Computing and Using Metrics in ADS

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Computing and Using Metrics in ADS

“performing informetrics”

study quantitative aspects of information:
+ bibliometrics (recorded information)
+ scientometrics (science)
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“performing informetrics”

“Create statements about the culture, sociology, evolution & impact of publishing (in astronomy)”
Bibliometrics in Literature

Larivière, V. (2012), Bulletin of the American Society for Information Science and Technology, 38 (6), 12-17
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Caveat Emptor

“Not everything that can be counted counts, and not everything that counts can be counted.”

Albert Einstein
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Different Audiences Have Different Needs

+ Researchers
+ Project Managers
+ Publishers
+ Librarians
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Generate publication statistics for person, group, project, instrument, grant, …
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Generate publication statistics for person, group, project, instrument, grant, ...

Explore trends in journal content, journal position, impact
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“canned” metrics
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"canned" metrics

"custom" metrics

Generate publication statistics for person, group, project, instrument, grant, ...

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Canned

“Select Records & Press a Button”
Computing

Canned

“What are the publication statistics for Adam G. Riess, for first-authored, refereed papers, published in the time period 2000-2013?”

author:”^Riess, Adam G.” year:2000-2013 property:”refereed"

For query syntax, visit: http://labs.adsabs.harvard.edu/adsabs/page/help/search
Computing       Canned

A Few Words About the Metrics Results

+ torí
+ Read10
tori index

“indicator for the total amount of scholarly work that others have devoted to his/her work, measured in the volume of research papers.”


Read10 index

“current readership rate for papers published in the most recent 10 years, normalized for number of authors”

Kurtz, M.J. et al. (2005), Journal of the American Society for Information Science and Technology, 56, 111
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Custom

“Meet the Powerful New ADS Query Syntax!”
Computing and Using Metrics in ADS

Custom (example)

“How has the role of a given journal changed over time for a given field?”
Computing

“How has the role of a given journal changed over time for a given field?”
For example: “The Astrophysical Journal (main section)” & “weak lensing”

+ How many papers on the subject appear in the journal?
+ How often is the journal cited by papers on the subject?

For query syntax, visit: http://labs.adsabs.harvard.edu/adsabs/page/help/search
"How has the role of a given journal changed over time for a given field?"
For example: “The Astrophysical Journal (main section)” & “weak lensing”


For query syntax, visit: http://labs.adsabs.harvard.edu/adsabs/page/help/search
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+ download results (Excel, PDF)
+ generate results programmatically
Generate results programmatically

Application Programming Interface

https://github.com/adsabs/adsabs-dev-api

To obtain access to the ADS Developer API you must do two things:

1. Log in to the newest version of the ADS search interface
   (with existing “Classic ADS” account, otherwise make new)
2. Apply for and receive a developer token using the Signup Form
“Not everything that can be counted counts, and not everything that counts can be counted.”
Albert Einstein

OPINION

How to improve the use of metrics

Since the invention of the science citation index in the 1960s, quantitative measuring of the performance of researchers has become ever more prevalent, controversial and influential. Six commentators tell Nature what changes might ensure that individuals are assessed more fairly.

Carl T. Bergstrom
Co-developer of Eigenfactor.org
University of Washington, Seattle

“Science is being killed by numerical ranking,” a friend once told me, “and you’re hastening its demise.” He was referring to my work on network-based ranking systems with the Eigenfactor project, and I can see his point. When asking questions related to large collections of material, such as “How often do biologists draw on results from economics papers?”, numerical evaluation makes sense. But all too often, ranking systems are used as a cheap and ineffective method of assessing the productivity of individual scientists. Not only does this practice lead to inaccurate assessment, it lures scientists into pursuing high rankings first and good science second. There is a better way to evaluate the importance of a paper or the research output of an individual scholar: read it.

Metrics are Useful, in the Right Context

Nature, vol. 446, 870-872

Publishing as prostitution? – Choosing between one’s own ideas and academic success

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Accepted 3 September 2002

Abstract. Survival in academia depends on publications in refereed journals. Authors only get their papers accepted if they intellectually prostitute themselves by slavishly following the demands made by anonymous referees who have no property rights to the journals they advise. Intellectual prostitution is neither beneficial to suppliers nor consumers. But it is avoidable. The editor (with property rights to the journal) should make the basic decision of whether a paper is worth publishing or not. The referees should only offer suggestions for improvement. The author may disregard this advice. This reduces intellectual prostitution and produces more original publications.
BEYOND BIBLIOMETRICS
Harnessing Multidimensional Indicators of Scholarly Impact

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