INTRODUCING ORCID THE API

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ORCID

Connecting Research and Researchers

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WHAT IS THE PROBLEM?

Connecting researchers with their professional activities can be very difficult



ORCID PROVIDES

Persistent digital identifiers that distinguish researchers from each other



ORCID iD	First name	Last name
0000-0002-8431-8539	Xiaoyan	Wang
0000-0001-6382-3264	Xiaoyan	Wang
0000-0003-4630-0060	Xiaoyan	Wang
0000-0002-2036-8174	xiaoyan	wang
0000-0002-0015-8890	Xiaoyan	Wang
0000-0001-6120-3328	Xiaoyan	Wang
0000-0002-7745-4794	Xiaoyan	Wang
0000-0002-4255-8200	xiaoYan	wang
0000-0002-0394-8679	Xiaoyan	Wang
0000-0002-5920-8709	Xiaoyan	Wang



MORE THAN A NUMBER

- Plumbing for research information
- Tools to build trust in digital information



Persistent digital identifiers to distinguish researchers from each other



Member-built integrations that connect researchers and their activities/affiliations



A hub for synchronizing machine-readable connections between identifiers for people, organizations, and research activities





ORCID IS OPEN

- Non-proprietary and platformneutral
- Registry use is free for individuals
- Public API is free to use by anyone
- Independent non-profit membership organization
- Open data, software, APIs, and documentation



ORCID IS INTERNATIONAL

- 600+ Members worldwide
- Multilingual staff in 5 continents
- Multiple languages supported
- Over 3.5 million ORCID iDs

ORCID MAKES LIFE EASIER FOR RESEARCHERS

Researchers like:

- Credit for their work

And they want to avoid:

- Completing the same forms over and over again Because:
- They want to get on with research!
- And be rewarded for doing so!



ORCID IS CONTROLLED BY THE RESEARCHER

Fine grained privacy controls

Who can see this?



 Researchers grant update permission to those they trust. e.g. publishers, institutions, funders.



USING THE ORCID REGISTRY

Two simple steps:

- 1. Register for an iD
- 2. Use the iD when
 - Publishing articles and datasets
 - Registering for meetings
 - Performing peer review
 - Applying for grants
 - Using university resources
 - Adding email signatures, web pages, CVs and more



REGISTERING

- 1. Registering for an iD
 - Self-registration only orcid.org/register
 - D Sign in with ORCID
 - Less than 30 seconds
 - Duplicate filters
 - Unique email
 - Name check

	First	name				
9	Sofia	1			* 2	
	Last n	ame				
	Gard	cia				
lv	Email			Em	ail check	
)	s.gar	·cia@orcid.org	_		*	
	s.gar	cia@orcid.or;	g already exists	in our syste	m. Would you	
	like t	o Sign in <mark>usin</mark>	g s.garcia@orci	id.org?	ame check	
<u> </u>	Re-en	iter email				
ds	We've found the foll	Ind the following records that None of these are me - continue to registration Value an ORCID Record for you. an existing account Sign In.				
~ ~	already created an (To access an existing	ORCID Record for g account Sign In.	you.			
5.0	already created an (To access an existing ORCID iD	ORCID Record for g account Sign In. Email	you. First Name(s)	Last Name	Institution	
5.0	ORCID iD	CRCID Record for g account Sign In. Email	you. First Name(s) Sofia	Last Name Garcia	Institution	
5	ORCID iD 0000-0001-5727-2427 0000-0002-1719-2243	CRCID Record for g account Sign In. Email s.garcia@orcid.org	you. First Name(s) Sofia Sofia	Last Name Garcia Amaral-Garcia	Institution	
5	ORCID iD 0000-0001-5727-2427 0000-0002-1719-2243 0000-0001-7652-6429	CRCID Record for g account Sign In. Email s.garcia@orcid.org	you. First Name(s) Sofia Sofia SOFIA DE LAS NIEVES	Last Name Garcia Amaral-Garcia GARCIA GAMEZ		
Ema	ORCID iD 0000-0001-5727-2427 0000-0001-7652-6429 ORCID iD 0000-0001-7652-6429 ORCID iD 0000-0001-7652-6429	CRCID Record for g account Sign In. Email s.garcia@orcid.org	you. First Name(s) Sofia Sofia SOFIA DE LAS NIEVES None	Last Name Garcia Amaral-Garcia GARCIA GAMEZ e of these are me - contin	Institution	



USING THE ID

2.Using the iD

- Provide an authenticated iD as well as a name
- Grant permission to read / write to the ORCID record (trusted parties)
- Sign into sites with ORCID account





BUILDING AN ORCID RECORD



BIOGRAPHICAL DETAILS

- NAMES: can include multiple names, including misspellings, past names, initials
- KEYWORDS: include terms to distinguish researcher from others
- WEBSITES: link to other resources such as blogs and project pages
- EMAILS: include all emails, even past ones
- OTHER IDs: person IDs from other systems to link accts (only added via API)
- BIOGRAPHY: adds context and detail

Sofia Maria Hernandez Garcia

ORCID ID Dorcid.org/0000-0001-5727-2427 View public version

Switch account >

🕅 Get a QR Code for your iD 🚱

Also known as S. M. Garcia, Sofia Maria Garcia

Country

Keywords Testing and Support

Websites Linked In Faculty Profile webpage

Emails sofia.m.g.herndez@gmail.com s.garcia@orcid.org

Other IDs Profile system identifier A-123456 Scopus Author ID 56030991900



AFFILIATION DETAILS

- EDUCATION: educational affiliations, linked by unique organization identifiers
- EMPLOYMENT: employment affiliations, linked by unique organization identifiers

Y Education (I)	+ Add	education	-H	Sort
Universidad Politécnica de Madrid: Madrid, N 2008-09 to 2012-05 BA (Computer Science)	1adrid, ES	۲	δ	a
SOURCE: Sofia Maria Hernandez Garcia	CREATED: 2015-01-20			/=

	Employment (I)	+ Add emplo	syment 41 So	ort
	ORCID: Bethesda, MD, US 2012-10 to present (Support & Testing)		ه ه	ô
4	SOURCE: Sofia Maria Hernandez Garcia	CREATED: 2015-01-20	/	1
9	A A A A A A A A A A A A A A A A A A A			
3				
	VERN			





- FUNDING: grants, awards, contracts, and salary awards, identified by unique identifier
 - Search & link wizard with ÜberWizard
 - Linked to funders by unique organization IDs



WORKS

- WORKS: broadly-defined research outputs including publications, datasets, patents, dissertations and more
 - 11 search & link wizards
 - Import/Export via BibTeX
 - Add manually (not recommended)







ORCID ENABLES





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





THE ORCID API

API	Features
Public API Freely available to anyone	 Authenticate: Get a user's authenticated ORCID iD Read (Public): Search/retrieve public data Create: Facilitate creation of new ORCID records (via on- demand process)
Member API ORCID member organizations (Sandbox test environment freely available to anyone)	 Read (Limited): Search/retrieve limited-access data Add: Post new items to a record Update: Edit or delete items you previously added
Premium Member API Premium ORCID member organizations	 Webhooks: Receive notifications of updates Customised monthly reports (including email stats) Access to monthly public data file



ORCID REGISTRY CONNECTIONS

Two models:

- 1. Connect via a vendor system
 - Manuscript submission/publication
 - Document/data repositories
 - Profile systems
 - CRIS systems
- 2. Develop a custom connection



VENDOR CONNECTIONS

Publishing

- eJournal Press
- Editorial Manager
- Open Journal Systems
- ScholarOne

Document / data repositories

- DSpace
- ePrints
- Hydra/Fedora

CRIS Systems

- Converis
- Elements
- IRMA
- Pivot
- PlumX
- Pure
- Vivo

Find more: https://members.orcid.org/orcidenabled-systems



CUSTOM INTEGRATIONS

Via the ORCID API

- Fine-tuned control and permissions
- Customized buttons, user flows, & user feedback
- Test and troubleshoot with ORCID Community Team

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



USER CONTROL: A KEY PRINCIPLE

Researchers own their ORCID records. When using the API the researcher must be involved.

- Only the researcher can create an ORCID record: you cannot create one on their behalf.
- The researcher must grant you permission to access/update. If you need additional permissions, you will need to ask again.
- The researcher can revoke permissions granted.
- The researcher sets the visibility of all items of their record. If it's private, you can't read it – including email addresses. (In process: ability to request email access, even if private.)



THE ORCID API IN A NUTSHELL

- Current version: 2.0
- Permissions / scopes: your contract with the user
- OAuth calls: how you execute the contract
- ORCID-specific calls: to provide & receive information with the registry
- The ORCID message: format of the data exchanged
- Permitted message format: send: XML, JSON receive: XML, JSON, HTML, RDF, GZIP, Turtle

XSD: https://github.com/ORCID/ORCID-Source/tree/master/orcid-model/src/main/resources





COLLECT



COLLECT *validated* ORCID iDs for individuals

- Explain what ORCID is
- Explain why you're collecting iDs
- Consistent user experience
- Authenticated connections

Ensure individuals are correctly connected with your institution

Many vendor systems use the OAuth validation process



GET & USE PERMISSIONS





GET PERMISSION

ORCID registry depends on user-based permissions: Can I...

D

- have 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)







INVOLVING THE USER

Key benefits:

- You know the user controls the iD
- User knows what's going on/user choice
- Privacy/ data control trends
- Position/ strengthen your system as a service

How?

- Just a customized URL
- Prior iD not needed
- Hard things: promotion, finding touch points



This application will not be able to see your ORCID password, or other private info in your ORCID Record. Privacy Policy.

> Authorize Denv

(Not You?)





DESIGNING TOUCHPOINTS

Look for natural fits:

- Give users a reason to sign in!
- Your sign in why not link your iD?
- Your account settings/user profile
- Submission (of any type)
- Form fills: pre-fill from your record!
- Registration: for conference or meeting
- Reporting: Link your iD to get started





STEP 1: AUTHORIZATION URL





STEP 1: AUTHORIZATION URL





STEP 1: AUTHORIZATION URL





WHAT THE USER SEES



Bob Researcher http://sandbox.orcid.org/0000-0002-0491-7882 (Not You?)

ORCID Staff (Member API) 2

has asked for the following access to your ORCID Record

C already signed in

Create or update your activities Read limited information from your record

Allow this permission until I revoke it. You may revoke permissions on your account settings page. Unchecking this box will grant permission this time only.

This application will not be able to see your ORCID password, or other private info in your ORCID Record. **Privacy Policy**.

Deny Authorize

ORCID

ORCID Staff (Member API) 🛛

has asked for the following access to your ORCID Record

Sign in form
 C (already registered)

Read limited information from your recor Create or update your activities

Allow this permission until I revoke it. You may revoke permissions on your account settings page. Unchecking this box will grant permission this time only.

This application will not be able to see your ORCID password, or other private info in your ORCID Record. **Privacy Policy**.

Sign into ORCID or Register now

👤 Personal Account 🛛 🏦 Institut

m Institutional Account

Authorize

Sign in with your ORCID account

Email or iD *

bobresearcher@mailinator.com

ORCID Password

ORCID Password

Forgotten password?

Deny

Jaccount

ORCID

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ORCID Staff (Member API) has asked for the following access to your ORCID Record

Read limited information from your record Create or update your activities

will grant permission this time only.

Bob

Researcher

unknown@mailinator.com

ORCID iD for yourself.

First name

Last name

Re-enter email

Create an ORCID

password Confirm ORCID

password

Email

Allow this permission until I revoke it.

private info in your ORCID Record. Privacy Policy.

You may revoke permissions on your account settings page. Unchecking this box

registration form Already have an ORCID iD? Sign In

0

0

This application will not be able to see your ORCID password, or other

As per ORCID's terms and conditions, you may only register for an

The ORCID registry provides notifications about things of interest, like changes to your ORCID record and new and events. How often would you like these notifications delivered to you via email?

Your ORCID iD connects with your ORCID Record that can contain links to

your research activities, affiliations, awards, other versions of your name, and

By default, who should be able to see information added to your ORCID Record?



more. You control this content and who can see it.

Terms of Use *

□ I consent to the privacy policy and terms and conditions of use, including agreeing to my data being processed in the US and being publicly accessible where marked Public.

You must accept the terms and conditions to register.



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STEP 2: AUTH CODE & USER FEEDBACK

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) Publication info Your autowith a Publisher sent to Crossref 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. We only store your ORCID iD and into 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

I changed my mind, authorize Crossref.

Do not authorize

Crossref









STEP 3B: STORE THE RESULT



DISPLAY



DISPLAY iDs on your website, platform, systems

- iDs shown as a link
- iDs in metadata
- Use the ORCID Member logo
- Explain why iDs are collected

Signal to your researchers and the wider community that your systems are plumbed to support ORCID iDs

https://orcid.org/trademark-and-id-display-guidelines



DISPLAY: IDS IN ARTICLES

iDs in print (pdf)



Science and Technology (CONACyT) and the Posgrado en Ciencias Biológicas (UNA

ORCID

Ángel Eliezer Bravo-Monzón ^(D) http://orcid.org/0000-0001-7172-0302 Francisco J. Espinosa-García ^(D) http://orcid.org/0000-0001-9173-1957

References

Borowiec, L. (2002). New records of Neotropical Cassidinae, with description of three r

Biocontrol Science and Technology, Taylor & Francis

iDs in html



eLife

DISPLAY: IDS IN PROFILES

Haak, Laurel L

Get A Badge ResearcherID Labs

ResearcherID: C-4986-2008

URL: http://www.researcherid.com/rid/C-4986-2008

Subject: Neurosciences & Neurology; Science & Technology - Other

Keywords: circadian rhythms; calcium imaging; confocal microscopy; metabotropic glutamate receptors; adenosine receptors; glial cells; suprachiasmatic nucleus; program evaluation; workforce modeling; diversity; gender equality

ORCID: http://orcid.org/0000-0001-5109-3700

The University of Auckland

Dr Julie Choisne

MSc Paris, PhD in Biomechanics ODU

Ho In:



norary Academic	Identifiers	
Auckland Bioengineering Institute	http://orcid.org/0000-0001- 5418-5870	
	Contact details	



ResearcherID

DISPLAY: IDS IN METADATA

ORCID iD in DOI metadata:

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

• iD available in search





CONNECT



CONNECT your data to ORCID records

- Request permission to write to records
- Store long-lived tokens
- Add data that you uniquely can assert
- Explain the connection

Enable researchers to provide validated data to other systems they use

https://orcid.org/blog/2015/10/26/auto-update-has-arrived-orcid-records-move-next-level







CONNECT VIA API TO SEND DATA endpoint: /work





READ & UPDATE THROUGH ORCID MESSAGE (SCHEMA)

1	
2	<pre><pre>cpeer-review:peer-review</pre></pre>
3	visibility="private" xmlns:common="http://www.orcid.org/ns/common"
4	<pre>xmlns:peer-review="http://www.orcid.org/ns/peer-review" xmlns:work="http://www.orcid.org/ns/work"</pre>
5	<pre>xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"</pre>
6	<pre>xsi:schemaLocation="http://www.orcid.org/ns/peer-review/peer-review-2.0_rc1.xsd "></pre>
7	<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>
8	<pre><pre><pre>cpeer-review:review-identifiers></pre></pre></pre>
9	<pre>-work:work-external-identifier></pre>
10	<common:external-identifier-url>http://www.wellcome.ac.uk/Funding/Biomedical-science/Application-</common:external-identifier-url>
	information/Committees/WTP059408.htm
11	<common:relationship>self</common:relationship>
12	<pre><work:external-identifier-type>source-work-id</work:external-identifier-type></pre>
13	<pre><work:external-identifier-id>WTP059408</work:external-identifier-id></pre>
14	
15	
16	<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>
	information/Committees/WTP059408.htm
17	<pre><pre><pre><pre>certex:review-type>review</pre></pre></pre></pre>
18	<pre><pre><pre>completion-date></pre></pre></pre>
19	<common:year>2014</common:year>
20	
21	<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>
22	<pre><pre><pre><pre>convening-organization></pre></pre></pre></pre>
23	<common:name>Wellcome Trust</common:name>
24	<common:address></common:address>
25	<common:city>London</common:city>
26	<common:region>London</common:region>
27	<common:country>GB</common:country>
28	
29	<common:disambiguated-organization></common:disambiguated-organization>
30	<common:disambiguated-organization-identifier>5072</common:disambiguated-organization-identifier>
31	<common:disambiguation-source>ringgold</common:disambiguation-source>
32	
33	
34	



READ & UPDATE THROUGH ORCID MESSAGE (SCHEMA)





SYNCHRONIZE



SYNCHRONIZE with your systems

- Update information when it changes
- Auto-add new information
- Search & link wizards
- Sync data from others

Saved time, better reporting, improved information flow

https://members.orcid.org/api/tutorial-webhooks https://orcid.org/blog/2015/10/26/auto-update-has-arrived-orcid-records-move-next-level



ENABLING SYNCHRONIZATION

ORCID API features & tips:

- Update notifications (webhooks)
 - Your system registers iDs you're watching
 - ORCID notifies when changes happen

Internal triggers

- Employment status change
- Publication acceptance
- Publication correction
- Funding award





API DEMO: CREATE ON DEMAND

ORCID @ State University	Home	About ORCID	Contact ORCID
Get an OF	RC	ID i	D!
Click the button below to create an C University's faculty	RCID iD a profile sys	and connect tem.	it to State
D Create a new	ORCID il	С	
Already have an ORCID iD? Con	nect your	existing OR	CID iD

https://orcid-createondemand.herokuapp.com



THANKS FOR YOUR ATTENTION

Bootcamp: ORCID API (Searches, OAuth, Create on Demand) https://github.com/TomDemeranville/thor-helsinki-bootcamp-2017 Member Support Centre https://members.orcid.org Workflows & integration points https://members.orcid.org/create-records API v1.2 technical documentation https://members.orcid.org/api API v2.0 technical documentation (Github) https://git.io/vXw5X **Questions? ORCID API users listserv** support@orcid.org https://groups.google.com/group/orcid-api-users http://support.orcid.org ORCID message (XSD) (Github) https://git.io/vXw5w

