ORCID in a world where machines read

ACSE Annual Conference
Dubai
10-11 August 2016

Matthew Buys
Regional Director, ORCID
m.buys@orcid.org
Twitter @mjbuys
http://orcid.org/0000-0001-7234-3684
“Researchers want to be read, acknowledged, and quoted.”

“Researchers want to spend their time on research, not reporting”
The research community has lacked the ability to link researchers and scholars with their professional activities.

• Name variations:
  - Matthew J Buys, MJ Buys, M Buys, Matthew John Buys, ماثيو، بايز، ماثيو
• Institutional variations:
  - ORCID, ORCID Incorporated, ORCID Inc, ORCID EMEA
Algorithms are not enough

- An intelligent web-based voice chat bot
  S. J. du Preez; M. Lull; S. Sinha
  EUROCON 2009, EUROCON '09. IEEE
  Year: 2009
  Pages: 386 - 391, DOI: 10.1109/EURCON.2009.5167660
  Cited by: Papers (1)

- Limitations of a LC-ladder and capacitive feedback LNA and scaling to mm-wave frequencies
  Marnus Weststrate, Saurabh Sinha; Dan Neculoiu
  2009 International Semiconductor Conference
  Year: 2009, Volume: 1
  Pages: 315 - 318, DOI: 10.1109/SMICND.2009.5336534
### Search results

<table>
<thead>
<tr>
<th>ORCID iD</th>
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<th>Last name</th>
</tr>
</thead>
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<tr>
<td>0000-0003-0305-6731</td>
<td>Saurabh</td>
<td>Sinha</td>
</tr>
<tr>
<td>0000-0001-7453-9576</td>
<td>Saurabh</td>
<td>Sinha</td>
</tr>
<tr>
<td>0000-0003-4634-3925</td>
<td>Saurabh</td>
<td>Sinha</td>
</tr>
</tbody>
</table>

---

**Professor Saurabh Sinha**

**ORCID ID**

![ORCID ID](orcid.org/0000-0003-4634-3925)

**Biography**

Saurabh Sinha, SMIEEE, FSAIEE, obtained his B. Eng, M. Eng and PhD (Electronic Engineering) degrees from the University of Pretoria (UP), South Africa. After more than a decade of service to the UP, Prof. Sinha now serves as Executive Dean: Faculty of Engineering and Built Environment, University of Johannesburg, South Africa. He has authored or co-authored over 60 publications in peer-reviewed journals and at international conferences. Saurabh is also an Extraordinary Professor of Microelectronics at the University of Pretoria.
Search using an ORCID iD
Names are Messy
Can names be cleaned up?

Of course they can!

We need to use digital names:

persistent identifiers that uniquely specify the person, organization, or object to which a name refers
So what was needed...

An open infrastructure

ORCID connects systems together through a community driven infrastructure - with user authentication and permission
ORCID provides persistent digital identifiers that distinguish researchers from each other.
ORCID provides a persistent digital identifier that distinguishes researchers from each other and links them to an organization identifier.

Individuals register for free and use this at their institution, funders and publishers.

Organizations join as members and can build integrations into their systems.
What's in a ORCID record?

Organized into two sections.

Person:
Names, Countries, Keywords, Websites, Person Identifiers

Activities:
Education, Employment, Funding, Peer Reviews, and Works
then ORCID returns things like this!

XML Data

```
<message-version"="1.1">
<orsid-message xmlns="http://www.orcid.org/m/orsid">
<message-version"="1.1">
<orsid-profile type="admin">
<orsid-identifier>
<http://orcid.org/0000-0002-0036-9460/>
</orsid-identifier>
</orsid-profile>
</orsid-message>
```

JSON Data

```
"message-version": "1.1",
"orsid-profile": {
  "orsid": null,
  "orsid-id": null,
  "orsid-identifier": {
    "value": null,
    "uri": "http://orcid.org/0000-0002-0036-9460",
    "path": "0000-0002-0036-9460",
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  },
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    "collection-date": "2012-02-24T21:16:32Z",
    "submission-date": "2012-02-24T21:17:35Z",
    "last-modified-date": "2012-03-12T21:23:58Z",
    "latest-modified": true,
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    "last-modified-date": "2012-03-12T21:23:58Z",
    "latest-modified": true,
  },
},
```

HTML
How does ORCID work

• ORCID works in a similar way to that of a credit card
  • It can be used across systems
  • It provides the researcher with a secure ID ("card") with asserted connections
  • ...and importantly synchronizes metadata and requires no manual input from the user

Note: ORCID does not store any sensitive private data about the individual
Instead of swiping a card – researchers provide permission using their username and password.
• Credit cards
  • Arrive and swipe card
  • Transaction details are populated in all the connected systems
  • There is no manual entry of transactional details

• ORCID iDs
  • Researchers enter their username and password
  • Metadata is populated in publisher, research institute, funder, and association systems
  • There is no manual entry of metadata
ORCID connects different ID systems through open & persistent identifiers

- Machine-readable
- Interoperable
ORCID is Open

- Non-proprietary and platform-neutral
- International service that integrates with other researcher identifiers
- Registry use is free for individuals
- Independent non-profit membership organization
- Open data, software, APIs, and documentation
Who uses ORCID iDs?

2.4M+ live iDs, 500+ members, multiple national consortia, and 300+ integrations in every region and sector of the international research community.
Universities Implementing

• Country-wide adoption in Denmark, UK, Italy, Australia, Finland, Belgium and more in 2016

• US consortia: CIC, GWLA, and NERL

“We want to use ORCIDs to simplify the life of Oxford’s researchers for working with institutional systems and publishers’ systems by re-using already available information for publication data management and reporting. The motto is: Input once – re-use often.”

Wolfram Horstmann, (former) Assoc. Director, Bodleian Libraries, University of Oxford
http://orcid.org/0000-0001-8673-6104
Organizations are use ORCID APIs to authenticate, collect, display, and connect persistent identifiers for people, places, and things in research workflows.
Government  Universities  Associations  Publishers  Funders

Platforms using the ORCID API

ORCID Registry
2.4M+ live iDs
Pull:
• Names
• Biography
• Affiliation
• Funding
• Works

Push:
• Works
• Peer review

Internal Systems

ACSE Authors
DISPLAY
• In metadata
• On sites
• In publications

CONNECT
• Affiliations (employers)
• Works (publishers)
• Awards (funders)
Collect & Connect goals

- Clarify how plumbing works
- Standardize experience
- Standard connection installation guidelines
- Increase predictability and trust in the “utility”
- Community approach to reliable connections
Collect & Connect

Display

iD

Connect

Collect

Synch

Authenticate!

orcid.org
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

Converis, Pure, Symplectic Elements, VIVO use the OAuth process
My Account → Personal Profile

(* = mandatory fields)

**ORCID**  Create/link an Open Researcher Contributor ID (ORCID)

**Title**

* First Name

Middle Name

* Last Name  Garcia

* Primary Email Address  s.garcia@orcid.org
Nature Publishing Group has asked for the following access to your ORCID Record

Read your ORCID record

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

Don't have an ORCID iD? Register.

Email or iD

Password

Forgotten password?

Deny  Authorize
## My Account → Personal Profile

(* = mandatory fields)

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</thead>
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</tr>
<tr>
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<td>Sofia</td>
</tr>
<tr>
<td><strong>Middle Name</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Last Name</strong></td>
<td>Garcia</td>
</tr>
<tr>
<td><strong>Primary Email Address</strong></td>
<td><a href="mailto:s.garcia@orcid.org">s.garcia@orcid.org</a></td>
</tr>
</tbody>
</table>
Dear Sofia Garcia,

You have been listed as a co-author on the manuscript submission #12345 "ORCID: a system to uniquely identify researchers." To confirm your authorship please add your ORCID ID to this submission by visiting your profile on our website or by clicking the button below.

Create or Connect your ORCID ID

What is ORCID

ORCID is an open, non-profit, community-based effort to provide a registry of unique researcher identifiers and a transparent method of linking research activities and outputs to these identifiers. ORCID is unique in its ability to reach across disciplines, research sectors, and national boundaries and its cooperation with other identifier systems.

Why use ORCID

As researchers and scholars, you face the ongoing challenge of distinguishing your research activities from those of others with similar names. You need to be able to easily and uniquely attach your identity to research objects such as datasets, equipment, articles, media stories, citations, experiments, patents, and notebooks. As you collaborate across disciplines, institutions and borders, you must interact with an increasing number and diversity of research information systems. Entering data over and over again can be time-consuming, and often frustrating.
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 that your systems are plumbed to support ORCID iDs

http://orcid.org/trademark-and-id-display-guidelines
You have the iD, now display it!

iDs in print

Mathieu Groussin¹, Bastien Boussau¹,², Sandrine Charles¹, Samuel and Manolo Gouy¹
³Laboratoire de Biométrie et Biologie Evolutive, Université de Lyon, Université Lyon 1, CNRS Villeurbanne, France
²Department of Integrative Biology, University of California, Berkeley, CA, USA
³Inria Lille Nord Europe, UEF, UMR 8522 (CNRS Université de Lille 1), Villeneuve d'Ascq, France
ID: MG, 0000-0002-4897-5005; BB, 0011-0022-0033-0044; SC, 0111-0222-0333-0444; SB, 0001-0002-0033-0004; MGo, 0000-1111-2222-3333

Royal Society, Biology Letters

iDs electronically

Xinchen Wang
orcid.org/0000-0002-5198-6581

Broad Institute of MIT and Harvard, Cambridge, Massachusetts Institute of Technology, Department of Biology, Massachusetts Institute of Technology, Computer Science and Artificial Intelligence Laboratory, Massachusetts, USA.

Nature, Genetics

PHOTO: Job Meeting
www.flickr.com/photos/jobmeeting/14375164286
You have the iD, now display it!

Tongzhu Li
Department of Mathematics, Beijing Institute of Technology, China
0000-0002-0324-7717

Scholarly Contributions [Data Provided by Scopus]

1. Wintgen ideal submanifolds with a low-dimensional integrable distribution
   Frontiers of Mathematics in China, 2014

2. Deformation of hypersurfaces preserving the Möbius metric and a reduction theorem

3. Compact Willmore hypersurfaces with two distinct principal curvatures in $S^{n+1}$

4. Möbius geometry of three-dimensional Wintgen ideal submanifolds in $S^5$

5. Möbius homogeneous hypersurfaces with two distinct principal curvatures in $S^{n+1}$
You have the iD, now display it!

**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 your data to ORCID Records

- Request permission to write to Records
- Store long-lived tokens
- Add data that you uniquely can (authoritative)
- Explain the connection

Enable researchers to provide validated data to others

https://orcid.org/blog/2015/10/26/auto-update-has-arrived-orcid-records-move-next-level
Nature Neuroscience is a multidisciplinary journal that publishes papers of the highest quality and significance in all areas of neuroscience. The editors welcome contributions in molecular, cellular, systems and cognitive neuroscience.

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<td>Review</td>
<td>Reviewer</td>
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Review identifier(s): DOI: 3498/203.283 | [http://url.for.the.review.com/weio.2i3oslg.html](http://url.for.the.review.com/weio.2i3oslg.html)
Convening organization: NPG (London, United Kingdom)
Review subject: Title of the publication that was reviewed (journal article) Nature Neuroscience.
DOI: 230.3/0239x894.85 | ![view](xxx)
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
<table>
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<tr>
<th>Sector</th>
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<th>PUBLISH on your site</th>
<th>POST to record</th>
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</thead>
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<td>With award</td>
<td>Grant award IDs</td>
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<tr>
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<td>For new staff &amp; students; at thesis submission</td>
<td>With works; in faculty profiles</td>
<td>Affiliation ID for institution</td>
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<td><strong>Publishers &amp; repositories</strong></td>
<td>For authors, contributors, reviewers</td>
<td>With works</td>
<td>Paper, dataset and review IDs</td>
</tr>
<tr>
<td><strong>Associations</strong></td>
<td>For members, authors, meeting participants</td>
<td>With member profiles</td>
<td>Affiliation ID with association, work IDs for publications</td>
</tr>
</tbody>
</table>
“We want to use ORCIDs to simplify the life of Oxford’s researchers for working with institutional systems and publishers’ systems by re-using already available information for publication data management and reporting. The motto is: Input once – re-use often.”

Wolfram Horstmann, Assoc. Director, Bodleian Libraries, University of Oxford
http://orcid.org/0000-0001-8673-6104
National funding agencies are using ORCID in their grants management systems including the National Institutes of Health (US), Research Councils UK and the Australian Research Council.

**Box 2. Funder Mandates.** These funders are requiring use of ORCID by researchers.

- Autism Speaks, USA (2014)
- FCT, Portugal (2014)
- QNRF, Qatar (2014)
- SRC, Sweden (2014)
- Department of Transportation, US (2015)
- NIHR, UK (2015)
- Wellcome Trust, UK (2015)
- FWF, Austria (2016)

http://orcid.org/blog/2015/12/04/research-funders-and-orcid-new-members-mandates-and-platforms
From January you’ll need an ORCID

7 December 2015 by Phil Hurst

Mandating the use of Open Researcher and Contributor ID (ORCID) by submitting authors.

**ORCID** provides a unique identifier for all researchers that can be linked to their different research works and activities across multiple platforms. It also serves to distinguish authors with similar names and simplify searching of publications databases (such as PubMed, Scopus, etc.) to avoid retrieving articles by authors with similar names. Close to 1.8 million researchers have already created their ORCID iD. The service is non-profit and community driven.

From 1 January 2016, we will require the submitting author to provide an ORCID identifier as part of the manuscript submission process. Details of the practicalities will be provided shortly, but don’t worry, it takes less than a minute to register for an ORCID iD and it’s free of charge. A recent survey carried out by ORCID indicates strong support in the research community for mandates by publishers, funders, and universities.
Auto-update in action

Jake VanderPlas @jakevdp · 2h
My first @JOSS_TheOJ paper passed review and is published! joss.theoj.org/papers/10.2110...

Jake VanderPlas
@jakevdp

Wow... that was fast! @ORCID_Org @JOSS_TheOJ

ORCID

Hi Jacob VanderPlas,

You have 1 new notification in your ORCID inbox - see summary below. Please visit your ORCID Inbox to take action or see more details.

☑ Crossref: Add your published work(s) to your ORCID record

🟢 Works (1)

mst_clustering: Clustering via Euclidean Minimum Spanning Trees http://dx.doi.org/10.21105/joss.00012

more info... Add now

View details in your ORCID inbox
Researcher Responsibility

① Register for an iD
② Use it!

Remember **authentication** is key
① Privacy setting per item in their record – granular control

② Default privacy setting for new items added by trusted parties
Importantly, by using ORCID in your system(s), you can play your part in building a trusted research infrastructure by asserting the connection between researchers and scholars and their professional research activities.

ORCID member API and support
Find out more at http://orcid.org

Register at http://orcid.org/register

Matthew Buys
Regional Director, ORCID
m.buys@orcid.org
http://orcid.org/0000-0001-7234-3684
Appendix A
Authentication Steps
Authentication Steps: Request

Government  Universities  Associations  Publishers  Funders

Organizations will ask for permission

Create or Connect your ORCID iD
Individual then provides permission

---

**Your Client Application** has asked for the following access to your ORCID Record:

- Read limited info from your ORCID Record
- Add a publication to your publications list
- Add an affiliation to your affiliations list
- Update your affiliations list
- Update your publications list

- 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.**

Already have an ORCID iD? Sign In.
Authentication Steps: Complete

Access has now been provided until you revoke this

Thank you for connecting your ORCID id

You will now be directed back to the submission system website.
## Authentication Steps: Managing Permissions

### Account settings

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<tr>
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<th>Action</th>
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</thead>
<tbody>
<tr>
<td>Email and contact preferences</td>
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</tr>
<tr>
<td>Security question</td>
<td>Edit</td>
</tr>
<tr>
<td>Close account</td>
<td>Close this ORCID record...</td>
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</tbody>
</table>

### Trusted organizations

You can allow permission for your ORCID Record to be updated by a trusted organisation. Find out more

<table>
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<td>Read your biographical information Read items in your ORCID record</td>
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<tr>
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Appendix B

ORCID Record Overview
An ORCID record: Sign In

Sign in using your

- Personal Account
- Institutional Account

Sign in with your ORCID account

Email or ID

Enter Email or ID

ORCID Password

Enter ORCID Password

Forgotten password?

Sign into ORCID

Sign in with a social media account

Facebook

Google+
An ORCID record: Overview

Laurel L Haak

ORCID ID
orcid.org/0000-0001-5109-3700
View public version

Managing Record

Biography
Laurel L. Haak, PhD, is the Executive Director of ORCID, an international and interdisciplinary non-profit organization dedicated to providing the technical infrastructure to generate and maintain unique and persistent identifiers for researchers and scholars.

Education (2)

Stanford University School of Medicine: Stanford, California, United States
To 1997 (Neurosciences)
PhD
Source: Laurel L Haak
Created: 2013-11-27

Stanford University: Stanford, California, United States
To 1998 (Biology)
BS and MS
Source: Laurel L Haak
Created: 2013-11-27

Employment (1)

ORCID: Bethesda, United States
2012-04 to present
Source: Laurel L Haak
Created: 2013-10-20

Also known as
L. L. Haak,
L Haak,
Laure Haak,
Laurela L Häka

Country
United States

Keywords
persistent identifiers, research policy, science workforce, program evaluation, neuroscience, calcium imaging, oligodendrocytes, circadian rhythms

Websites
ResearchGate
An ORCID record: Overview

Keywords
persistent identifiers, research policy, science workforce, program evaluation, neuroscience, calcium imaging, oligodendrocytes, circadian rhythms

Websites
LinkedIn
ResearchGate

Other IDs
ISNI: 0000000138352317
ResearcherID: C-4986-2008
Scopus Author ID: 6602258586

Funding (1)

CELLULAR BASIS OF CIRCADIAN CLOCK IN SCN
National Institute of Mental Health (Bethesda, United States)
1994-10 to present | Grant
Grant number: 5F31MH1010500-03
Grant number: 5F31MH1010500-03

Source: ÜberWizard for ORCID

Works (58)

ORCID iD Throughput in Publishing Workflows
Figshare
2016 | data-set
DOI: 10.6084/M9.FIGSHARE.3172084

Source: DataCite

Figshare
2016 | data-set
DOI: 10.6084/M9.FIGSHARE.3172123
Appendix C
Live API example
Live example

Google playground
http://tinyurl.com/zrmbyqb

https://sandbox.orcid.org/signin

Scope: /orcid-works/create

Header name: accept / Header value: application/vnd.orcid+xml
Header name: Content-type / Header value: application/vnd.orcid+xml