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***Disambiguating Transportation Authors with Unique ORCID(r) Identifiers***

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# DISAMBIGUATING TRANSPORTATION AUTHORS WITH UNIQUE ORCID IDENTIFIERS



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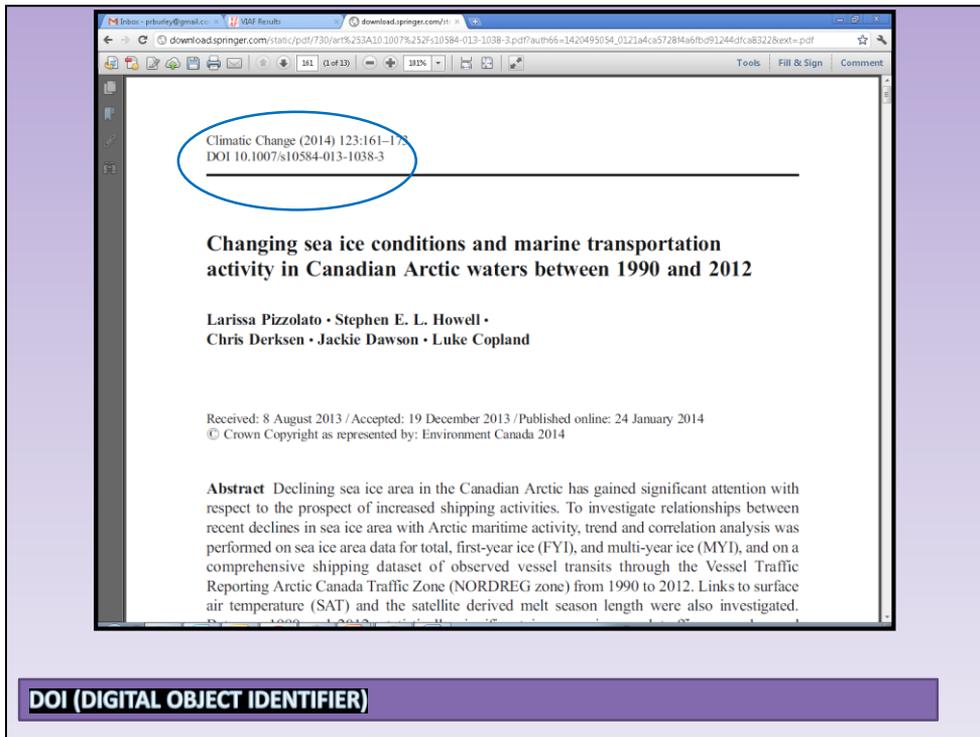
January 23, 2014

Paul Burley:

I'm Paul Burley from the Northwestern University Transportation Library. I'm so pleased to speak with Leighton Christiansen of the Iowa Department of Transportation.

The topic of our presentation is: Disambiguating Transportation Authors with Unique ORCID Identifiers.

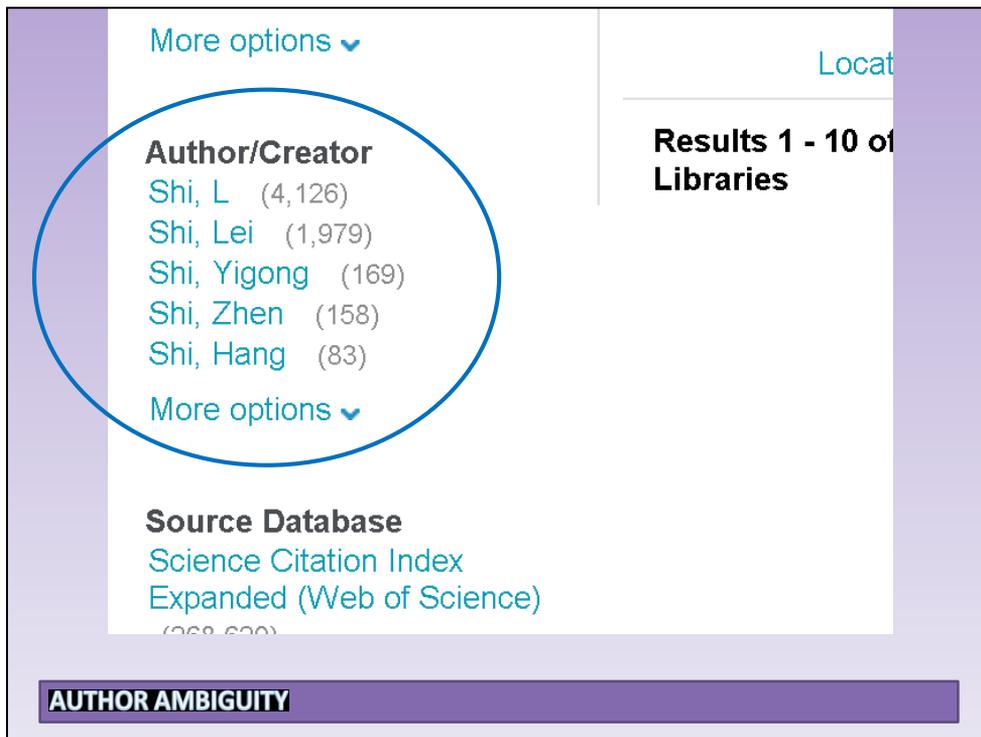
The presentation will also be presented in more detail as a poster at the Transportation Research Board Annual Meeting.



Let's start with looking back at the DOI, the digital object identifier.

The DOI is a unique string of characters that distinguish one electronic document or other resource from another, and allows for, among other thing, the disambiguation of two objects (and we're usually talking about journal articles) with the same or similar titles.

Note that I didn't use an example of a DOI from the Transportation Research Record because they appear at the bottom of the page there, not at the top.



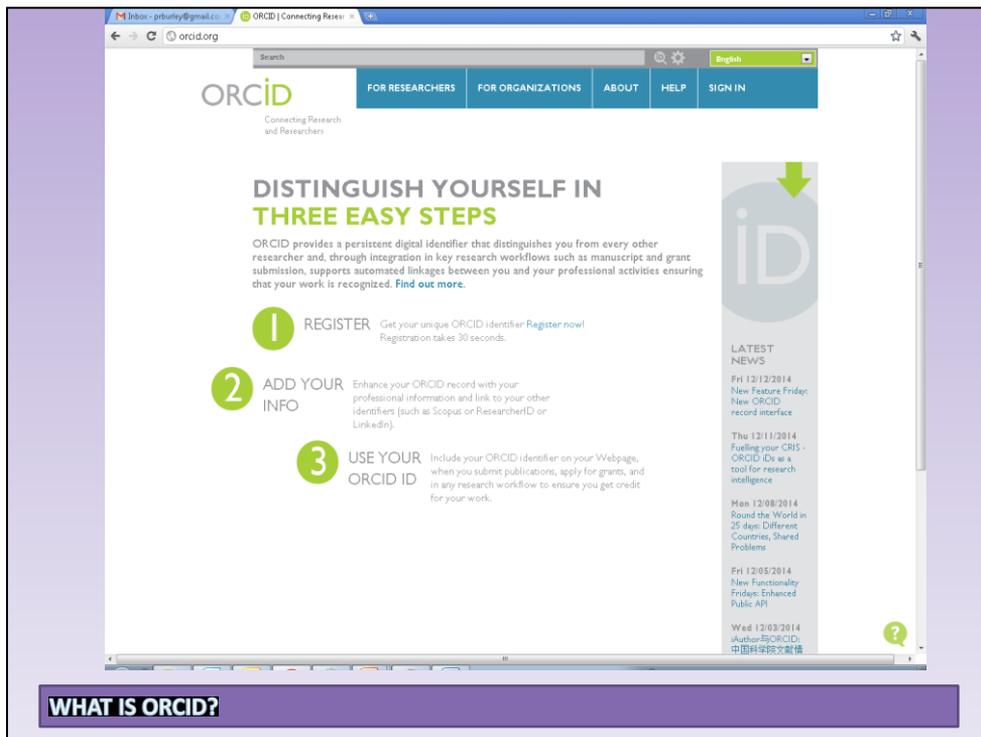
So DOIs provide a unique and persistent identifier for documents.

What about the problem of authors? This has proven problematic.

Distinguishing two authors, who might have the same or similar names, has been more difficult, especially among Asian, and some Western European, authors. ORCID identifiers may help authors disambiguate themselves from others with the same name, even in the same research field.

Note in the example above, a snippet of a screenshot from Nusearch, the new catalog of the Northwestern University Library, that across formats authors named “Shi, L.” are associated with the creation of 4,126 works; “Shi, Yigong”, which is actually a fuller form of a name, is still associated with 169 separate works across separate disciplines; and so on.

The problem of disambiguation of author names is especially noticeable with Chinese authors, as these are the romanized forms of unique names. However, in my authority work the same problem is common with Japanese, German, and often British authors, where a smaller set of forenames and surnames are used.



ORCID, from its website:

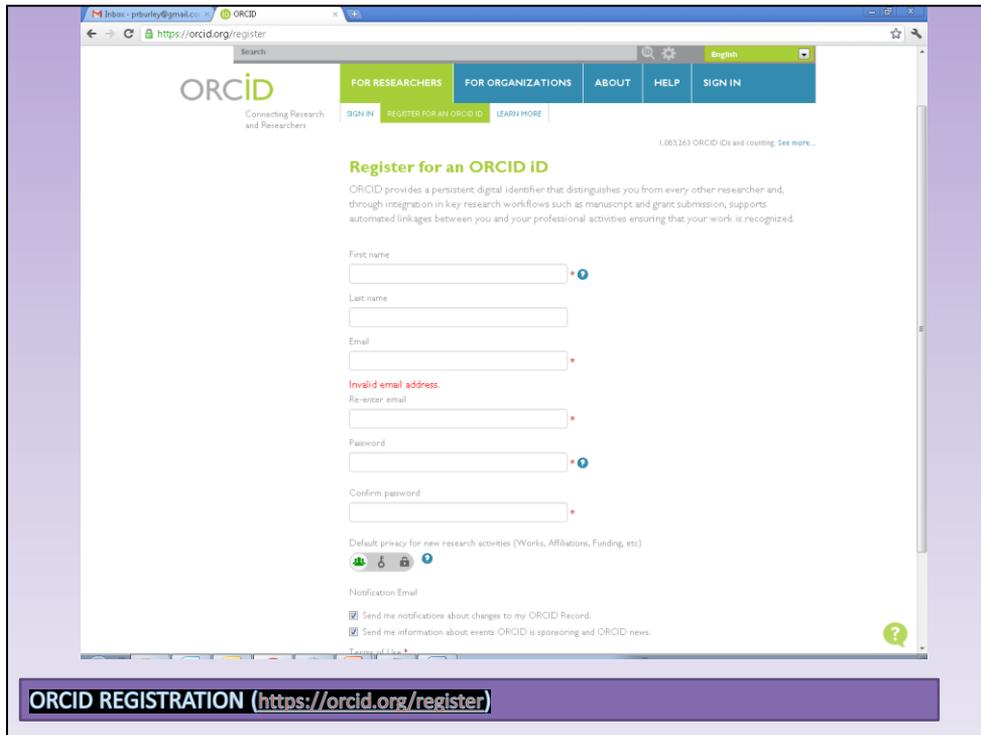
“provides a persistent digital identifier (an ORCID iD) that distinguishes you from every other researcher and, through integration in key research workflows such as manuscript and grant submission, supports automated linkages between you and your professional activities ensuring that your work is recognized.”

The ORCID iD acts as digital signature and link, directing readers to the unique ORCID record for that author, which, if the author chooses, may include contact information as well as other publications by that author.

Basic facts:

- Established in 2012; already surpassed a million members.
- The acronym: note that the ORCID stands for “Open Researcher and Contributor ID”, but only the acronym is used.
- ORCID is governed by representatives from a broad cross-section of stakeholders including publishers, societies, libraries, and other institutions.
- ORCID software developments are released under open-source software license(s) and approved by the Open Source Initiative (OSI)
- Interface is surprisingly multi-lingual for a new initiative: covers Chinese (Simplified

and Traditional), Korean and Japanese, where ORCID is critical; and already Russian, Spanish, French, Portuguese. If ORCID is aiming for widespread use in the international community, this is a good sign.



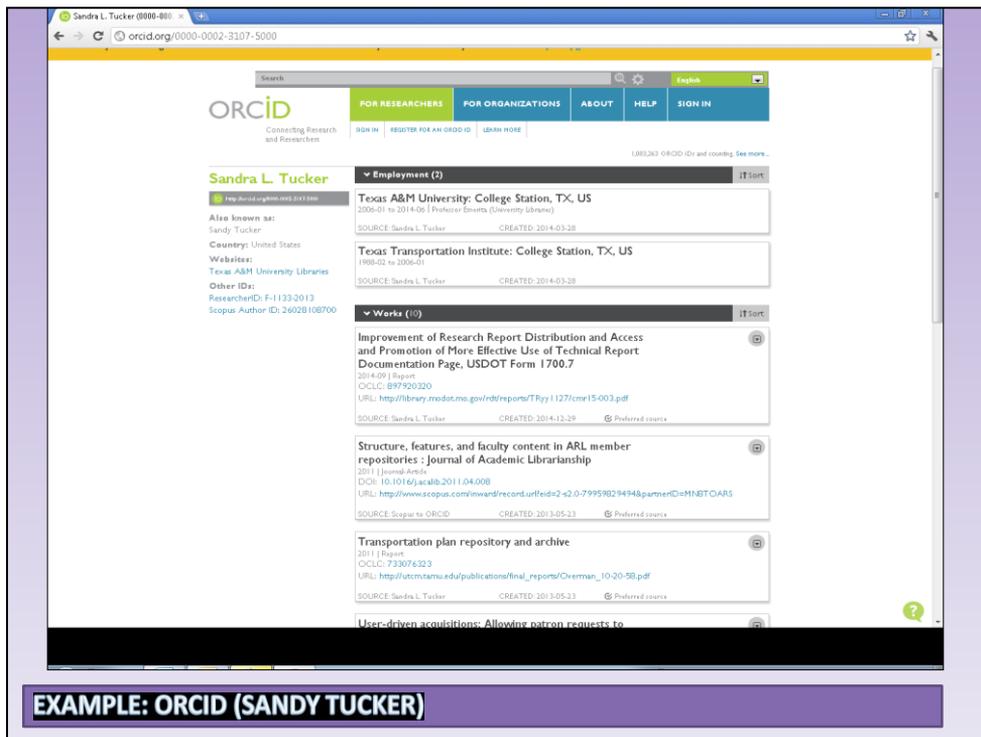
## ORCID registration

Takes approximately 5 minutes; you'll receive a confirmation e-mail to verify, etc.

- Record name, variant forms of your names, including in non-roman scripts;
- Record institutional affiliations (educational institutions, research facilities, etc.);
- Identify publications (we'll see an example in a minute);
- allows you to connect to SCOPUS or other identifiers.

Note: you can literally register for an ORCID id while you're listening to this presentation – the URL is simply

[orcid.org/register](https://orcid.org/register)



An excellent example from our colleague Sandy Tucker.

Note to the left that Sandy has:

- created an ORCID ID
- recorded an alias for her full name;
- provided a website for her institution;
- includes links to other Research ID (Thomson Reuters), and SCOPUS (Elsevier)

At center:

- Employment history, and most importantly,
- Long list of publications, sorted recent date first.



This screen shows the recommended display of an ORCID id.

**Note to:**

- Show the full URI and use hyphens between every fourth digit;
- Display a full URI on the same line;
- Precede the URI with the ORCID iD logo, as shown above.

You'll find these guidelines at: <http://orcid.org/trademark-and-id-display-guidelines>



Organizations become members of ORCID in order to support the accurate dissemination of research by their authors.

Organizational members may:

- Register researchers, students, and other employees for ORCID ids (that have signed the [ORCID member/creator agreement](#))
- Link ORCID ids to their publications and other institutional records
- Track research activities of faculty and staff
- Update organizational ORCID records

However, ORCID itself recommends that:

- ORCID does not recommend this process for most organizations.
- Organization which created ORCID ids for an entire student/faculty body have a very low claim rate: 20%;
- For a specific groups of researchers: 40% claim rate. (Note: I think that sounds like a pretty solid number).

- Will be part of TRB publication submission
- Status at some universities: in process
- Focus on promotion at DOT, etc. level

**ORCID: TRANSPORTATION RESEARCH COMMUNITY**

How can we implement ORCID in the transportation research community?

Already being implemented by TRB as part of the Access.gov initiative. Authors will be encouraged by TRB to submit ORCID ids as part of the TRB publication process. I'm not completely clear on where the NTL/TRB is in this process, but we'll learn much more about it in 2015.

Institutional members. Do we have institutional ORCID members within the transportation community? I don't know.

Northwestern is on the cusp of becoming an institutional member. Note that ORCID is relatively new, and decisions are made on a fiscal year basis.

What can non-institutional members in the transportation community do to promote ORCID among researchers?

This is perhaps the most important point of the presentation. Since you all are at the ground level, and connected to researchers at DOTs, research institutes, etc., please:

- Register for your own ORCID iD right now
- Guide others at your institution to register for an ORCID id through your regular communications venues
- Despite the 40% statistic above, you all are working with target groups of researchers.
- Group and one-on-one promotion will also create visibility for you as a librarian and for your library itself.

Technical Report Documentation Page

<b>1. Report No.</b> IIRAW Project 15-388	<b>2. Government Accession No.</b>	<b>3. Recipient's Catalog No.</b>
<b>4. Title and Subtitle</b> Quantifying Uncertainty in Real Time Performance Measurement for Highway Winter Maintenance Operations - Phase 2	<b>5. Report Date</b> October 2014	
<b>6. Performing Organization Code</b>		<b>7. Author(s)</b> Jiliang Lv, Zhongwen Zhu, and Mark Bauer
<b>8. Performing Organization Report No.</b> IIRAW Project 15-388		<b>9. Performing Organization Name and Address</b> Institute for Transportation Jorn State University 2711 South Loop SW, Suite 4700 Arlene, IA 50810-8016
<b>10. Work Unit No. (if any)</b>		<b>11. Contract or Grant No.</b>
<b>12. Sponsoring Organization Name and Address</b> Iowa Department of Transportation 800 Lincoln Way Ames, IA 50010		<b>13. Type of Report and Period Covered</b> Final report
<b>14. Sponsoring Agency Code</b> SPR 000-013		<b>15. Supplementary Notes</b> Visit www.its.iastate.edu for color plots of data and other research reports.
<b>16. Abstract</b> Winter weather in Iowa often impede traffic and can have an adverse impact on traffic flow. The Iowa Department of Transportation (Iowa DOT) attempts to focus the impact of winter weather events on traffic speeds with various proactive maintenance operations. In order to assess the performance of these maintenance operations, it would be beneficial to develop a model for expected speed reductions based on weather variables and normal maintenance activities. Such a model would allow the Iowa DOT to identify situations in which speed reductions were much greater than or less than would be expected for a given set of given conditions, and make modifications to improve efficiency and effectiveness. The objective of this work was to predict speed changes relative to baseline speed under several conditions, based on normal maintenance schedules and winter weather scenarios (snow type, temperature, and wind speeds) as measured by roadside weather stations. This allows for an assessment of the impact of winter weather covariates on traffic speed changes, and estimation of the effect of regular maintenance passes. The researchers chose events from Adams County, Iowa and fit a linear model incorporating the covariates mentioned previously. A Bayesian analysis was conducted to estimate the values of the parameters of this model. Specifically, the authors produce a distribution for the parameter value that represents the impact of maintenance on traffic speeds. The effect of maintenance is not a constant but rather a value that the researchers have some uncertainty about and this distribution represents what they know about the effect of maintenance. Similarly, maintenance of the distribution for the effect of winter weather covariates are possible. Plots of observed and expected traffic speed changes allow a visual assessment of the model fit. Future work involves expanding the model to incorporate more or an additional location. The model allows for assessment of the impact of winter weather maintenance across various schedules, and eventually identify locations and times in which maintenance could be improved.		
<b>17. Key Words</b> performance measures traffic flow winter maintenance	<b>18. Distribution Statement</b> No restrictions	
<b>19. Security Classification of this report</b> Unclassified	<b>20. Security Classification of this report</b> PDF Unclassified	<b>21. No. of Pages</b> 25
<b>Form DOT F 1700-7 (8-72)</b>		<b>22. Price</b> NA
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**ORCID: TECHNICAL DOCUMENTATION REPORT PAGE**

Finally, could ORCID ids be integrated into a revision of the technical report documentation page?

I personally think the answer is yes, and I think that librarians in the transportation community can see the benefits.

I'll also note that as a cataloger, the days of actually typing an author's name are waning. We're moving away from MARC into a new data structure called BIBFRAME. When we cross into the BIBFRAME environment I believe we'll only be using numerical identifiers, as you see with so many European records now, so this is coming soon.



## Questions / Discussion



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