



# Google Scholar as a Citation Metrics Tool



by the NUS Libraries Cited Reference Team  
25 April 2013

# History of Google Scholar

- ❑ **2004** - Launch of Google Scholar
- ❑ **2006** - Launch of Publish or Perish by Anne – Wil Harzing
- ❑ **July 2011** - Launch of Google Scholar Citations (limited launch)
- ❑ **Nov 2011** – Launch of Google Scholar Citations (open to all)
- ❑ **April 2012** – Launch of Google Scholar Metrics for Publications
- ❑ **Nov 2012** – Launch of Google Scholar Metrics for Publications (2<sup>nd</sup> version)

# What is Google Scholar?



**Scholar**About 2,220 results (0.02 sec) My Citations 0

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Since 2013  
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**[CITATION] Gender and migration**  
K Willis, BSA **Yeoh** - 2000 - Edward Elgar Pub  
[Cited by 145](#) [Related articles](#) [Cite](#)

**[CITATION] Contesting space: power relations and the urban built environment in colonial Singapore**  
BSA **Yeoh** - 1996 - [getcited.org](#)  
... Contesting space: Power relations and the urban built environment in colonial Singapore.  
Post a Comment. CONTRIBUTORS: Author: **Yeoh, Brenda** SA. PUBLISHER: Oxford University Press (Kuala Lumpur and New York). SERIES TITLE: YEAR: 1996. ...  
[Cited by 185](#) [Related articles](#) [All 2 versions](#) [Cite](#) [More](#)▼

**[BOOK] Singapore: A developmental city state**  
M Perry, L Kong, BSA **Yeoh** - 1997 - [lavoisier.fr](#)  
In the World Cities Series, this book provides a comprehensive review of Singapore's economic, social, physical and political characteristics to give a broad understanding of its recent growth, current development strategies and dilemmas. Singapore is the dominant ...  
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**Negotiating public space: strategies and styles of migrant female domestic workers in Singapore** [Find It! @NUS Libraries](#)  
BSA **Yeoh**, S Huang - [Urban studies, 1998 - usj.sagepub.com](#)  
Abstract This paper investigates migrant domestic workers as a marginalised group in Singapore's urban landscape by examining the ways in which their social maps are structured and negotiated in relation to public space. It argues that the phenomenon of the' ...  
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# What is Google Scholar Citations?



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## Citation indices

	All	Since 2008
<a href="#">Citations</a>	50	48
<a href="#">h-index</a>	3	3
<a href="#">i10-index</a>	1	1

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1-14

Title / Author		Cited by	Year
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<input type="checkbox"/> <a href="#">QR codes for libraries--some thoughts</a>	A TAY Musing about librarians. Consulta 14 (09)	3	2011
<input type="checkbox"/> <a href="#">Designing Low-Cost Mobile Websites for Libraries</a>	T Travis, A Tay Bulletin of the American Society for Information Science and Technology 38 ...	3	2011
<input type="checkbox"/> <a href="#">What are Mobile Friendly Library Sites Offering? A Survey</a>	A Tay Musings about librarianship 24	2	2010

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# What is Google Scholar Metrics?





Search Scholar

▼ English

Business, Economics & Management

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Engineering & Computer Science

Health & Medical Sciences

Humanities, Literature & Arts

Life Sciences & Earth Sciences

Physics & Mathematics

Social Sciences

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Spanish

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Publication	h5-index	h5-median
1. Nature	339	507
2. The New England Journal of Medicine	313	523
3. Science	305	469
4. The Lancet	238	355
5. Cell	226	325
6. Proceedings of the National Academy of Sciences	220	281
7. Journal of Clinical Oncology	201	260
8. Nature Genetics	200	302
9. JAMA: The Journal of the American Medical Association	196	283
10. Physical Review Letters	188	254
11. Circulation	185	273
12. arXiv Astrophysics (astro-ph)	176	245
13. Chemical reviews	173	305

# What is Google Scholar?

“Google Scholar provides a simple way to broadly search for **scholarly literature**. From one place, you can search across many disciplines and sources: articles, theses, books, abstracts and court opinions, from academic publishers, professional societies, online repositories, universities and other web sites”

<http://scholar.google.com.sg/intl/en/scholar/about.html>

# What is included in Google Scholar?



It is unclear what Google Scholar considers “scholarly” & Google Scholar does not list what journals are included but includes inclusion guidelines.

See...

<http://scholar.google.com.sg/intl/en/scholar/inclusion.html>

# Inclusion Guidelines

## Individual Authors

If you're an individual author, it works best to simply upload your paper to your website, e.g., `www.example.edu/~professor/jpdr2009.pdf`, and add a link to it on your publications page, such as `www.example.edu/~professor/publications.html`. Make sure that:

- a. the full text of your paper is in a PDF file that ends with ".pdf",
- b. the title of the paper appears in a large font on top of the first page,
- c. the authors of the paper are listed right below the title on a separate line, and
- d. there's a bibliography section titled, e.g., "References" or "Bibliography" at the end.



That's it! Our search robots should normally find your paper and include it in Google Scholar within several weeks.


If it doesn't work, you could either (1) read more detailed technical guidelines in this documentation or (2) check if your local institutional repository is already configured for indexing in Google Scholar, and upload your papers there.

<http://scholar.google.com.sg/intl/en/scholar/inclusion.html>



# Papers indexed on NUS domain



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Articles

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**[PDF] THE ROLE OF MARKETING IN TODAY'S ENTERPRISES** [\[PDF\] from nus.edu.sg](#)

[J Wirtz](#), [S Tuzovic](#), [V Kuppelwieser](#) - 2013 - [bschool.nus.edu.sg](#)

Page 1. 1 THE ROLE OF MARKETING IN TODAY'S ENTERPRISES Jochen Wirtz1, Sven Tuzovic2, and Volker Kuppelwieser3 Working Paper 8 April 2013 Note: All authors contributed equally to this article. 1 NUS Business ...

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**[PDF] A Dichotomy in the Intensional Expressive Power of Nested Relational Calculi augmented with Aggregate Functions and a Powerset Operator** [\[PDF\] from nus.edu.sg](#)

[L Wong](#) - 2013 - [comp.nus.edu.sg](#)

ABSTRACT The extensional aspect of expressive power—ie, what queries can or cannot be expressed—has been the subject of many studies of query languages. Paradoxically, although efficiency is of primary concern in computer science, the intensional aspect of ...

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**[PDF] Phase-preserved optical elevator** [\[PDF\] from nus.edu.sg](#)

[Y Luo](#), [B Zhang](#), [T Han](#), [Z Chen](#), [Y Duan](#), [CW Chu](#)... - [Optics ...](#), 2013 - [ece.nus.edu.sg](#)

Abstract: The unique superiority of transformation optics devices designed from coordinate transformation is their capability of recovering both ray trajectory and optical path length in light manipulation. However, very few experiments have been done so far to verify this ...

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**[PDF] MANAGING BRANDS AND CUSTOMER ENGAGEMENT IN ONLINE BRAND COMMUNITIES** [\[PDF\] from nus.edu.sg](#)

[J Wirtz](#) - 2013 - [bschool.nus.edu.sg](#)

Purpose Given the dramatic technology-lead changes that continue to take place in the marketplace, researchers and practitioners alike are keen to understand the emergence and implications of online brand communities (OBCs). This paper explores OBCs both from a ...

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# Multiple versions auto-merged

## [Emerging education hubs: The case of Singapore](#)

R Sidhu, KC Ho, B Yeoh - Higher Education, 2011 - Springer

Abstract In anticipation of a globalising post-Fordist political economy, countries and universities are increasingly pursuing strategic transnational **education** and research alliances. This article analyses the Global Schoolhouse, a key **education** policy platform ...

Cited by 18 [Related articles](#) [All 13 versions](#) [Cite](#)

The screenshot shows a Google Scholar search interface. At the top is the Google logo and a search bar. Below it, the word 'Scholar' is displayed in red, followed by 'About 13 results (0.02 sec)'. On the left side, there is a link 'All versions'. The main content area lists several search results for the article 'Emerging education hubs: The case of Singapore' by R Sidhu, KC Ho, and B Yeoh. The first result is the full article from Higher Education (2011) on Springer. Below it are several citation entries, some from ERIC and some from scholarbank.nus.edu.sg. Each entry includes a link to the full text or citation, a brief abstract, and links to 'Cited by', 'Related articles', and 'Cite'.

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R Sidhu, KC Ho, B Yeoh - 2011 - voced.edu.au  
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R Sidhu, KC Ho, B Yeoh - Higher Education: The International Journal of ..., 2011 - ERIC  
Abstract: In anticipation of a globalising post-Fordist political economy, countries and universities are increasingly pursuing strategic transnational education and research alliances. This article analyses the Global Schoolhouse, a key education policy platform ...  
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R Sidhu, KC Ho, B Yeoh - Higher Education, 2011 - Springer  
Abstract In anticipation of a globalising post-Fordist political economy, countries and universities are increasingly pursuing strategic transnational education and research alliances. This article analyses the Global Schoolhouse, a key education policy platform ...  
Cite

[CITATION] [Emerging education hubs: the case of Singapore](#)  
R Sidhu, KC Ho, B Yeoh - 2010 - 137.132.14.55  
Cite

# Manipulations?

## **Manipulating Google Scholar Citations and Google Scholar Metrics: simple, easy and tempting**

Emilio Delgado López-Cózar<sup>1</sup>, Nicolás Robinson-García<sup>1</sup> y Daniel Torres-Salinas<sup>2</sup>

EC3: Evaluación de la Ciencia y de la Comunicación Científica

<sup>1</sup>Universidad de Granada

<sup>2</sup>Universidad de Navarra

[edelgado@ugr.es](mailto:edelgado@ugr.es); [elrobin@ugr.es](mailto:elrobin@ugr.es); [torressalinas@gmail.com](mailto:torressalinas@gmail.com)

### **ABSTRACT**

**The launch of Google Scholar Citations and Google Scholar Metrics may cause a revolution in the research evaluation field as it places within every researcher's reach tools that allow them to measure their output. However, the data and bibliometric indicators offered by Google's products can be easily manipulated. In order to alert the research community, we present an experiment in which we manipulate the Google Citations' profiles of a research group through the creation of false documents that cite their documents, and consequently, the journals in which they have published, modifying their H-index. For this purpose we created six documents authored by a faked author and we uploaded them to a researcher's personal website under the University of Granada's domain. The result of the experiment meant an increase of 774 citations in 129 papers (six citations per paper) increasing the authors and journals' H-index. We analyse the malicious effect this type of practices can cause to Google Scholar Citations and Google Scholar Metrics. Finally, we conclude with several deliberations over the effects these malpractices may have and the lack of control these tools offer.**

# What is Google Scholar picking up?



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<input type="checkbox"/> <a href="#">What are Mobile Friendly Library Sites Offering? A Survey</a> A Tay <a href="#">Musings about librarianship 24</a>		2	2010

# Advantages

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- ❑ Easy to use
- ❑ Wide coverage of cited works and citations , including books and particularly other languages
- ❑ Scholar Profile is good publicity
- ❑ Scholar Profile can automatically add or suggest articles to be added.

# Google Scholar recommendations

Recommended based on My Citations

View:

Top

All

[PDF] [“The Mother of all LibGuides”: Applying Principles of Communication and Network Theory in LibGuide Design](#) [PDF] from ala.org

[CA Leibiger](#), [AW Aldrich](#) - ala.org

16 days ago - Since their development in 2007, LibGuides have captured the attention and the imagination of the academic library world, at least in the United States. The 2009 ACRL national conference saw crowded panel, roundtable, Cyber Zed Shed, poster, and ...

[Cite](#)

[PDF] [Hidden Patterns of LibGuides Usage: Another Facet of Usability](#) [PDF] from ala.org

[G Castro-Gessner](#), [W Wilcox](#), [A Chandler](#) - ala.org

16 days ago - Library guides have a long history and prominent place in traditional library service. 1 Librarians put forth tremendous effort in researching, compiling, and formatting research guides to help users navigate complex and vast library resources. Yet, despite ...

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[PDF] [Relationships between Collective Intelligence Quality, Its Determinants, and Usefulness: A Comparative Study between Wiki Service and Q&A Service in ...](#) [PDF] from apjis.or.kr

[J Joo](#), [IR Normatov](#) - Asia Pacific Journal of Information Systems, 2012 - apjis.or.kr

24 days ago - Online survey using Google Docs with email and Kakao Talk was conducted for collecting data from Wikipedia and Naver KnowledgeIN users. A total of 490 valid responses were collected, where users of Wikipedia were 220 while users of Naver ...

[Cite](#)

[PDF] [ESTUDIOS/RESEARCH STUDIES](#) [PDF] from rclis.org

[NG Fernández-Villavicencio](#), [JLM Novoa...](#) - Revista Española de ..., 2013 - eprints.rclis.org

30 days ago - Abstract: The objective of this paper is to review the literature about systems of measure in social networks and present a draft proposal of set of indicators to help the units of information to evaluate the use and impact of their services through social Web o Web ...

[Cite](#)

# Disadvantages

- ❑ Lacking in advanced search functions
- ❑ Lack of transparency indexed sources are not stated
- ❑ Times cited includes sources that are not strictly peer reviewed (e.g Library Guides, theses, students' assignments, presentations, technical reports etc)
- ❑ Google Scholar metadata may be inaccurate due to automated parser may result in
  - ❑ Inflated counts due to duplicated records
  - ❑ “Lost authors” due to replacement by ghost authors
- ❑ Vulnerable to manipulation
- ❑ Cannot generate:
  - ❑ H-index or times cited without self-citations

# Google Scholar parsers

“... the parsers are not trained well enough to recognize the metadata. They often identify as authors the menu options on the host site's search page, the descriptors assigned to the papers for topical classification, the affiliation institute and address of authors and even the journal names.”

Péter Jacsó, (2010) "Metadata mega mess in Google Scholar"



# Disadvantages

Google scholar   [Advanced Scholar Preferences](#)

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**Scholar** [All articles](#) [Recent articles](#) Results 1 - 100 of about 34,200. (0.28 sec)

[Advancement of the orbits and the midface in one piece, combined with frontal repositioning, ...](#)  
... , EOF ORBITOFACIAL, A **TECHNIQUES** - Plastic and Reconstructive Surgery, 1978 - pdfs.journals.lww.com  
ADVANCEMENT OF THE ORBITS AND THE MIDFACE IN ONE PIECE, COMBINED WITH FRONTAL REPOSITIONING, FOR THE CORRECTION OF CROUZON'S DEFORMITIES FERNANDO ORTIZ MONASTERIO, MD., ANTONIO FUENTE DEL CAMPO, MD, and ARTURO CARRILLO, MD ...  
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► [An evidence-based evaluation of percutaneous vertebroplasty](#)  
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Background Information: Percutaneous vertebroplasty is a therapeutic, interventional radiologic procedure that involves injection of bone cement into a cervical, thoracic, or lumbar vertebral body lesion for the relief of ...  
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[Cited by 103](#) - [Related articles](#) - [BL Direct](#) - [All 4 versions](#)

<http://www.jacso.info/gs-phantom-au/>

# Advantages (Google Scholar Metrics)

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- ❑ Multidisciplinary including arts & humanities
- ❑ Includes citing papers that contribute to the H-index
- ❑ Easy to use

# Disadvantages (Google Scholar Metrics)

- ❑ Only shows top 20 journals per area or discipline (English only)
- ❑ Unclear update frequency
- ❑ Older historical versions are not retained
- ❑ Results are ranked only by H-Index & nothing else