

Managing researcher identity: Tools for researchers and librarians

By: [Anna R. Craft](#)

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Abstract:

Researchers have increasing opportunities to identify themselves and raise the profile of their research and scholarship through online researcher identity management and researcher profile systems. This column provides a basic introduction to researcher identity management and examines four widely used researcher profile systems: Google Scholar Citations, Open Researcher and Contributor Identifier (ORCID), Scopus Author ID, and Web of Science ResearcherID. System benefits and comparisons are provided, with the purpose of helping researchers and librarians to select appropriate researcher identity management tools to support their work.

Keywords: Academic libraries | online research identity | research support | researcher identity management | researcher profile systems | ORCID | Google Scholar Citations | Scopus Author ID | Web of Science ResearcherID

Article:

Introduction

Researchers have increasing opportunities to proactively identify themselves and raise the profile of their research and scholarship through online researcher identity management and researcher profile systems. The landscape of available systems and services has seen significant growth in recent years, as new products have joined the market and increasing numbers of researchers have created profiles within them. But this wide and varied landscape has the potential to be overwhelming, especially to new users. This column identifies a selection of widely used researcher profile systems that are available to individuals and provides comparisons meant to assist researchers—and librarians who support them—in selecting appropriate services to meet their needs.

Researcher identity management and researcher profile systems

In the context of this column, researcher identity management is the practice of scholars and researchers creating and maintaining online identifiers and/or profiles to professionally identify themselves and their scholarly output to readers, colleagues, collaborators, publishers, granting agencies, and other individuals and institutions. Elements of researcher identity can include an individual's research interests and publications, their professional affiliations, citations and other metrics relating to the impact of their work, the manner in which they style their name to appear on their publications and other professional works, and other facets related to their professional selves. Researcher profile systems allow scholars to create these online identifiers and profiles. The practice of researcher identity management and the use of researcher profile systems should be seen as subsets of the larger world of Research Information Management (RIM), which generally addresses institutional-level needs and workflows and which Bryant et al. (2017) defines as "aggregation, curation, and utilization of metadata about research activities."

The practice of researcher identity management bears significant overlap with efforts to implement name authority control and provide author disambiguation in electronic systems; indeed, several services discussed here provide unique identifiers for authors and creators. But the focus of this column is primarily on the individual identifying him, her, or herself, and not on large-scale institutional or consortial efforts to identify individuals and create name authority records or identifiers.

Researcher profile systems discussed in this column are the Open Researcher and Contributor Identifier (ORCID), Google Scholar Citations, Scopus Author ID, and Web of Science ResearcherID. These four systems are widely available and widely used, but they are not the only services and systems available in this realm. Shanks and Arlitsch (2016) examined a broader spectrum of researcher services, breaking these services into three categories: author/researcher identification, academic and professional networking, and reference and citation management. While there is some overlap in functionality within these categories, the primary area associated with the systems discussed in this column is self-identification of authors and researchers.

Why manage researcher identity?

There are both individual and institutional benefits to the management of researcher identities. Rotenberg and Kushmerick (2011) identified issues that have the potential to cause confusion in relation to identifying authors and correctly attributing their work; these include challenges around name disambiguation, the increasing volume of worldwide scholarship, and the need to meet requirements for tenure and funding through reporting on researcher productivity and impact. Researcher profiles can help address these areas by providing visibility in recognized services and search systems, allowing for disambiguation of author names, and through tracking of citations and other scholarship metrics.

Researcher profile systems

All of the widely used research profile services discussed here are available at no charge to individuals: Google Scholar Citations, ORCID, Scopus Author ID, and Web of Science ResearcherID. Brief descriptions are included in this section; fuller service comparisons follow,

with the goal of assisting researchers, scholars, and librarians in understanding which system or systems would best meet their needs.

1. Google Scholar Citations

<https://scholar.google.com/scholar/citations.html>.

Google describes Google Scholar Citations as “a simple way for authors to keep track of citations to their articles” (Google Scholar, n.d.). The system allows researchers to identify and track their publications as indexed by Google Scholar, and to bring these publications and associated metrics together via a researcher profile. Accounts are provided at no charge, but an individual must have at least one publication that is already indexed by Google Scholar in order to create a profile in the system. Each Google Scholar Citations profile shows a list of the author’s publications as indexed by Google; publication citations include links, but there is no guarantee that readers will be able to access publications without encountering paywalls.

Google Scholar Citations tracks citations of publications and computes *h*-index and *i10* index metrics; these metrics are defined in the *Metrics and impact* section below. The system also provides a visualization of the scholar’s citations per year over time. Researchers can upload a picture, associate themselves with their affiliated institution via email verification, and provide basic information such as their research interests. Researchers also have the option to make their profile show up in public searches or to limit it so the information is only available to the individual. Choosing to limit profile access does not limit the appearance of an individual’s publications within the Google Scholar system.

2. ORCID

<https://orcid.org/>

ORCID is a nonprofit organization that strives to allow everyone who participates in research, scholarship and innovation to be “uniquely identified and connected to their contributions and affiliations, across disciplines, borders, and time” (ORCID, n.d.). ORCID offers persistent digital author identification via a sixteen-digit number—an ORCID identifier or ORCID iD—and an associated profile. Any individual can sign up at no cost; institutional memberships are also available for funders, publishers, and research organizations. ORCID is used worldwide, and some publishers and funders require authors and investigators to have an ORCID iD.

ORCID users can populate their profiles with information about their employment, education, memberships, publications, funding, and more. Crossref and other metadata services are integrated into ORCID, allowing users to identify their scholarly works in extant systems and use that data to populate their profiles; there is also an option to manually enter information about works. An individual’s works appear with basic citation information and include Digital Object Identifiers (DOIs) when applicable; but because scholarly works are not stored in ORCID, individuals may encounter paywalls when trying to access these works. While ORCID can be used to provide information about an individual’s publications, the system does not track citation counts or provide other metrics on research impact.

ORCID offers a variety of privacy settings. Users can elect to share some or all parts of their profiles publicly, with “trusted parties” (as identified by the individual), or can limit information display to only themselves. These privacy settings can be applied across the profile or to specific sections within the profile. Limiting the visibility of some sections or the entirety of a profile does not affect the user’s ability to use or be identified via their ORCID iD number.

3. Scopus Author ID

<https://www.scopus.com/freelookup/form/author.uri>

Scopus, an Elsevier product, offers researcher profiles through Scopus Author ID. Unlike other researcher profiles described in this column, Scopus author identifiers are automatically assigned for authors who have published articles in journals indexed in Scopus. Because profiles are automatically created, individuals who think their work may have been indexed in Scopus may want to consider searching for themselves in the system in order to verify the accuracy of any available information. Individuals can submit changes—such as duplicate profiles or incorrect information—to Scopus for correction.

Profiles in Scopus Author ID display an individual’s name (including variant forms under which they have published), institutional affiliation, and lists of publications and citations. Publication lists include the option to “Find full text,” but users should be aware that they may encounter paywalls when attempting to use Scopus to locate full-text versions. Scopus Author ID profiles also calculate *h*-index and graph publications and citations over time. While correction requests can be submitted to Scopus, users do not otherwise have the option to limit or otherwise control the availability of their profiles in the system.

4. Web of Science ResearcherID

<https://www.researcherid.com/#rid-for-researchers>

Web of Science ResearcherID, part of the Web of Science Group, uses the Publons online system to allow researchers to track publications, citations, and peer review and editorial activities. Anyone can sign up for an account at no charge, without regard to institutional affiliation with or purchase of Web of Science products. Upon signing up, each individual is assigned a unique alphanumeric code—their ResearcherID number. The Publons system allows individuals to build a robust profile with information about their research fields, institutional and organizational affiliations, and biographical information. The system tracks publications and citations, providing visualizations of both over time. Publication and citation metrics are tracked through Web of Science, via articles indexed in the Web of Science Core Collection. The system calculates author *h*-index scores and provides Altmetric scores that include mentions on social media, readership on Mendeley, and other online mentions and activity. Individuals can link an extant ORCID identifier to their ResearcherID account and can also connect certain social media accounts if desired.

Web of Science ResearcherID profiles are publicly available, but individual account holders can choose to exclude some elements—including metrics and impact—from public availability.

Selecting an appropriate researcher profile system

With the availability of the above systems and more, researchers may be uncertain about which researcher profile systems may be most beneficial to them. Libraries and librarians have an opportunity to assist researchers in this area. Some questions for consideration are as follows:

- What systems index work in the researcher's field(s)?
- What, if any, systems do the researcher's funders or publishers recommend or require?
- What, if any, systems do the researcher's institution recommend or support?
- What systems do the researcher's colleagues and collaborators use?
- For graduate students, what systems do their advisors recommend?
- Which systems capture the widest depiction of usage (such as citation counts) or otherwise provide the most favorable metrics on the individual's research and scholarship?

Usage and availability

At the time of this writing, ORCID's website states that nearly 7.5 million ORCID iDs exist (ORCID, 2019). Publons, the system used by Web of Science ResearcherID, states that over two million researchers use the system (Publons, n.d.a). Current statistics on the number of extant Google Scholar Citations profiles and Scopus Author IDs were not immediately available at the time of this writing.

All systems considered in this article currently offer user accounts at no charge for individuals; however, not all systems are available to all users. Any individual can sign up for an account in ORCID and Web of Science ResearcherID, regardless of their publication history; as such, these systems may be the most appropriate selections for graduate students and other early-career researchers. Google Scholar Citations is only available to authors who have publications that have been indexed by Google Scholar. Likewise, Scopus Author IDs are only created for authors who have at least one publication in a journal indexed by Scopus. Thus, researchers who have limited publication histories may not have Google Scholar Citations profiles or Scopus Author IDs immediately available to them. Individuals who are not yet eligible for Google Scholar Citations profiles or Scopus Author IDs can sign up for accounts through ORCID and Web of Science ResearcherID.

Account management and privacy options

While all systems considered above may contain information related to an individual's work—generally through publication citations—without the explicit creation of a profile, Scopus Author ID is the only system in which the creation of a user account is not self-initiated. Authors who have papers indexed in Scopus will have a profile automatically created for them by the system. There are feedback and error-reporting options available within Scopus, so it benefits individuals

to look up their information and discern its accuracy. User-specific privacy controls are not available as part of the system.

The other systems considered above do include varying levels of user privacy controls. ORCID offers the most granular privacy settings, allowing users to limit access to individual profile components, such as works on their list of publications, funded grants, and employment history. ORCID users can also elect to apply account-level privacy settings to restrict or allow access to their full profile; users can choose to make their profiles publicly available, accessible only to themselves, or accessible to trusted parties only (trusted parties are organizations or individuals identified by the user). As noted above, a user's account privacy settings do not impact the user's ability to use and be identified by their ORCID iD. Users of Google Scholar Citations can elect to make their profiles publicly viewable or restrict the profile so that information is only available to the user; a private profile does not limit the inclusion of an individual's publications in searches of Google Scholar. Profiles in Web of Science ResearcherID are publicly available, but users have the option to limit access to their publication metrics, review metrics, and Web of Science *h*-index score.

In the three systems that allow users to enter data and control elements of their profiles—ORCID, Google Scholar Citations, and Web of Science ResearcherID—individuals should exercise judgment in selecting what information to share about themselves. Librarians may be able to assist users in identifying and presenting appropriate information.

Metrics and impact

Tenure-track researchers and others looking to demonstrate impact may find value in research profiles that provide citation counts and other metrics; several systems considered in this column offer support in this area: Google Scholar Citations, Scopus Author ID, and Web of Science ResearcherID. ORCID does not provide citation metrics or other impact calculations.

When examining citation counts and other metrics, the size of the universe of indexed content within each system is a key consideration. Scopus states that it indexes over 22,000 titles (Scopus, n.d.). The Web of Science Core Collection is used to provide publication metrics for Web of Science ResearcherID; this collection includes over 20,000 journals (Publons, n.d.b). Google Scholar does not provide data on the number of publications it indexes. However, Gusenbauer's (2019) research estimates that Google Scholar's database includes nearly 400 million records, while estimating that both Scopus and Web of Science Core Collection each include approximately 60 million records. Authors may see the sizes of these record groups affect the relative number of their own publications that are available in each system, as well as the number of indexed works that cite their publications. Due to the larger size of Google Scholar's corpus of content, it is likely—but not guaranteed—that many authors will see higher citation counts and metrics in that system than in Web of Science ResearcherID or Scopus Author ID.

Google Scholar Citations, Web of Science ResearcherID, and Scopus Author ID all track publication citation counts and calculate author *h*-index; and due to the variance in indexed content across these systems, authors may find that their citation counts and *h*-indexes are

different in each system. *H*-index was first proposed by J.E. Hirsch in 2005; this metric calculates the number of an author's papers that have been cited *h* times or more (Hirsch, 2005). For example, a researcher with an *h*-index of twenty has published twenty papers that have *each* been cited twenty or more times. Google Scholar Citations also calculates i10 index, which measures the number of an individual's articles that have ten or more citations (Connor, 2011).

In addition to citation counts and *h*-index calculation, Web of Science ResearcherID also provides Altmetric scores that include mentions on social media such as Twitter, readership on Mendeley, and other online mentions and activity. An individual's Altmetric scores are not publicly available but can be accessed through the author dashboard.

To gain the fullest picture of their impact—especially when preparing for processes such as tenure and promotion—scholars may wish to have accounts in Google Scholar Citations, Web of Science ResearcherID, and Scopus Author ID. Librarians can assist in helping scholars understand available metrics and contextualizing their meaning in each system.

Other considerations

While all researcher profile systems considered here offer similar baseline information such as researcher name, publication list, and affiliation(s), some systems offer additional features not discussed above.

- Business model: ORCID is the only nonprofit entity considered here; Google Scholar Citations, Scopus Author ID, and Web of Science ResearcherID are all part of larger for-profit companies.
- Grants: For researchers who are involved in grants and other funded research, ORCID provides the opportunity to include an individual's funding awards as part of the ORCID profile.
- Persistent identifier: Three systems considered above—ORCID, Scopus Author ID, and Web of Science ResearcherID assign unique alphanumeric strings to users to assist in identification and disambiguation. Google Scholar, while offering individual profiles, does not assign or offer individual identifiers to users.
- Reviewing: For researchers who are involved in peer review activities for journals, conferences, and grants, the Publons online system used by Web of Science ResearcherID allows individuals to highlight peer review work by including it in the online profile. This feature offers privacy controls that can hide review content while still identifying the user's official affiliation as a reviewer associated with the journal, conference, or other institution.

A note about open access

While the researcher profile systems described above can provide many benefits, including increasing the visibility of scholars and their research products, none of these systems are designed with the purpose of sharing open access scholarship. Each system provides scholarly citations, generally including links, DOIs, or other options to locate the full text. But a user's

ability to access full-text works through links in these systems is not guaranteed; users may encounter paywalls or other barriers that impede them from directly accessing the content.

Scholars who wish to support open access may also want to consider sharing their work via open access institutional or subject-specific repositories, in addition to considering creating profiles in the systems discussed above.

Conclusion

Researchers in all career stages can benefit from managing their research identity online. This column discussed four widely used options—Google Scholar Citations, ORCID, Scopus Author ID, and Web of Science ResearcherID—which researchers may want to consider when negotiating their online research identities and selecting appropriate researcher profile systems. These systems can help individuals establish a professional and visible scholarly presence online and can provide information about publications, citation counts, other impact metrics, peer review activities, and more. Librarians who liaise with or otherwise support faculty, graduate students, and other researchers are well-positioned to assist in selecting, promoting, and understanding the use of these systems.

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