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# An initiative to address name ambiguity

## Implementing ORCID at a large academic institution

mong the thousands of authors publishing all over the world, some have distinctive surnames, but numerous others have names that can be similar to one another or even precisely the same. Therefore, when searching for a particular author, it is often necessary to match the name with the topic, the provenance, or the timeframe, and still one would have to guess and hope that one has located the correct author. For example, searching in PubMed for the author lee j retrieves more than 54,468 records. Thus, a researcher's name is insufficient to reliably identify the author of, or contributor to, an article published in a journal or in a dataset uploaded to a repository. Obviously, a foolproof method to distinguish and disambiguate names in both the published and unpublished literature would be very helpful, and is, in fact, becoming a necessity in these times of extensive research and publication.

ORCID stands for Open Researcher and Contributor ID. It is an open, nonprofit initiative that provides a registry of unique researcher identifiers resulting in a transparent method of linking research activities and published outputs to these identifiers. ORCID has the ability to reach across disciplines, research sectors, and national boundaries to solve researcher name ambiguity and thus assure that each author and researcher derives full credit for his or her

work.¹ ORCID is currently being integrated into the workflow of granting agencies and journal manuscript submission systems internationally. This article describes the steps taken by one large academic institution, the University of Michigan (UM), to establish and implement ORCID on its campus.

On October 16, 2012, the ORCID initiative was officially launched and began to issue its unique identifiers. The number of those identifiers continues to increase.<sup>2</sup> ORCIDs are indicated as URLs with a 16-digit machine-readable identifier, i.e., http://orcid.org/0000-0002-9793-535X. ORCID distinguishes an individual scientist and author in much the same way that a Digital Object Identifier (DOI) uniquely identifies a paper, book, or other scholarly publication.<sup>3</sup>

Across the UM campus, issues with name disambiguation range in areas across the spectrum, from selecting the right name from the online directory to overcoming difficulties that librarians and researchers encounter when seeking a particular author and confusing him or her with someone with the same or a similar name. To resolve this issue, MLibrary elected to implement

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ORCID, since this nonprofit initiative distinguishes a specific researcher from other researchers. and since it is now being integrated into key research workflows such as manuscript and grant submissions. ORCID also supports automated linkages between researchers at



Open Researcher and Contributor ID (ORCID) Online Research Guide.

the UM and their professional activities, thus ensuring that each individual's work is properly recognized.

#### Implementing ORCID at UM

In December of 2012, the UM MLibrary signed a member license agreement with ORCID, permitting, among other factors, UM to create ORCID records, deposit to existing ORCID records, and employ various application program interfaces (APIs) along with the data that those APIs can access to perform tasks associated with an ORCID.

APIs allow programmers to use predefined functions to interact with the operating system. To determine how best to move forward with implementing ORCIDs, a task force was set up to select steps to facilitate and encourage its use at UM.

The ORCID task force was charged with the following:

- become a team of ORCID experts;
- identify and prioritize library systems that are good candidates for ORCID implementation;
- establish workflows and processes that will propagate ORCID;

- identify and prioritize administrative systems that are good candidates for ORCID implementation;
- make recommendations for how the library can engage the stakeholders who manage various administrative systems, e.g., UM Medical School's New Faculty Onboarding systems;<sup>4</sup> and
- document and assess the library's use of ORCID.

Having purchased a membership in ORCID for a term extending through December 31, 2015, MLibrary became committed to the project on a financial, as well as a philosophical, level. As an ORCID member, MLibrary has the ability to create ORCIDs for UM researchers proactively and then promote their use. The first step in doing this was to assign ORCIDs to all 200 of our librarians. After this was accomplished successfully through email solicitation and detailed explanation, the members of the task force were further encouraged to move forward proactively and do the same for the faculty in other departments with whom they had a library liaison arrangement.

The Implementation Task Force is working with the MLibrary's ORCID project man-

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agement/leadership group, Information and Technology Services (ITS),<sup>5</sup> Medical School Information Services (MSIS),<sup>6</sup> the Inter-University Consortium for Political and Social Research (ICPSR),<sup>7</sup> and the Taubman Health Sciences Library (THSL).<sup>8</sup> At this point, the task force proposed to have UM's integration into ORCID proceed in three phases:

- Phase 1. Prepare MCommunity for ORCID iD data. ITS is developing a "scholarly identifier" field that will display the individual's ORCID iD. The plan is to test the field using last year's pilot group of librarians who were assigned iDs through ORCID's APIs.
- Phase 2. Design a system for self-reporting current iDs and self-provisioning or "minting" new ORCID iDs. The task force is working with example code for a web application, such as that used by Boston University, to accomplish this and is still in discussions about the venue where the app will be hosted—as a stand-alone website or as part of the MCommunity Directory —or somewhere else entirely; when it will be released, etc.; and which additional items have to be included in the process.
- Phase 3. Onboarding/auto provisioning of ORCID iDs for future employees and possibly students.

The action items decided upon were delineated:

- MCommunity field: ITS is developing functional requirements for displaying ORCID iDs in MCommunity, and then developing mockups of the scholarly identifier field, with the ORCID iD as one attribute. ITS has also developed its own implementation to document and employ cases for assigning and managing ORCID iDs.
- ORCID data stewardship: ITS and the MLibrary's ORCID group are currently analyzing the potential data stewards for ORCID.

Determining the long-term stewardship of iDs will be essential as the task force continues to develop its technical implementation and communication plans. The members of the MLibrary ORCID leadership group are working on drawing up effective communications to departmental research associate deans, and, ultimately, the communication that will be issued by the provost to the UM campus. Again, this process is still under discussion, especially since it is linked to the decision about the long-term home, stewardship, and sustainability of ORCID on the campus.

To date, the faculty, authors, and researchers in the Department of Human Genetics,11 as well as the members of the Department of Computational Medicine and Bioinformatics,12 have been assigned ORCIDs. Both departments are moving ahead rapidly in implementing the ORCID system. After a presentation that a librarian made at their regular faculty meeting was well received, all the participants opted to use all possible APIs based on UM's ORCID institutional subscription. After each faculty member had been assigned an ORCID number, the liaison librarian to that department met, upon request, with several individuals to provide more detailed instructions on how to manage their own personal ORCID accounts.

Subsequently, a librarian who is a member of the task force created an online guide to facilitate disseminating the specifics for managing ORCID.<sup>13</sup> This guide was later incorporated into a poster displayed at the Michigan Health Sciences Libraries Association 2013 Conference in Grand Rapids, Michigan; the 2014 Medical Library Association Conference in Chicago; and the 2014 ORCID Ambassadors' Meeting in Chicago.

ORCIDs have been incorporated into Deep Blue, <sup>14</sup> the university's institutional repository maintained for current authors to deposit their works. Deep Blue is the only system in which the university controls the metadata; therefore, records and items are by definition certain to have at least one UM author.

The task force, in addition to work with MCommunity, is collaborating with several other systems in which authors and creators

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supply metadata. These systems include Michigan Experts<sup>15</sup> and M-CV, the UM Medical School's online Faculty Curriculum Vitae database.<sup>16</sup> The MCommunity Directory contains profiles for every current member of the university community on all three UM campuses—Ann Arbor, Dearborn, and Flint. MCommunity includes students, faculty, staff, alumni, and sponsored affiliates.

A search in the directory for the name *J Lee* returns 45 results. By incorporating ORCIDs into MCommunity records, our researchers need only remember their "uniqname," which is the UM assigned login name. By using ORCID one can now be assured of retrieving data about the correct researcher—the precise individual one has in mind—at UM.

Michigan Experts is a collaboration between the UM Medical School with the Schools of Dentistry, Nursing, and Public Health; the Colleges of Engineering and Pharmacy; the Life Sciences Institute; and the university's Dearborn and Flint campuses. In addition to highlighting individual research expertise, Michigan Experts reveals connections among UM researchers and external faculty and thus can assist in identifying potential collaborators. This tool can also help find mentors and subject matter experts, making connections between faculty, students, staff, and also external users.

M-CV Faculty Curriculum Vitae is the UM Medical School Faculty's online system for depositing and maintaining curriculum vitae. All UM Medical School members must have an M-CV. The application gathers data from disparate sources so that faculty members can quickly generate an official medical school-formatted CV. CVs produced from M-CV are already requested of all faculty members and are required for promotion.

An ORCID allows for the listing of various nontraditional research activities such as datasets, class syllabi, videos, multimedia, gray literature, and more. Since Michigan Experts and M-CV already list

an individual's traditional scientific and research output, adding an ORCID to an entry in Michigan Experts and M-CV adds to and expands an individual's contributions to his or her field.

Assigning ORCIDs to members of the UM community and then incorporating these identifiers into the online systems allow easier linkage across internal data and may also be extended to such external systems as grant-funding agencies, e.g., the National Institutes of Health, the U.S. Department of Defense, and the Wellcome Trust. In addition, such high profile publishers as Nature Publishing Group and Biomed Central now provide online manuscript submissions systems in which entering one's ORCID will prepopulate the researcher's information.

#### Conclusion

With thousands of authors publishing internationally, many of whom have names that are similar if not exactly the same as each other, UM's M-Library saw a need to clear up confusion and to distinguish between similar names by instituting unique identifiers for researchers.

Incorporating ORCID into our university's researchers' workflow seems to have greatly diminished their need for a tedious, time-consuming hunt for details about their previous publications. In addition, because of the current emphasis on academic cooperation and collaboration across disciplines, ORCID facilitates networking among our university colleagues. Although we have not conducted a formal survey of outcomes, we have noted subjectively that many of our researchers have eagerly accepted and seem delighted with the institution of the ORCID system. Further, we believe that because of their enthusiasm about ORCID, word-of-mouth has helped us successfully promote and disseminate information about it

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