

# ACESSO ABERTO E MAIOR IMPACTO: ALGUNS NÚMEROS



Já vários estudos mostraram que a **disponibilização gratuita**, online, de artigos científicos aumenta não apenas a sua **visibilidade**, mas também, e consequentemente, o seu **impacto**.

## Free online availability substantially increases a paper's impact

*Sir*—The volume of scientific literature far exceeds the ability of scientists to identify and use all relevant information. The ability to locate relevant research quickly will dramatically improve communication and scientific progress. Although availability varies greatly by discipline, more than a million research articles are now freely available on the web. Here we investigate the impact of free online availability by analysing citation rates. Online availability of an article may not greatly improve access and impact without efficient and comprehensive search services; a substantial percentage of the literature needs to be indexed by these search services before scientists consider them useful. In computer science, a substantial percentage of the literature is online and available through search engines such as Google ([www.google.com](http://www.google.com)), or specialised services such as ResearchIndex ([www.researchindex.org](http://www.researchindex.org))—although the greatest impact of online availability is yet to come, because comprehensive search services and more powerful search methods have become available only recently.

We analysed 119,924 conference articles in computer science and related disciplines, obtained from DBLP ([dblp.uni-trier.de](http://dblp.uni-trier.de)). In these fields, conference articles are typically formal publications and are often more prestigious than journal articles, with acceptance rates at some conferences below 10%. We estimated citation counts and online availability using ResearchIndex, excluding self-citations.

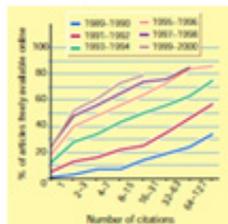
The figure shows the probability that an article is freely available online as a function of the number of citations to the article, and the year of publication of the article. The results are dramatic, showing a clear correlation between the number of times an article is cited and the probability that the article is online. More highly cited

conference for a particular year, for example), looking at the percentage increase in citation rates for online articles. When offline articles were more highly cited, we used the negative of the percentage increase for offline articles; hence if the average number of citations for offline articles is two, and the average for online articles is four, the percentage increase would be 100%. For the opposite situation, the percentage increase would be

— 100%. Averaging the percentage increase across 1,434 venues containing at least five offline and five online articles results in an average of 336% (median 158%) more citations to online computer-science articles compared with offline articles published in the same venue.

If we assume that articles published in the same venue are of similar quality, then the analysis by venue suggests that online articles are more highly cited because of their easier availability. This assumption is likely to be more valid for top-tier conferences with very high acceptance standards. Restricting our analysis to the top 20 publication venues by average citation rate gives an increase of 286% (median 234%) in the citation rate for online articles.

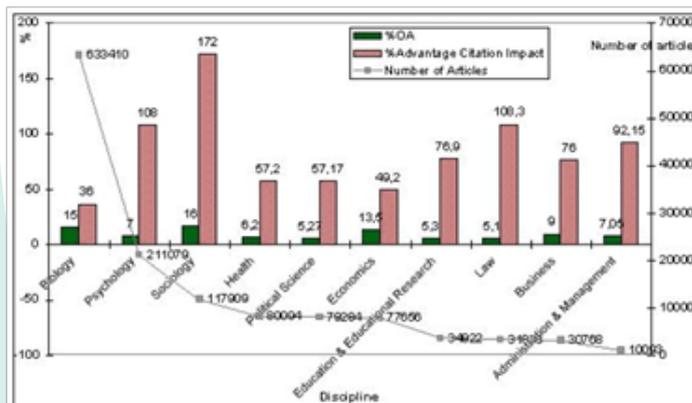
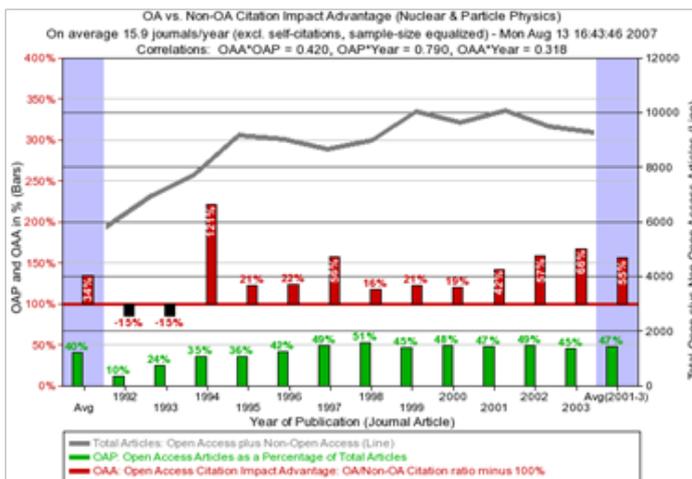
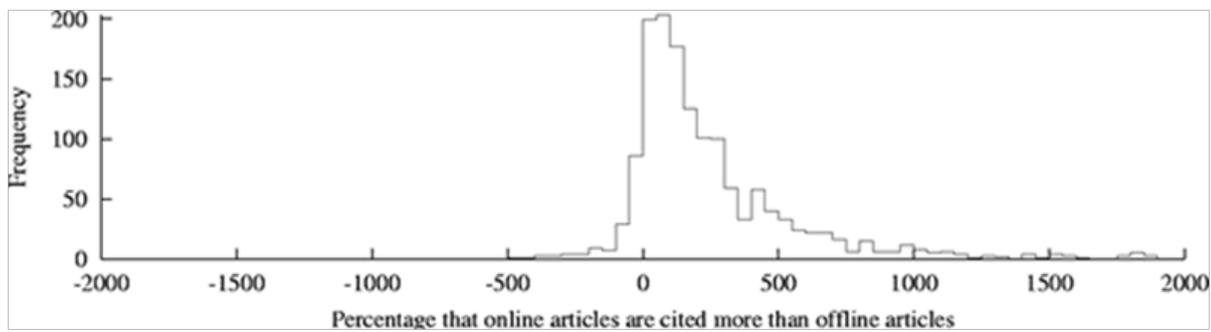
Free online availability facilitates access in many ways, including provision of online archives, direct connections among scientists or research groups, hassle-free links from e-mail, discussion groups and other services; indexing by web search engines; and the creation of



Um primeiro estudo, de 2001, é o artigo "*Free online availability substantially increases a paper's impact*", de Steve Lawrence, publicado na revista "Nature", o qual conclui que, na área de informática, os artigos disponíveis gratuitamente chegam a ser citados três vezes mais do que os restantes.

LAWRENCE, Steve – "Free online availability substantially increases a paper's impact". Nature, May 31st 2001, p. 521.

Uma versão eletrónica deste texto está disponível em:  
<http://users.ecs.soton.ac.uk/harnad/Tp/nature4.htm>



Em 2005, iniciou-se um estudo<sup>1</sup> sobre cerca de 14.000.000 de artigos de revistas indexadas nas bases de dados do ISI (Institute for Scientific information).

Os primeiros resultados obtidos, para a área de física, evidenciam que se verifica a mesma vantagem de impacto nos artigos em acesso aberto, comparativamente aos restantes.

A mesma tendência é visível para um conjunto de outras áreas científicas, da biologia à psicologia, da sociologia à saúde ou à economia.

Existe já extensa bibliografia sobre os efeitos do acesso aberto na divulgação e no impacto da investigação científica. Esta bibliografia, em contínuo crescimento, é recolhida regularmente no documento «*The effect of open access and downloads ('hits') on citation impact: a bibliography of studies*», disponível neste endereço:

<http://opcit.eprints.org/oacitation-biblio.html>

<sup>1</sup> <http://www.ctwatch.org/quarterly/articles/2007/08/incentivizing-the-open-access-research-web/6/index.html>