ORCID: Building Trusted Infrastructure

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“The ability to uniquely identify contributors is a deceptively simple concept which, if realized, could enable forms of real-time understanding of scientific research that up to now have been extremely costly (if not impossible).”

-Jonathan Kram, Wellcome Trust
● Documenting impact through research performance frameworks
● Reducing researcher burden

... but these two goals seem at cross purposes?
NAME AMBIGUITY

Unique identifiers provide trusted connections to professional activities

Michael Jackson???
## Identifiers for People, Places and Things

<table>
<thead>
<tr>
<th>ORCID iD</th>
<th>First/given name</th>
<th>Last/family name</th>
<th>Other names</th>
<th>Affiliations</th>
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<tbody>
<tr>
<td><a href="https://orcid.org/0000-0002-1701-6370">https://orcid.org/0000-0002-1701-6370</a></td>
<td>Matt</td>
<td>Buys</td>
<td></td>
<td>Scion, South African National Biodiversity Institute, North-West University, University of Stellenbosch Faculty of Science</td>
</tr>
<tr>
<td><a href="https://orcid.org/0000-0001-7234-3684">https://orcid.org/0000-0001-7234-3684</a></td>
<td>Matt</td>
<td>Buys</td>
<td>Matthew Buys, MJ Buys, M Buys, Matthew J Buys</td>
<td>ORCID, University of the Witwatersrand, Wits Business School</td>
</tr>
</tbody>
</table>
WHAT IS ORCID?

• An identifier for researchers
• A registry
• A set of standard procedures (APIs) for connecting researchers to their affiliations and activities
• A committed community building connectors
• An international-scale open research effort
THE ORCID COMMUNITY

• 1,056 organizational members from 46 countries
• 600+ system connectors: all research sectors
• Over 7 million researchers
• 20 consortia in:
  ○ Americas: Brazil, Canada & United States
  ○ EMEA: UK, Norway, Finland, Sweden, Netherlands, Belgium, Germany, Italy, Portugal, Israel, South Africa, Denmark, Greece, Austria
  ○ APAC: Australia, New Zealand, Taiwan

https://orcid.org/statistics
Why ORCID iDs are important?
What’s in a Name?
Most names are not unique

Many people have the same name
Names may change through marriage or other circumstances
People use different versions of their name during their career

Individuals use different alphabets, abbreviations, or naming conventions

Meadows, Alice; Laurel, Haak (2019): The Value of Using Unique Identifiers for Researchers. figshare. Poster
Researchers are mobile!

For example, 30% of the scientists who got their PhD in the United Kingdom now live elsewhere.

Source: Science Magazine

Research institutions and organizations therefore find it hard to

- Benchmark their organization against others
- Identify, track, and report on researchers’ affiliations and contributions (publications, peer reviews, grants, and more)
Institutions Face a Rising Tide of Research

OVER 3 MILLION scholarly articles published per year
Source: The STM Report, October 2018

42,500 ACTIVE SCHOLARLY PEER-REVIEWED JOURNALS
Source: The STM Report, October 2018

Institutions must increasingly recognize and demonstrate the impact of all types of research contributions
Research evaluation is hampered by a lack of data that clearly connect a research program with its outcomes and, in particular, by ambiguity about who has participated in the program and what contributions they have made.
Administrative burden

Manually making these connections is very labor-intensive, and algorithmic matching introduces errors and assumptions that can distort results.

Contribution types

Service Activities
- Peer Review
- Working Groups
- Leadership Positions
- Training and Mentoring
- Extension Activities

Affiliations
- Employer
- Professional Associations
- Education

People
- Team
- Collaborations

Funding
- Grants
- Contracts
- Seed Funding
- Coop. Agreements

Publications
- Journal Articles
- Books
- Patents
- Legal Briefs
- Algorithms
- Software Code

Datasets
- Physical Objects
- Electronic Files
- Genetic Sequences

Impacts
- Policy
- Legal
- Health
- Environment
- Education
- Product Development
- Spin Off
- Workforce
Unique researcher identifiers have the potential to bring efficiency and transparency to the creation and re-use of information for research evaluation.
Visibility, Interoperability & Credibility

ORCID benefits for researchers
Visibility

Researchers

Registers & manages ORCID record

Controls visibility

Gives permission to COLLECT ID and access the record

university

CONNECTS affiliation

funder

CONNECTS grant

publisher

CONNECTS publication

ORCID record

Researcher Name

ORCID ID

orcid.org/xxxx-xxxx-xxxx-xxxx

Basic information
- Other names
- Email addresses
- Biography
- Account settings

Activities & affiliations

Employment:
XXX University
Source: XXX University (ID139)

Funding:
YYY Foundation, Grant #123
Source: YYY Foundation (ID45)

Works:
Source: ZZZ Publishing (ID675)
Interoperability
Matthew Buys

ORCID ID
https://orcid.org/0000-0001-7234-3684

Print view

Also known as
Mj Buys, M Buys, Matthew J Buys

Country
Netherlands, South Africa

Keywords
information systems, interoperability, access to information, research management, innovation, persistent identifiers

Websites
LinkedIn
ORCID blog: Matthew Buys

Other IDs
ResearcherID: J-2686-2014

Blog: Technology+Engagement=Infrastructure Sustainability
Figshare
2018 | other
DOI: 10.23640/07243.7008152

Source: DataCite

Peer review (3)
review activity for Journal of Geophysical Research - Space Physics(2)
journal, JGR: Space Physics is dedicated to the publication of new and original research in the broad field of space science. This embraces aeronomy, magnetospheric physics, planetary atmospheres, ionospheres and magnetospheres, solar and interplanetary physics, cosmic rays, and heliospheric physics. Science that links interactions between space science and other components of the Sun-Earth system are encouraged, as are multidisciplinary and system-level science papers.

<table>
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<tr>
<th>Review date</th>
<th>Type</th>
<th>Role</th>
<th>Actions</th>
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<td>2017</td>
<td>review</td>
<td>reviewer</td>
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</tr>
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Conceiving organization: American Geophysical Union (Washington, DC, United States)
Source: GEMS
Created: 2017-10-18

Credibility
Research Vision

Benefits realisation
TO REALIZE THE OPEN RESEARCH VISION, EVERY STAKEHOLDER MUST TAKE ACTION
Evidence of Institutional Value

Examples of time/staff savings achieved by implementing ORCID from around the world

**UK:** 0.2 – 0.4 FTEs per institution\(^1\)
**Portugal:** 100,000 researcher hours per year\(^2\)
**Australia:** 15-30 minutes per grant application\(^3\)

2. Cátia Laranjeira, FCT - Fundação para a Ciência e a Tecnologia 2017
3. Australian Research Council governance meeting, September 2018

"Having ORCID iDs for most of our researchers has helped in providing authoritative accounts in our various databases, ensuring accuracy in reviewer identities, and helping editors find reviewers and check expertise."

—Brooks Hanson, Executive Vice President, Science, American Geophysical Union
How Organizations and Researchers Benefit

INSTITUTIONS

- Save time and reduce errors with automated information-sharing and cross-system interoperability
- Manage your organization name and your researchers’ connections with it
- Maintain links with your researchers - past, present, and future

RESEARCHERS

- Improve recognition and discoverability of their research
- Spend more time doing research, less time managing it
- Control and manage a trusted and easily shareable record of their research activities and affiliations – for free
Three Ways to Get Involved

1. Encourage and support your researchers in getting, sharing, and using their ORCID iD
2. Invest in integrating ORCID into your systems
3. Connect data to and from your researchers’ ORCID records to support information use and reuse across organizations
THANK YOU...

Register at https://orcid.org/register

Email m.buys@orcid.org / e.cheng@orcid.org

Twitter @ORCID_Org / @mjbuys