# Bibliometrics & Research Impact Workshop: Sciences and Engineering Fields

## Show your Research Impact using Citation Analysis

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# AGENDA

- A little bit of background
- The metrics and what they measure
- How to use them and how to get them
- Manage your scholarly identity

# Handout & Checklist

Relax and take it easy.

Most of what you need to know is in the handout.

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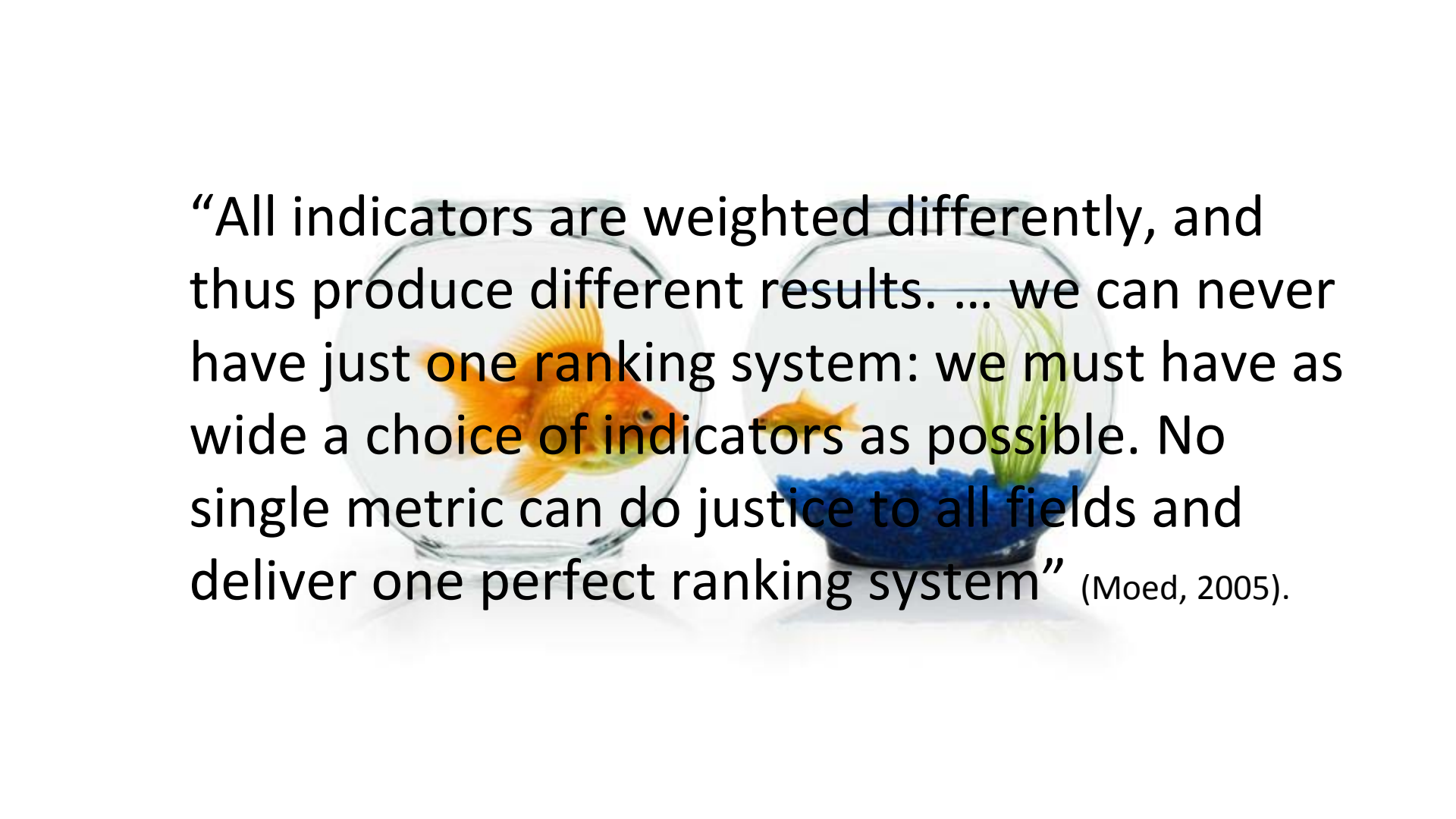


“All indicators are weighted differently, and thus produce different results. … we can never have just one ranking system: we must have as wide a choice of indicators as possible. No single metric can do justice to all fields and deliver one perfect ranking system” (Moed, 2005).

# Metrics: Why?

D. Julien (2011). Wired. *Flickr*. Retreived from:http://goo.gl/8pq3je

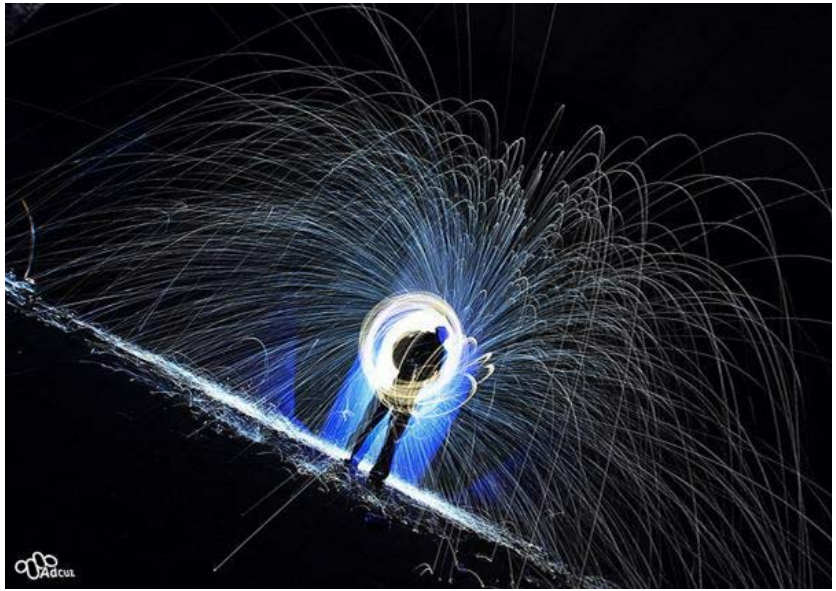
# Non-traditional metrics

- number of grad students/post docs
- work influence policy/decision-makers
  - government agencies, clinical guidelines, protocols
- lab influence
- impact of your research data
- presentations, guest lectures, invited speaker - “engagement”

# Alternative metrics

Altmetric tools measure

- tweets, blog mentions, Facebook posts, presentations, media & news articles, shared citations, data uploads



dcuz (2009). A blob of molten wire wool to the head!. *Flickr*. Retrieved from: https://www.flickr.com/photos/adcuz/3536735043/

# Altmetric Tools













# Metrics & what they measure

## Journals & Articles

How many publications?

What types of journals?

- Journal Impact Factor
- International
- Disciplines

Collaboration

- International
- Disciplines
- Industry

## Authors

Your impact or ***h*-index**

How many times have you been cited?

What is the nature of these citations?

- Other disciplines
- High impact journals
- Key papers
- Key authors

# Benchmarking

When comparing your impact to others in your field:

- *h*-index & # of publications:

  Similar authors-same career span, same subject area, geographic area

- Times Cited of Articles
  compared to other articles on exact same subject published in same year, how many citations have you received

When comparing publications

- Impact Factor

# The main bibliometric tools

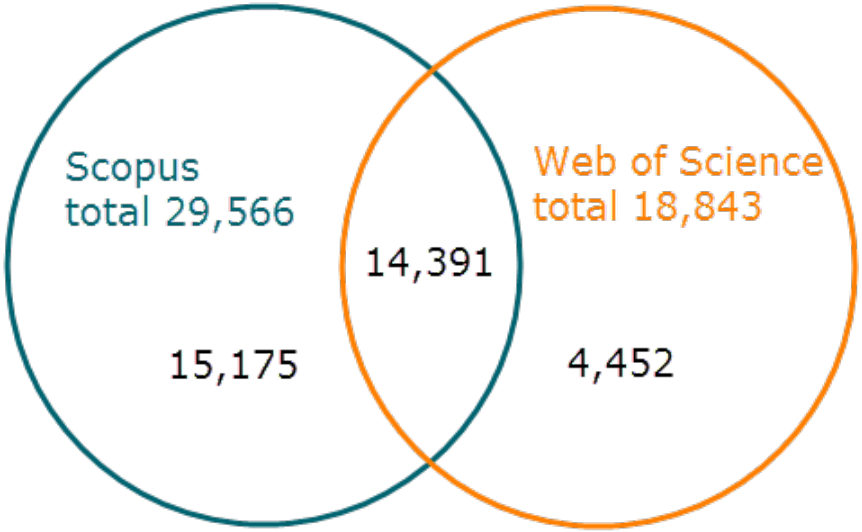
Web of Science

- 1900-current, +12 000 journals

Scopus

- 1996-current, +21 000 journals

Publish or Perish & Google Scholar




JISC-ADAT comparison, Scopus vs. Web of Science journal & conference proceedings - 2013 journals-only coverage Scopus=19,809 WoS=12,311

# Some important truths about citations

- Time favours citations
- Junior researchers may be disadvantaged*
- Review studies are cited more often in all fields
- Most articles are never cited*
- Physical sciences have fewer references (Fanelli and Glänzel, 2013)
- Women are cited less frequently (Lariviere 2013)
- Very important to compare *like to like*

# Increasing your *impact*

1. get your name right and standardize your affiliation (ORCiD ID)
2. Open Access: deposit pre-prints ERA (open access institutional repository)
3. keep your website updated

Table 1. Effect of Open Access (OA) to increase the level of citations (Swan 2010)

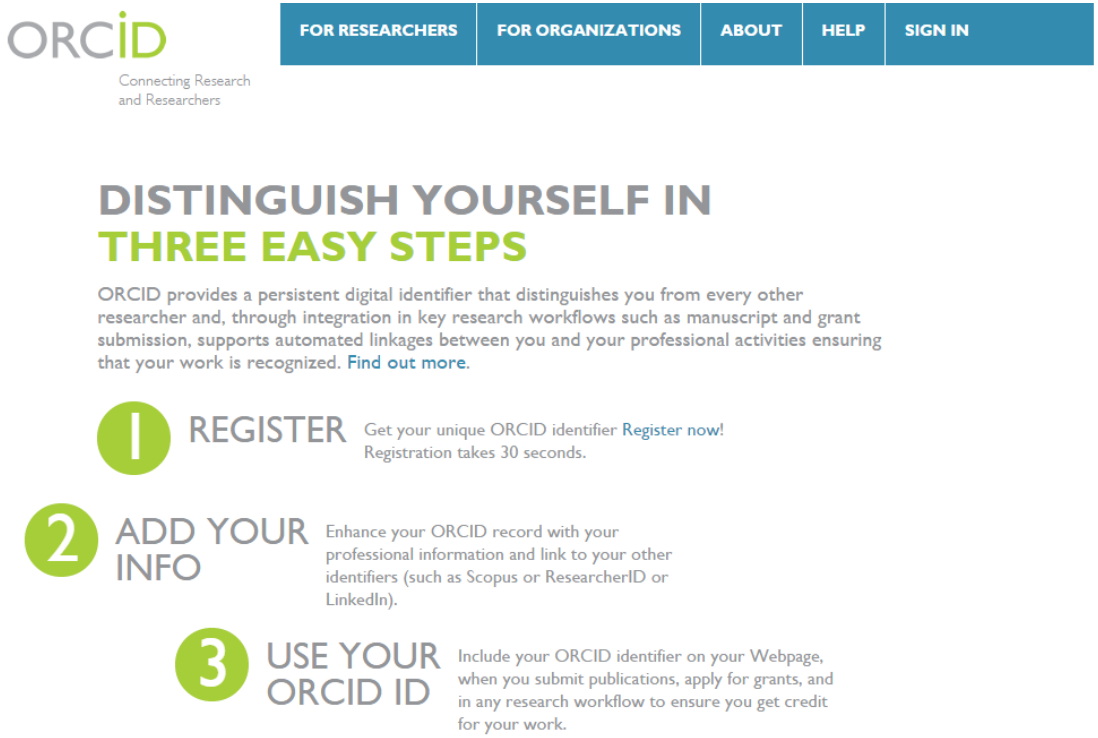
| **Size of OA citation advantage when found** (and where explicitly stated by discipline) | **% increase in citations with Open Access** |
|---|---|
| Physics/astronomy | 170 to 580 |
| Mathematics | 35 to 91 |
| Biology | -5 to 36 |
| Electrical engineering | 51 |
| Computer science | 157 |
| Political science | 86 |
| Philosophy | 45 |
| Medicine | 300 to 450 |
| Communication studies (IT) | 200 |
| Agricultural sciences | 200 to 600 |

# Increasing your *impact*

4. contribute to Wikipedia, blogs, share podcasts
5. use social media tools
6. talk about and share your research data (Dataverse)
7. deposit data in data repository (Dataverse, Dryad…)
8. present a working paper
9. write a review paper (maybe)


# Manage your scholarly identity

1. Get an ORCiD ID
2. Link your Web of Science Researcher ID & your Scopus Author ID to ORCiD ID
3. Enter your Research ID & Author ID in ORCiD account



Article Level


Alternative




Journal level


Citations

Downloads
Mendeley readers
Facebook likes
Citeulike
F1000 score
Wikipedia citations
Media/news stories
Time spent reading
Annotation density
Readership demographics

Data sets
Data reuse/repurpose
Data downloads
Data citation
Software
App development
Reviewing
Tools built
Grant revenue
PhDs supervised
Course materials
Patents
Standards
Government documents

Impact factor
Title
Editorial board
H-index (h5 index)
Eigenfactor

Adapted from: Holmes, K. (2014). Transforming Assessment: Alternative Metrics and Other Trends.

# Remember to look at everything

# References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