

Research Impact, Visibility, and ORCID Author Identifiers Relationships

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Why impact matters

- Used to be *Publish or Perish*.
- Increasingly it's ***Show Impact or Perish***.
 - Departments & schools track citation counts for individuals/subgroups.
 - Funding agencies asking scholars to provide metrics on who, where, and how their research is being used.
 - Academia being asked to justify tuition, student loans, and federal funding, no longer a given.



Research Impact: How to Measure?

> Classic Approaches

- **Publication Counts**- least publishable unit
- **Citations**
 - **Journal Impact Factors** (Clarivate, formerly Thomson Reuters)
 - **Scimago & Scopus** 'Compare Sources'
 - **h-index** (individuals, departments)
- **Grant Peer Reviewers** – potential bias

Research Impact: How to Measure?

> Non-Traditional - A

➤ AltMetrics

- **Usage** – clicks, downloads, views...
- **Captures** – bookmarks, favorites, readers...
- **Mentions** – blogs, comments, Wikipedia
- **Social media** –likes, shares, tweets...
- <http://www.nature.com/nature/journal/v517/n7535/full/nature14098.html>

Research Impact: How to Measure?

> Non-Traditional B

- **Network analysis** of citing papers, collaborators, journals, etc.
- Careful to clean & normalize data to permit valid disciplinary comparisons.
- Leiden Univ. is leading research center.
- <http://www.leidenranking.com/>



The Common Factors

Showing impact requires two things:

1. **Visibility**, not just getting published.
2. Facile, automatic means to **uniquely identify** your publications.

Demo: Essential Science Indicators

<http://research.lib.buffalo.edu/essential-science-indicators>



How **Visibility** Became Important

- A brief walk through the changing landscape of scholarly publishing.
- 1665: 1st scientific journals: French *Journal des sçavans* & English *Philosophical Transactions of the Royal Society*.
- Early 1960's – *Journal Impact Factors* (Eugene Garfield).

2-Year (Classic) Impact Factor

2009-2010
Journal of Catalysis

547 articles

3,283 Cites

2011
All scholarly
articles in
journals covered
by Science
Citation Index

$$\text{2011 Impact Factor} = \frac{\text{3,283 2011 cites}}{\text{547 2009-10 articles}} = \mathbf{6.002}$$



JIF Cons

- ▶ Metric of **extreme currency** – narrow citing (1 yr.) & cited (2 yr.) window.
- ▶ **GROSS average (mean)**
 - ▶ Average article in *J. of Catalysis* is cited 6.002 times, but the times cited **range** from zero to 112 times.
- ▶ Can not be readily compared across disciplines or even sub-disciplines.


2005 - h-index

Invented by *Jorge E. Hirsch, UCSD physicist*

- An h-Index of 11: A person has 11 articles cited at least 11 times.
- Easily calculated from Web of Science or Scopus.

<http://research.lib.buffalo.edu/web-of-science-core-collection>

<http://research.lib.buffalo.edu/scopus>



2008 – NIH Open Access Mandate

- Requires all NIH-funded research available open access within 12 months.

2010 - NRC Report (Rev. 2011)

A Data-Based Assessment of Research-Doctorate Programs in the United States.

- ▶ Dept. by Dept. Ranking partially based on faculty publication metrics 2000-2006 (Web of Science citation data).
- ▶ <http://www.nap.edu/rdp/>
- ▶ http://en.wikipedia.org/wiki/United_States_National_Research_Council_rankings

METRICS PERCEPTIONS

Q: At your institution or department are metrics of scientific performance used to any degree in any of the following?



Do Metrics Really Matter? Nature, 16 June 2010. 465, p. 860-862

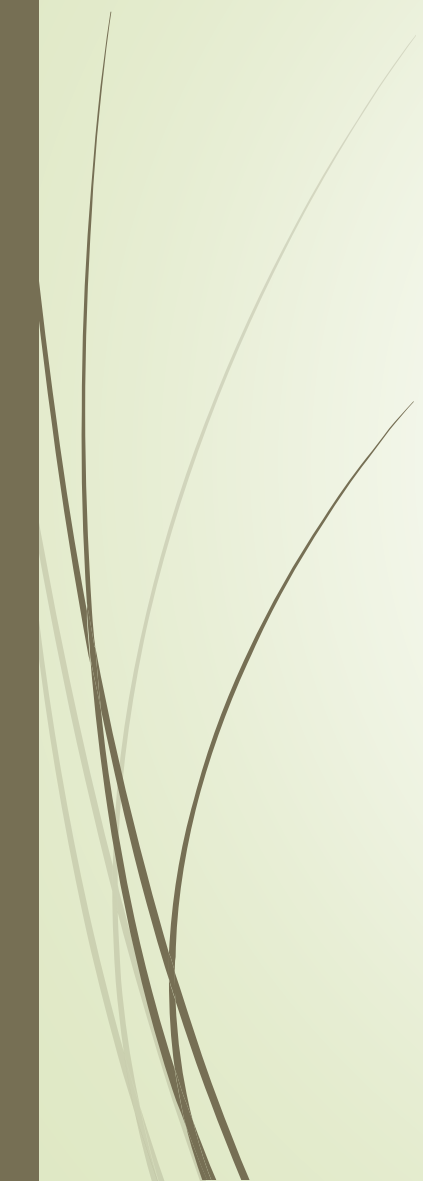



2013 – Executive Order - Open Access Mandate

- Extends NIH Mandate to virtually all federally funded research.
- Over 25 agencies including NSF, DOE, EPA, FDA, NOAA.



What does this mean to you?

- ▶ **Bibliometrics** – statistical analysis of various characteristics of scholarly publications.
 - ▶ Most STEM funding agencies, academic institutions, and research centers use bibliometrics as PART of their **evaluation of scholars** including tenure and promotion considerations.
- 



Becoming more visible: Publish with care

- Do good research.
- Maximize your readership.
 - Publish where you will reach your target audience.
 - Publish open access (OA) or **reserve the right** to post your manuscript to an OA repository.
 - Check *Sherpa/Romeo* for author rights.
<http://www.sherpa.ac.uk/romeo/index.php>.




Becoming more visible: Claim your work

- **ORCID**
- **Google Scholar Profile**
- **Correct** bad Web of Science & Scopus data
- Other profiles (your preference)
 - ResearcherID
 - ResearchGate
 - Mendeley




ORCID Author Identifiers

- Publishers increasingly requiring ORCID ID for manuscript submission incl. ACS & RSC
- Posed to become the standard identifier to disambiguate authors.
- Can import publications from Scopus, PubMed Central, Google Scholar, EndNote, and ResearcherID profiles.
- **MUST-HAVE!**



Google Scholar Profile – My Citations

- ▶ Track your publications.
- ▶ Automatic notifications when someone cites you.
- ▶ Citation counts automatically updated; often higher than Web of Science.
- ▶ FAQ/Help setting up personal profile
<http://scholar.google.ca/intl/en/scholar/citations.html>



Google Scholar Profile – My Citations

- ▶ The neatest thing: Your profile is at top of Google Scholar rankings when you search your name.
- ▶ <http://scholar.google.com>



Review WOS & Scopus records

- Citation databases can't count citations if the computer can't match a citing paper to your work.
- Correct errors such as incorrect initials, misspelled names, incorrect pagination.
- Check results against your resume for missing items.
 - May not be covered by database.
 - May have an error.
- Review Scopus Author Clusters – Do Author Search.
- <http://www.scopus.com>



ResearcherID - WOS

➤ Advantages

- Citations to WOS records auto-update
- Easy to import references from WOS or EndNote
- Can be linked to ORCID profile

➤ Disadvantages

- No citations for non-WOS covered articles
- Many conference papers and most book sections will need to be imported from other sources
- Unified logon for WOS, EndNote Online, ResearcherID



Becoming more visible: Other Profiles

- Your preference
 - ResearchGate – Some UB researchers see noticeable increase in readership.
 - Mendeley
 - Others?



Open Access Citation Advantage

- ▶ We publish for prestige, but we also publish to be read & cited.
- ▶ **Open access (OA)** articles are cited 10%-100% more than equivalent toll access (TA) articles?
- ▶ Open Access Citation Advantage: An Annotated Bibliography
 - ▶ <http://www.buffalo.edu/~abwagner/OA-CiteImpact-Bib-Rev201108.doc>



LOCMUF

- ▶ Old Saying: LOCKSS – Lots Of Copies Keeps Stuff Safe.
- ▶ New Saying: LOCMUF – Lots of Copies Makes You Findable.
- ▶ Deposit your manuscript in as many good OA repositories as you legally can.
- ▶ UB Institutional Repository
- ▶ <https://ubir.buffalo.edu/xmlui/>

Who cares about OA?

- 2012 Intel Science Fair winner – Jack Andraka
- HS Sophomore developed a sensor - detects pancreatic cancer for **3 cents in 5 minutes**.
 - **168** times faster; **26,000** times less expensive
 - **400** times more sensitive
 - than the current method of detection!
- Credits availability of **open access articles** to his success

<http://www.sparc.arl.org/news/16-year-old-touts-role-open-access-breakthrough-cancer-diagnostic-interview-jack-andraka-dr>



Resources

➤ Measuring Research Impact Library Guides

➤ Cornell Univ. -

<http://guides.library.cornell.edu/impact>

➤ North Carolina State -

<http://www.lib.ncsu.edu/do/research-impact>

➤ Univ. of Minnesota -

<https://www.lib.umn.edu/researchsupport/impact>

➤ **ME!**