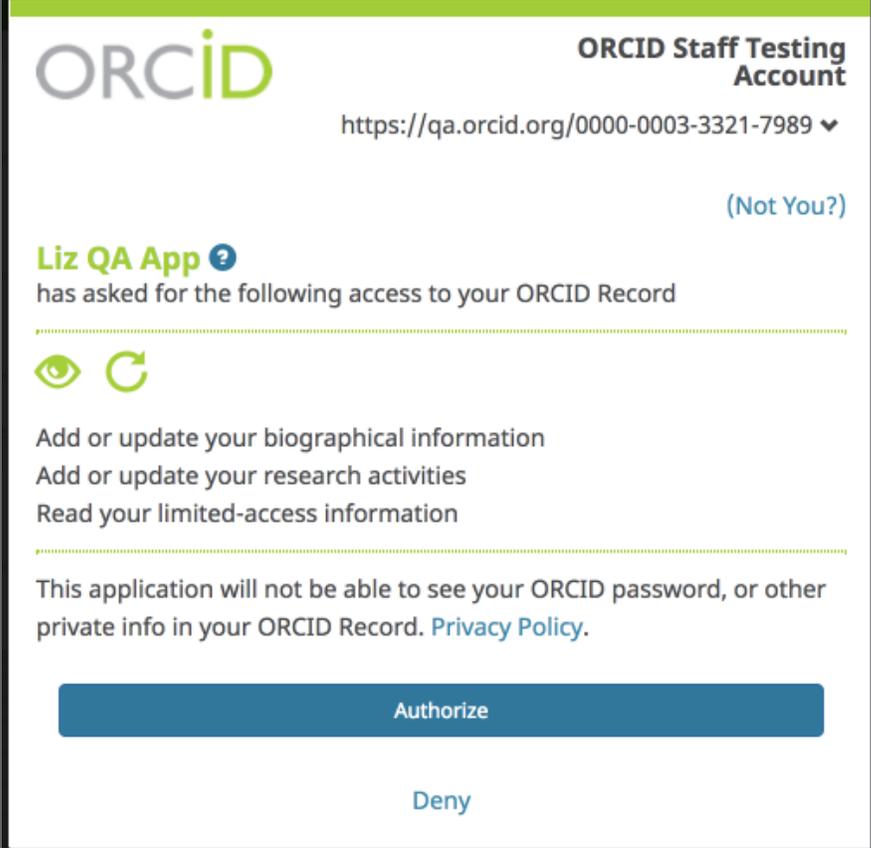


# GET PERMISSION

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*)  

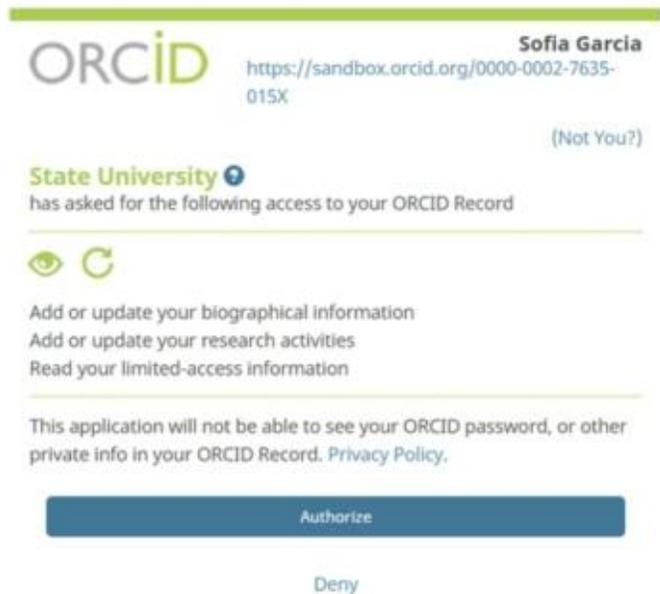
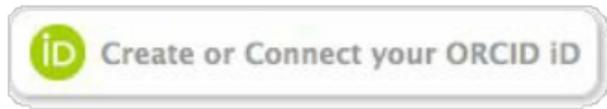


The screenshot shows an ORCID authorization interface. At the top left is the ORCID logo. At the top right, it says "ORCID Staff Testing Account" and shows the URL "https://qa.orcid.org/0000-0003-3321-7989" with a dropdown arrow. Below the URL is a link "(Not You?)". The main heading is "Liz QA App" with a question mark icon, followed by the text "has asked for the following access to your ORCID Record". Below this, there are two icons: an eye and a refresh symbol. The list of permissions includes: "Add or update your biographical information", "Add or update your research activities", and "Read your limited-access information". A note states: "This application will not be able to see your ORCID password, or other private info in your ORCID Record. [Privacy Policy](#)." At the bottom, there are two buttons: "Authorize" (a large blue button) and "Deny" (a smaller blue button).



# 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

**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

our API calls always look like  
URLs (RESTful)

Use the code to gain access using the ORCID API

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

HEADER: accept:application/json

← what format?

DATA:

client\_id=APP-XT8FBKJRO3MR8WDR

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

grant\_type=authorization\_code

code=htA3yE

← the auth code

← confirms that you are  
the right one to get this  
information

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

# 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, ← when permission expires (in seconds)  
"scope"        : "/read-limited /activities/update", ← what you can do  
"orcid"        : "0000-0002-0491-7882", ← iD & name for the person  
"name"         : "Bob Researcher" ← 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

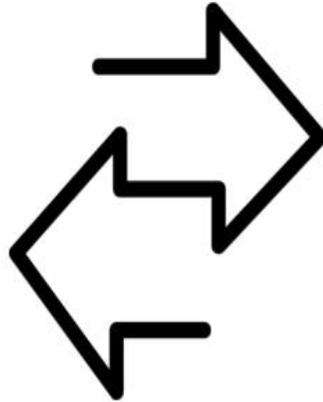
Access token: **[Stored access token]**

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**

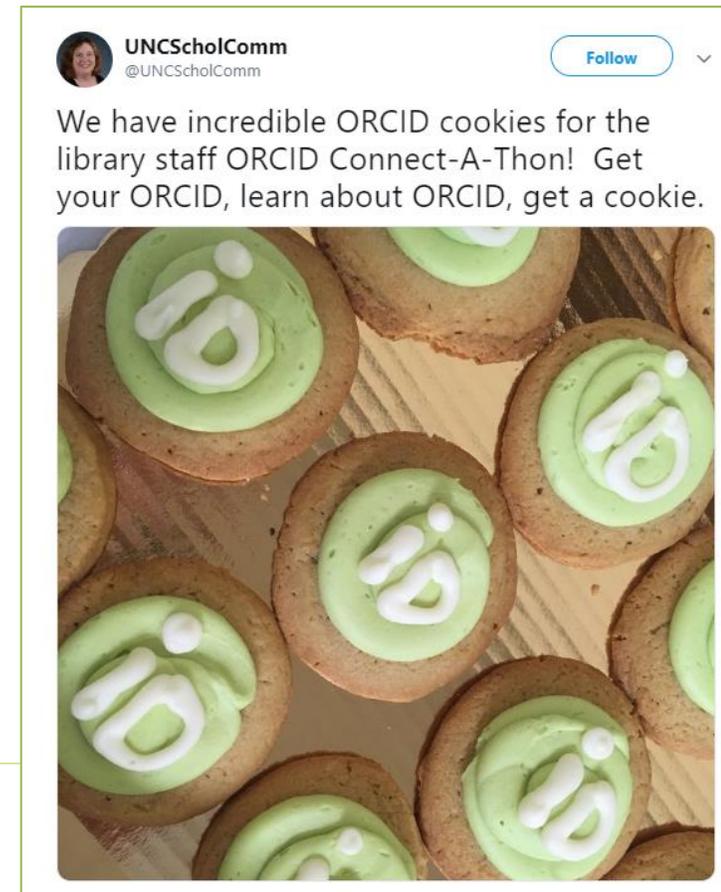
**ORCID ID**

 <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 three sections of an ORCID profile, each with a header bar containing a dropdown arrow, a count, and a help icon, followed by buttons for adding new entries and a sort icon.

- 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)



# 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>

