

IUScholarWorks, Statistics, and Altmetrics

Jim Halliday & Stacy Konkiel
Indiana University Libraries

Digital Library Brown Bag Series
Indiana University || 10/23/2013

#dlbb

Overview

- IUScholarWorks Repository
- Usage statistics
- Altmetrics basics
- Altmetric.com
- Integrating Altmetric.com and DSpace
- Further work
- Discussion

IUScholarWorks Repository

The screenshot shows the homepage of the IUScholarWorks Repository. At the top, there is a red header with the Indiana University logo and the text "INDIANA UNIVERSITY". Below this is a banner with the text "IU ScholarWORKS repository". The main navigation bar includes a home icon, a login link, and dropdown menus for "About the Repository" and "E-Scholarship @ IU". The page is divided into several sections: "Search IUScholarWorks" with a search box and "Go" button; "Browse" with links for "All of IUScholarWorks", "Communities & Collections", "By Issue Date", "Authors", "Titles", and "Subjects"; "My Account" with "Login" and "Register" links; "Statistics" with a "View Usage Statistics" link; "RSS Feeds" with links for "RSS 1.0", "RSS 2.0", and "Atom"; and a "Welcome" section with a paragraph of text and a list of links. The "Communities in IUScholarWorks" section lists various departments and programs with their respective item counts.

Search IUScholarWorks

[Advanced Search](#)

Browse

All of IUScholarWorks
[Communities & Collections](#)
[By Issue Date](#)
[Authors](#)
[Titles](#)
[Subjects](#)

My Account

[Login](#)
[Register](#)

Statistics

[View Usage Statistics](#)

RSS Feeds

[RSS 1.0](#)
 [RSS 2.0](#)
 [Atom](#)

Welcome

IUScholarWorks Repository is service of the [Indiana University Libraries](#) and [Indiana University Digital Library Program](#) to make the work of IU scholars freely available, while ensuring these resources are preserved and organized for the future. Because your work is assigned a stable, permanent Internet address readers will always find it.

- [5 Reasons to deposit your papers](#)
- [FAQ for submitters](#)
- [Getting Started](#)
- [Copyright and Licensing](#)
- [Mediated Submission Form](#)

Communities in IUScholarWorks

Select a community to browse its collections.

- [African American and African Diaspora Studies Department \(Bloomington\)](#) [2]
- [African Studies Program \(Bloomington\)](#) [125]
- [Anthropology Department \(Bloomington\)](#) [11]
- [Archives of Traditional Music \(Bloomington\)](#) [76]
- [Astronomy Department](#) [2]
- [Biology Department \(Bloomington\)](#) [213]
- [Black Diaspora Review](#) [37]
- [Campus Lectures, Presentations and Symposia \(Bloomington\)](#) [25]
- [Center for Applied Economics and Policy Research \(Bloomington\)](#) [51]
- [Center for Latin American & Caribbean Studies \(Bloomington\)](#) [0]
- [Central Eurasian Studies Department \(Bloomington\)](#) [7]
- [Chemistry Department \(Bloomington\)](#) [70]
- [Cognitive Science Program \(Bloomington\)](#) [12]
- [Communication and Culture Department \(Bloomington\)](#) [1]
- [Criminal Justice Department \(Bloomington\)](#) [1]
- [Digital Library Program](#) [1]
- [Dissertations \(Bloomington\)](#) [230]
- [East Asian Languages and Cultures Department \(Bloomington\)](#) [2]
- [Economics Department \(Bloomington\)](#) [2]
- [English Department \(Bloomington\)](#) [2]
- [Faculty Research - General \(Bloomington\)](#) [77]

Founded 2006

DSpace 3.1

10000 items+

7000+ authors

Usage Statistics

- Used to “assess the use, adoption, implementation, economics, and success of [institutional repositories]” (Borgman & Larsen, 2003)
- Usage statistics include:
 - Pageviews
 - Downloads
 - Abstract vs. full-text views (SSRN)
 - Web session length
 - Unique visitors, etc

Applied Usage Statistics in IRs

- Recommender systems (Bollen & Luce, 2002)
- Predict research trends (Bollen, Luce, Sekhara Vemulapalli & Xu, 2003)
 - Predict and meet user needs better than the JIF
- Rank the popularity of content based on web session length (Khoo *et al*, 2008)

Applied Usage Statistics in IRs

- Meaningful disciplinary metrics for subject repositories (Armbruster, 2008)
 - Abstract display counts
 - Page views
 - Document downloads
- Provide understanding of IR and research impact to authors, university/library administration (Konkiel & Scherer, 2013)

Challenges for IR usage statistics

- Redundancy (Hull, Pettifer & Kell, 2008)
- Metadata inconsistencies (Hull, Pettifer & Kell, 2008)
- Author disambiguation (Warner, 2009)
- Disengaged faculty (Janz & Wilson, 2008; Kim 2008; Xia & Sun, 2007; Xia 2007; Xia 2008)
- Little context or understanding how content is used (Wacha & Wisner, 2011)

Addressing the challenges

- Redundancy
 - Enhancing metadata with PIDs and citations
- Metadata inconsistencies
 - Librarian enhancement to reconcile disparate vers.
- Author disambiguation
 - ORCID & other author identifiers
 - Re-engineering of Dspace...or move on to another platform
- Disengaged faculty
 - Continue to support engaged faculty, allow control over metrics
- Little context or understanding how content is used
 - Altmetrics

STARTING SMALL: ADDING SIMPLE USAGE STATS FOR IUSCHOLARWORKS

Statistics in IUScholarWorks – the old way

Traditionally, usage statistics for IUSW repository were gathered in 3 ways

- Apache logs: comprehensive, but hard to use
- DSpace logs: more easily parsed, but not available to public
- Google Analytics: Useful and filtered, but not available to the public

Statistics in IU ScholarWorks – the new way

DSpace 3.0+ incorporates:

- SOLR-based search data
- Dynamic filtering for robots and crawlers
- Page view and file downloads tracked

Statistics in IUSW Repository – LIVE!

File view and download statistics are available for every item in IUSW Repository.

Statistics now go back all the way to the beginning of the repository in 2007.

Custom conversion script used to convert Apache log files for stats before 2012.

**STARTING SMALL: TESTING
ALTMETRICS IN IUSCHOLARWORKS**

altmetrics

Altmetrics = “Alternative metrics”

Track the usage and sharing of scholarly outputs on the social web

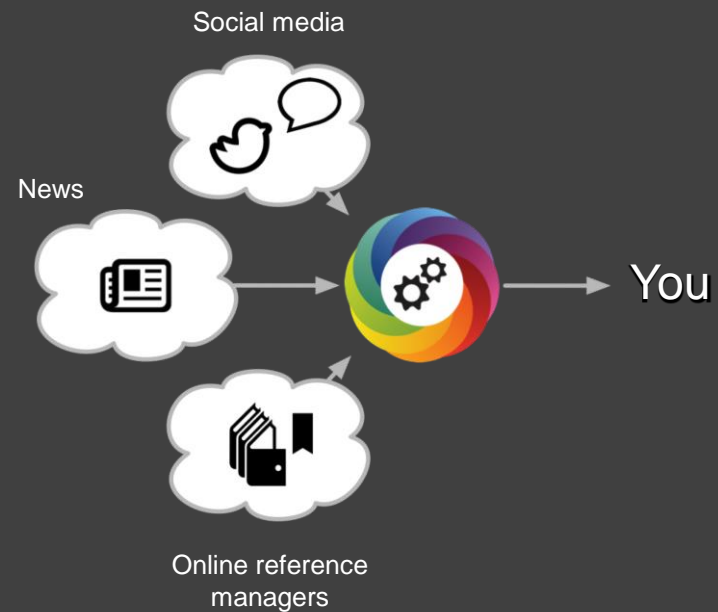


(Image via <http://altmetrics.org/manifesto/>)



What does Altmetric do?

- Measures the online attention surrounding journal articles and datasets.
- Collect and deliver article-level metrics to publishers, libraries, repositories, researchers, and more.

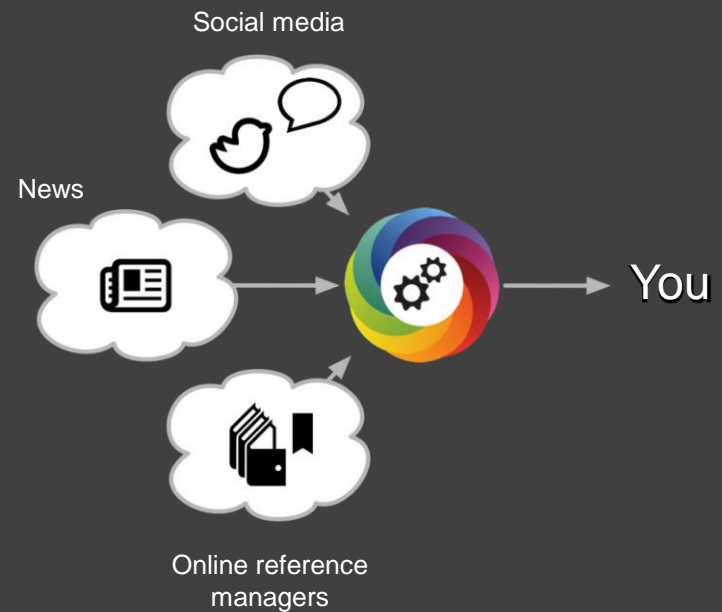


(Liu & Adie, 2013)



How does Altmetric work?

- . Bookmarklet
- . Altmetric Explorer
- . Embeddable Badges
- . API Access



(Liu & Adie, 2013)



Altmetric

Altmetric “badges”

- Displayed on journal and repository websites
- Embedded via javascript
- DOI or other identifier passed in as a parameter

Online attention



Altmetric score (what's this?)

- Tweeted by 13
- On 1 Facebook pages
- 0 readers on Mendeley
- 0 readers on CiteULike
- 0 readers on Connotea

This Altmetric score means that the article is:

- in the 90 percentile of a sample of 10,000 of the 31,481 tracked articles of a similar age in all journals
- in the 35 percentile (ranked 348th) of the 535 tracked articles of a similar age in *Nature*

(Via <http://bit.ly/13YfCxT>)

Statistics

[View Usage Statistics](#)



(Via <http://bit.ly/11JbVQ1>)

Integration with IUScholarWorks

Issues

- Getting access to Altmetric
- DOI vs. Handle
- Altmetric badge on XMLUI
- IU-branded landing page
- Allowing authors control over displaying metrics for their deposits

Integration with IU ScholarWorks

Issues

- Getting access to Altmetric
- DOI vs. Handle
- Altmetric badge on XMLUI
- IU-branded landing page
- Allowing authors control over displaying metrics for their deposits

“Altmetrics in libraries and institutional repositories,”
Altmetric Blog,
<http://go.iu.edu/7IM>

Integration with IUScholarWorks

Issues

- Getting access to Altmetric
- DOI vs. Handle
- Altmetric badge on XMLUI
- IU-branded landing page
- Allowing authors control over displaying metrics for their deposits

Integration with IUScholarWorks

Issues

- Getting access to Altmetric
- DOI vs. Handle
- **Altmetric badge on XMLUI**
- IU-branded landing page
- Allowing authors control over displaying metrics for their deposits

The screenshot shows the IUScholarWorks repository interface. The main content area displays the article title, authors, and abstract. A red circle highlights the 'Statistics' link in the left sidebar, which is currently selected. Below the article title, the abstract text is visible, mentioning 'WikiProteins enables community annotation in a Wiki-based system'.

Statistics

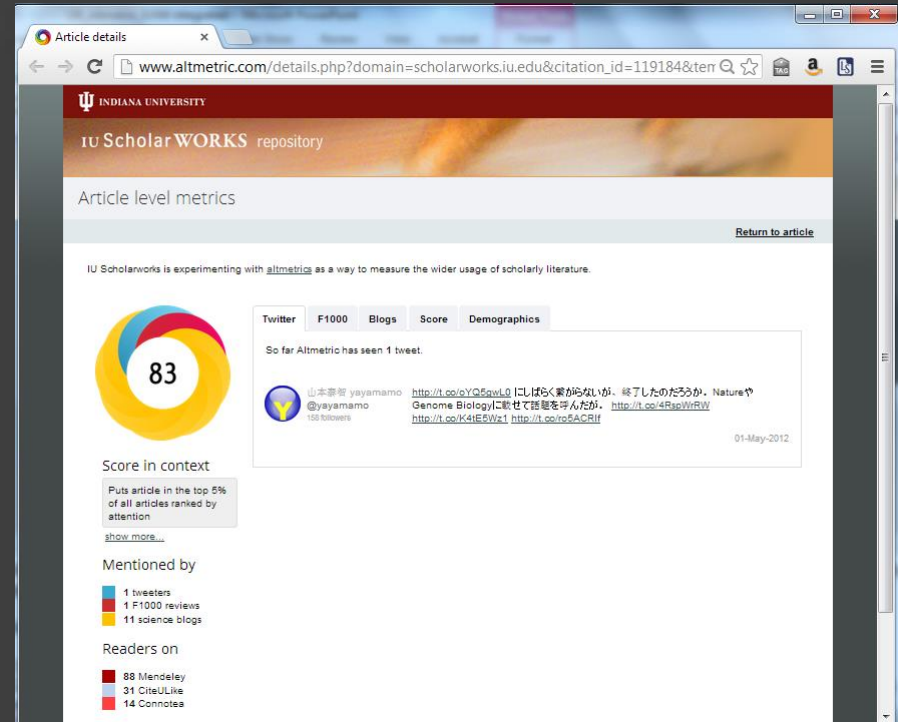
[View Usage Statistics](#)

Altmetric 83

Integration with IUScholarWorks

Issues

- Getting access to Altmetric
- DOI vs. Handle mapping
- Altmetric badge on XMLUI
- **IU-branded landing page**
- Allowing authors control over displaying metrics for their deposits



Integration with IUScholarWorks

Issues

- Getting access to Altmetric
- DOI vs. Handle mapping
- Altmetric badge on XMLUI
- IU-branded landing page
- **Allowing authors control over displaying metrics for their deposits**

The screenshot shows a metadata editor interface. On the left is a navigation menu with the following items: Access Control, People, Groups, Authorizations, Registries, Metadata, Format, Items, Withdrawn Items, Private Items, Control Panel, Statistics, Import Metadata, and Curation Tasks. The main area contains several sections: a large empty text box at the top; a 'Rights URL:' section with a description 'Enter a link to an outside description of the terms governing use and reproduction, such as those from Creative Commons.' and a text box containing 'This item is available for reuse under a Creative Commons Attribution 3.0 (CC-BY) license.'; a 'Description:' section with a description 'Enter any other description or comments in this box.' and an empty text box; and an 'Altmetrics Display:' section with a description 'Select whether or not to display public altmetrics data for this item.' and a dropdown menu currently showing 'true'. Below the dropdown is a tooltip that reads 'Select whether or not to display public altmetrics data for this item.' At the bottom of the form are buttons for '< Previous', 'Save & Exit', and 'Next >'.

This is a close-up of the 'Altmetrics Display:' section from the previous screenshot. It shows the dropdown menu with 'true' selected. A tooltip is visible over the dropdown, containing the text 'Select whether or not to display public altmetrics data for this item.' Below the dropdown are three buttons: '< Previous', 'Save & Exit', and 'Next >'.

Integration with IUScholarWorks

Technical Details

- New metadata element to hold altmetrics display toggle
- New config value to turn on altmetrics overall
- Edited input-forms.xml to show display toggle on item ingest
- Theme changes to add altmetric badge and link it to item handle
- Change in Navigation.java to control placement of badge

Future work

- **Release code publicly**
- **Integration with DSpace stats page**
- **User testing & deployment**
- **Ranked lists for IR content**
- **Author profiles**
- **Exporting data for “business” analysis**

References

- Armbruster, C. (2008). *Access, Usage and Citation Metrics: What Function for Digital Libraries and Repositories in Research Evaluation? Social Science Research Network Working Paper Series*. Berlin: SSRN. doi:10.2139/ssrn.1088453
- Bollen, J., & Luce, R. (2002). Evaluation of Digital Library Impact and User Communities by Analysis of Usage Patterns. *D-Lib Magazine*, 8(6). Retrieved from <http://www.dlib.org/dlib/june02/bollen/06bollen.html>
- Bollen, J., Luce, R., Sekhara Vemulapalli, S., & Xu, W. (2003). Usage Analysis for the Identification of Research Trends in Digital Libraries. *D-Lib Magazine*, 9(5). Retrieved from <http://www.dlib.org/dlib/may03/bollen/05bollen.html>
- Borgman, C. L., & Larsen, R. (2003). ECDL 2003 Workshop Report: Digital Library Evaluation - Metrics, Testbeds and Processes. *D-Lib Magazine*, 9(9). Retrieved from <http://www.dlib.org/dlib/september03/09inbrief.html>
- Hull, D., Pettifer, S. R., & Kell, D. B. (2008). Defrosting the digital library: bibliographic tools for the next generation web. (J. McEntyre, Ed.) *PLoS computational biology*, 4(10), e1000204. Retrieved from <http://dx.plos.org/10.1371/journal.pcbi.1000204>
- Jantz, R. C., & Wilson, M. C. (2008). Institutional Repositories: Faculty Deposits, Marketing, and the Reform of Scholarly Communication. *The Journal of Academic Librarianship*, 34(3), 186–195. doi:10.1016/j.acalib.2008.03.014
- Khoo, M., Pagano, J., Washington, A. L., Recker, M., Palmer, B., & Donahue, R. A. (2008). Using Web Metrics to Analyze Digital Libraries. In *Proceedings of the 8th ACM/IEEE-CS joint conference on Digital libraries - JCDL '08* (pp. 375 – 384). New York, New York, USA: ACM Press. doi:10.1145/1378889.1378956
- Kim, J.-H. (2008). Faculty Self-Archiving Behavior: Factors Affecting the Decision to Self-Archive. Retrieved from <http://deepblue.lib.umich.edu/handle/2027.42/61564>
- Konkiel, S., & Scherer, D. (2013). New opportunities for repositories in the age of altmetrics. *Bulletin of the American Society for Information Science and Technology*, 39(4), 22–26. doi:10.1002/bult.2013.1720390408
- Wacha, M., & Wisner, M. (2011). Measuring Value in Open Access Repositories. *The Serials Librarian*, 61(3-4), 377–388. doi:10.1080/0361526X.2011.580423
- Warner, S. (2009). Author Identifiers in Scholarly Repositories. *Context*, 1–10. Digital Libraries. Retrieved from <http://arxiv.org/abs/1003.1345>
- Xia, J. (2008). A Comparison of Subject and Institutional Repositories in Self-archiving Practices. *The Journal of Academic Librarianship*, 34(6), 489–495. doi:10.1016/j.acalib.2008.09.016
- Xia, J., & Sun, L. (2007). Assessment of Self-Archiving in Institutional Repositories: Depositorship and Full-Text Availability. *Serials Review*, 33(1), 14–21. doi:10.1016/j.serrev.2006.12.003

Discussion



Get in touch.

Email Jim: jhallida@indiana.edu

Email Stacy: skonkiel@indiana.edu

Explore the Altmetric API: <http://api.altmetric.com/>

Source code and documentation:

<https://wiki.dlib.indiana.edu/x/r122Hg>

Thanks to Euan Adie & Jean Liu (Altmetric)

Liu J & Adie E. "Altmetric: Getting Started with Article-Level Metrics."

Presentation available at <http://www.slideshare.net/altmetric/>