Analysis of Bibliometrics information for selecting the best field of study

Nader Ale Ebrahim
Analysis of Bibliometrics information for selecting the best field of study

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www.researcherid.com/rid/C-2414-2009
http://scholar.google.com/citations

28th September 2016
4th SERIES OF INTRODUCTORY WORKSHOP ON:

Strategies to Enhance Research Visibility, Impact & Citations

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www.researcherid.com/rid/C-2414-2009
http://scholar.google.com/citations

Abstract:
Bibliometrics can be defined as the statistical analysis of publications. Bibliometrics has focused on the quantitative analysis of citations and citation counts which is complex. It is so complex and specialized that personal knowledge and experience are insufficient tools for understanding trends for making decisions. We need tools for analysis of Bibliometrics information for select the best field of study with promising enough attention.

This presentation will provide tools to discover the new trends in our field of study in order to select an area for research and publication which promising the highest research impact.

Keywords: H-index, Improve citations, Research tools, Bibliometrics, Research Visibility, Research Impact
Research Tools Mind Map

- Links
- h-index
- Survey
- Virtual Teams will become as important as
- (1) Searching the literature
- (2) Writing a paper
- (3) Targeting suitable journals
- (4) Enhancing visibility and impact
- Download

Research Tools
By: Nader Ale Ebrahim
World University Rankings 2016-2017
By their very nature, citation cartels are difficult to detect. Unlike self-citation, which can be spotted when there are high levels of references to other papers published in the same journal, cartels work by influencing incoming citations from other journals.

In 2012, I reported on the first case of a citation cartel involving four biomedical journals. Later that year, Thomson Reuters suspended three of the four titles from receiving an Impact Factor. In 2014, they suspended six business journals for similar behavior.
Top 10 authors with the highest profile view counts on ResearchGate

Table 11. Top 10 authors with the highest profile view counts on ResearchGate (9th of November, 2015), compared to the same indicator on the 10th of September, 2015.

<table>
<thead>
<tr>
<th>Author Name</th>
<th>September 10th (2015) Profile Views</th>
<th>November 9th (2015) Profile View</th>
<th>Mismatch (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nader Ale Ebrahim</td>
<td>19,821</td>
<td>13,281</td>
<td>67.00</td>
</tr>
<tr>
<td>Chaomei Chen</td>
<td>7,760</td>
<td>3,937</td>
<td>50.73</td>
</tr>
<tr>
<td>Loet Leydesdorff</td>
<td>4,227</td>
<td>1,758</td>
<td>41.59</td>
</tr>
<tr>
<td>Bakthavachalam Elango</td>
<td>2,883</td>
<td>1,756</td>
<td>60.91</td>
</tr>
<tr>
<td>Zaida Chinchilla</td>
<td>5,840</td>
<td>1,569</td>
<td>26.87</td>
</tr>
<tr>
<td>Mike Thelwall</td>
<td>4,297</td>
<td>1,568</td>
<td>36.49</td>
</tr>
<tr>
<td>Lutz Bornmann</td>
<td>3,129</td>
<td>1,439</td>
<td>45.99</td>
</tr>
<tr>
<td>Wolfgang Glänzel</td>
<td>3,012</td>
<td>1,301</td>
<td>43.19</td>
</tr>
<tr>
<td>Kevin Boyack</td>
<td>3,256</td>
<td>1,135</td>
<td>34.86</td>
</tr>
<tr>
<td>Peter Ingwersen</td>
<td>2,335</td>
<td>1,025</td>
<td>43.90</td>
</tr>
</tbody>
</table>


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From submission to sharing: the life cycle of an article

- Phase 1: Conception and birth
- Phase 2: Submission
- Phase 3: Reviewers
- Phase 4: Production and publication
- Phase 5: Dissemination and archiving
  
  The article is published, but its life cycle isn’t yet complete. In this phase, dissemination can start; sharing the Share Links article helps increase readership and make it more visible.

Source: https://www.elsevier.com/reviewers-update/home/featured-article/from-submission-to-sharing-the-life-cycle-of-an-article

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Introduction of bibliometrics

• Bibliometrics can be defined as the quantitative analysis of science and technology performance and the cognitive and organizational structure of science and technology.

• Basic for these analyses is the scientific communication between scientists through (mainly) journal publications.

• Key concepts in bibliometrics are output and impact, as measured through publications and citations.

• Important starting point in bibliometrics: scientists express, through citations in their scientific publications, a certain degree of influence of others on their own work.

• By large scale quantification, citations indicate influence or (inter)national visibility of scientific activity, but should not be interpreted as synonym for ‘quality’.


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Informetrics, scientometrics, bibliometrics, webometrics, cybermetrics and altmetrics

Bibliographies – largely references

Whole Internet, cyberspace

Science of Science

Web presence, visibility and impact – links, pages, documents

Alternative metrics – views, downloads, web citations, etc


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## Frequently Used Terms for Research Evaluation Metrics

<table>
<thead>
<tr>
<th>Term</th>
<th>Short Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bibliometrics</td>
<td>Bibliometrics is a set of methods to quantitatively analyse academic literature and scholarly communications.</td>
</tr>
<tr>
<td>Informetrics</td>
<td>Informetrics is the study of quantitative aspects of information. This includes the production, dissemination, and use of all forms of information, regardless of its form or origin.</td>
</tr>
<tr>
<td>Scientometrics</td>
<td>Scientometrics is the study of quantitative features and characteristics of science, scientific research and scholarly communications.</td>
</tr>
<tr>
<td>Webometrics</td>
<td>Webometrics is the study of quantitative features, characteristics, structure and usage patterns of the world wide web, its hyperlinks and internet resources.</td>
</tr>
<tr>
<td>Cybermetrics</td>
<td>Cybermetrics is an alternative term for Webometrics.</td>
</tr>
<tr>
<td>Librametrics</td>
<td>Librametrics is a set of methods to quantitatively analyse availability of documents in libraries, their usage and impact of library services to its user community.</td>
</tr>
<tr>
<td>Patentometrics</td>
<td>Patentometrics is a set of methods to quantitatively analyse patent databases, patent citations and their usage patterns.</td>
</tr>
<tr>
<td>Altmetrics</td>
<td>Altmetrics is new metrics proposed as an alternative to the widely used journal impact factor and personal citation indices like the h-index. The term altmetrics was proposed in 2010, as a generalization of article level metrics, and has its roots in the twitter #altmetrics hashtag.</td>
</tr>
<tr>
<td>Article Level Metrics (ALM)</td>
<td>Article level metrics is an alternative term for Altmetrics.</td>
</tr>
</tbody>
</table>

Reasons for bibliometric studies

- Understanding of *patterns*
  - discovery of regularities, behavior
  - “order out of documentary chaos” [Bradford, 1948]

- Analysis of *structures & dynamics*
  - discovery of connections, relations, networks
  - search for regularities - possible predictions

- Discovery of *impacts, effects*
  - relation between entities & amounts of their various uses
  - providing support for making of decisions, policies

Source: https://comminfo.rutgers.edu/~tefko/Courses/e530/Lectures/Lecture09%20Bibliometric%20searching.ppt

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Use of evaluative bibliometrics

• Academic, research & government institutions for:
  – promotion and tenure, hiring, salary raising
  – decisions for support of departments, disciplines
  – grants decision; research policy making
  – visualization of scholarly networks, identifying key contributions & contributors
  – monitoring scholarly developments
  – determining journal citation impact

• Resource allocation:
  – identifying authors most worthy of support;
  – research areas most worthy of funding
  – journals most worthy of support or purchase; etc.

Source: https://comminfo.rutgers.edu/~tefko/Courses/e530/Lectures/Lecture09%20Bibliometric%20searching.ppt
Applications of Scientometrics and Bibliometrics in Research Evaluation

• For Institution/ Collaborative Research Group

• For a scientist:
  – Mapping of collaborations, collaborating institutions, collaborating countries, co-authors, highly cited papers, top publishing journals, percentage of cited vs. uncited papers, percentage of self-citations, author-level indicators such as h-index, i10-index, etc.

• For a country

• For a journal

## Major Citation Databases

<table>
<thead>
<tr>
<th>Name of Citation Database</th>
<th>Launched</th>
<th>Scope</th>
<th>Owned by</th>
<th>Terms of Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science Citation Index (SCI)</td>
<td>1964</td>
<td>Global</td>
<td>Thomson Reuter</td>
<td>Subscription-based with Web of Science</td>
</tr>
<tr>
<td>Social Science Citation Index (SSCI)</td>
<td>1972</td>
<td>Global</td>
<td>Thomson Reuter</td>
<td>Subscription-based with Web of Science</td>
</tr>
<tr>
<td>Arts &amp; Humanities Citation Index (A&amp;HCI)</td>
<td>1978</td>
<td>Global</td>
<td>Thomson Reuter</td>
<td>Subscription-based with Web of Science</td>
</tr>
<tr>
<td>Scopus</td>
<td>2004</td>
<td>Global</td>
<td>Elsevier B.V.</td>
<td>Subscription-based</td>
</tr>
<tr>
<td>Google Scholar Citations</td>
<td>2004</td>
<td>Global</td>
<td>Google Inc.</td>
<td>Freely Available Online</td>
</tr>
<tr>
<td>Microsoft Academic Search</td>
<td>2003</td>
<td>Global</td>
<td>Microsoft Research</td>
<td>Freely Available Online</td>
</tr>
<tr>
<td>CiteSeerX (CiteSeerX.ist.psu.edu)</td>
<td>1997</td>
<td>Global; Subject specific</td>
<td>Pennsylvania State University, USA</td>
<td>Freely Available Online</td>
</tr>
</tbody>
</table>

The Institute for Scientific Information (ISI) was founded by Eugene Garfield in 1960. It was acquired by Thomson Scientific & Healthcare in 1992, became known as Thomson ISI and now is part of the Healthcare & Science business of the multi-billion dollar Thomson Reuters Corporation.

ISI offered bibliographic database services. Its speciality: citation indexing and analysis, a field pioneered by Garfield. It maintains citation databases covering thousands of academic journals, including a continuation of its long time print-based indexing service the Science Citation Index (SCI), as well as the Social Sciences Citation Index (SSCI), and the Arts and Humanities Citation Index (AHCI). All of these are available via ISI's Web of Knowledge database service.
Thomson Reuters (formerly ISI) has been the authority on citation data for over 50 years.
Scopus (Launched 2004)

• Scopus is the largest abstract and citation database of peer-reviewed literature: scientific journals, books and conference proceedings. Delivering a comprehensive overview of the world's research output in the fields of science, technology, medicine, social sciences, and arts and humanities, Scopus features smart tools to track, analyze and visualize research.

• As research becomes increasingly global, interdisciplinary and collaborative, you can make sure that critical research from around the world is not missed when you choose Scopus.

Source: http://www.elsevier.com/online-tools/scopus

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A Comparison between Two Main Academic Literature Collections: Web of Science and Scopus Databases

Author Level Indicators

- H Index
- i10 index
- Articles with Citation Data
- Average Citation per Article
- Total Citations Count
- Cited vs. Uncited Papers Ratio
- Eigenfactor® score
- Impact Points
- RG Score

CHECK YOUR SCORE

- H-Index?
- i10-Index?
- g-Index?
- Citations Count?
- Articles with citation?
- Average citations per article?
- Impact Points?
- RG Score?
Citations as a proxy of scientific impact

Visibility

Relevance

Quality

Reputation

Random factors

Scientific impact

Citations


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H and g-index
H-index Example

Jorge E. Hirsch

<table>
<thead>
<tr>
<th>Scholar A</th>
<th>Scholar B</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>27</td>
</tr>
<tr>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>

56 citations 56 citations
6 h-index 4 h-index

Source: http://www.slideshare.net/librarian68/overview-of-citation-metrics
A scientist has index h if h of his/her Np papers have at least h citations each, and the other (Np-h) papers have no more than h citations each.

As an example, a researcher with an H-index of 15 has (of their total number of publications) 15 papers which have been cited at least 15 times each.

<table>
<thead>
<tr>
<th>Researcher A</th>
<th>Citations</th>
<th>Researcher B</th>
<th>Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper rank</td>
<td></td>
<td>Paper rank</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>10</td>
<td>1</td>
<td>1348</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>2</td>
<td>159</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
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<td>5</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>6</td>
<td>3</td>
</tr>
</tbody>
</table>

Neither researcher can have an H-index of more than 6.

“Hirsch, who has a $h$-index of 49, says that a "successful scientist" will have an index of 20 after 20 years; an "outstanding scientist" will have an index of 40 after 20 years; and a "truly unique individual" will have an index of 60 after 20 years.”

Table 2: Publication and citation list of scientist S1

<table>
<thead>
<tr>
<th>Rank (squared) - Publications</th>
<th>Citations</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (1) A</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>2 (4) B</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>3 (9) C</td>
<td>9</td>
<td>39</td>
</tr>
<tr>
<td>4 (16) D</td>
<td>8</td>
<td>47</td>
</tr>
<tr>
<td>5 (25) E</td>
<td>6</td>
<td>53</td>
</tr>
<tr>
<td>6 (36) F</td>
<td>6</td>
<td>59</td>
</tr>
<tr>
<td>7 (49) G</td>
<td>6</td>
<td>65</td>
</tr>
<tr>
<td>8 (64) H</td>
<td>5</td>
<td>70</td>
</tr>
<tr>
<td>9 (81) I</td>
<td>5</td>
<td>75</td>
</tr>
</tbody>
</table>

Normalized citation metrics put citation information in context

Citation rates vary among fields. What is good or average in mathematics is very different from what is good or average in biochemistry.

How “good” is this? What is the context?
Additional metrics are needed to understand research performance.

Source: Ann Kushmerick (May 3, 2013), Bibliometric Analysis Tools for Research Portfolio Analysis and Management, Manager, Research Evaluation and Bibliometric Data
All three publication lists have a Hirsch Index of 5

<table>
<thead>
<tr>
<th>Author 1</th>
<th>Author 2</th>
<th>Author 3</th>
</tr>
</thead>
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<tr>
<td>30 P1</td>
<td>30 P1</td>
<td>100 P1</td>
</tr>
<tr>
<td>10 P2</td>
<td>10 P2</td>
<td>70 P2</td>
</tr>
<tr>
<td>8 P3</td>
<td>8 P3</td>
<td>8 P3</td>
</tr>
<tr>
<td>6 P4</td>
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<td>6 P4</td>
</tr>
<tr>
<td>5 P5</td>
<td>5 P5</td>
<td>5 P5</td>
</tr>
<tr>
<td>1 P6</td>
<td>4 P6</td>
<td>1 P6</td>
</tr>
<tr>
<td>0 P7</td>
<td>4 P7</td>
<td>0 P7</td>
</tr>
</tbody>
</table>

H=5

Source: Henk F. Moed, (2011) "New developments in electronic publishing and bibliometrics", CWTS, Leiden University, Netherlands & Elsevier, Amsterdam, Netherlands
Different bibliometric distributions have the same H-Index

## Results

<table>
<thead>
<tr>
<th>Papers:</th>
<th>46</th>
<th>Cites/paper:</th>
<th>6.57</th>
<th>h-index:</th>
<th>8</th>
<th>AWCR:</th>
<th>24.07</th>
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</thead>
<tbody>
<tr>
<td>Citations:</td>
<td>302</td>
<td>Cites/author:</td>
<td>170.70</td>
<td>g-index:</td>
<td>17</td>
<td>AW-index:</td>
<td>4.91</td>
</tr>
<tr>
<td>Years:</td>
<td>17</td>
<td>Papers/author:</td>
<td>20.72</td>
<td>h-index:</td>
<td>6</td>
<td>AWCRpA:</td>
<td>13.35</td>
</tr>
<tr>
<td>Cites/year:</td>
<td>17.76</td>
<td>Authors/paper:</td>
<td>3.26</td>
<td>h-index:</td>
<td>4.00</td>
<td>e-index:</td>
<td>13.96</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td>h-index:</td>
<td>5.67</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cites</th>
<th>Per year</th>
<th>Rank</th>
<th>Authors</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>51</td>
<td>3.64</td>
<td>1</td>
<td>J Bal</td>
<td>Process analysis tools for process improvement</td>
</tr>
<tr>
<td>44</td>
<td>3.14</td>
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<td>J Bal</td>
<td>Process analysis techniques and tools for busine</td>
</tr>
<tr>
<td>39</td>
<td>3.25</td>
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<td>J Bal</td>
<td>Managing the virtual team and controlling efficien</td>
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<tr>
<td>38</td>
<td>3.17</td>
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<td>J Bal</td>
<td>Implementing virtual teamworking. Part 1: a</td>
</tr>
<tr>
<td>31</td>
<td>2.38</td>
<td>5</td>
<td>J Bal</td>
<td>Virtual teaming in the automotive supply chain</td>
</tr>
<tr>
<td>26</td>
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<td>6</td>
<td>J Bal, R Wilding...</td>
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</tr>
<tr>
<td>17</td>
<td>1.55</td>
<td>7</td>
<td>J Bal</td>
<td>Implementing virtual teamworking: Part 2—</td>
</tr>
<tr>
<td>13</td>
<td>1.18</td>
<td>8</td>
<td>J Bal</td>
<td>Learning style preferences of engineers in an</td>
</tr>
<tr>
<td>8</td>
<td>0.73</td>
<td>9</td>
<td>J Bal</td>
<td>Implementing virtual teamworking: Part 3—a</td>
</tr>
<tr>
<td>8</td>
<td>0.89</td>
<td>11</td>
<td>J Bal</td>
<td>The emerging self-directed learning methods</td>
</tr>
<tr>
<td>7</td>
<td>0.78</td>
<td>10</td>
<td>A Young, J Bal</td>
<td>External environmental forces affecting e-learning,</td>
</tr>
<tr>
<td>5</td>
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<td>J Bal</td>
<td>Virtual Teaming in the Automotive Supply Chain</td>
</tr>
<tr>
<td>4</td>
<td>0.36</td>
<td>12</td>
<td>J Bal</td>
<td>The effects of technology-based learning on</td>
</tr>
<tr>
<td>4</td>
<td>0.00</td>
<td>14</td>
<td>J Bal</td>
<td>E-business through competence profiling</td>
</tr>
<tr>
<td>2</td>
<td>0.15</td>
<td>16</td>
<td>J Bal</td>
<td>Tracking systems for use in ergonomic assess</td>
</tr>
<tr>
<td>2</td>
<td>0.14</td>
<td>15</td>
<td>B Jay</td>
<td>Process analysis techniques and tools for busine</td>
</tr>
<tr>
<td>1</td>
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<td>Effective virtual teamworking</td>
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<td>0.10</td>
<td>19</td>
<td>J Bal</td>
<td>Supporting SMEs through e-business</td>
</tr>
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<td>0.14</td>
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<td>AH Anderson, J Mullin, R McEwan, J Bal...</td>
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</tr>
<tr>
<td>0</td>
<td>0.00</td>
<td>30</td>
<td>D Seng, Y Cheung, J Bal...</td>
<td>A business model for collaborative commerce</td>
</tr>
</tbody>
</table>

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Predicting scientific success

H-index prediction


H-index calculator uses BitmapExporter by Mario Klingemann

H-index 5

# articles 12

Years since first article 8

# distinct journals 5

# articles in 'top' journals* 1

Future h-index

Years ahead 1 2 3 4 5 6 7 8 9 10

6 8 9 11 12 12 14 15 15 16


# distinct journals: number of different journals where you have published in.

Note: The equations and the calculator model people that are in Neurotree, have an h-index 5 or more, and are between 5 to 12 years after publishing first article.
Subject Bubble Chart - US
Virtual Teams

Top 50 keyphrases by relevance, based on 3,178 publications | Learn about keyphrase calculations

- Human computer interaction
- Information technology
- Project management
- Distributed computer systems
- Augmented reality
- Learning
- Setting
- E-learning
- Tools
- Societies and institutions
- Computers
- Sensory perception
- Students
- Research
- Industry
- Virtual reality
- Technology
- Human resource management
- Education
- Curricula
- Models
- Software engineering
- Knowledge management
- Dynamics
- Engineering education
- Reviews
- Communication
- Management
- Design
- Personnel training
- Social networking (online)
- Experiments
- User interfaces
- Innovation
- Internet
- Decision making
- Product development

AAA relevance of keyphrase | declining ➔ growing (2011-2015)

⇒ Analyze in more detail

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SCOPUS - Analyze author output

Combined data for multiple authors
Ebrahim, Nader Al; Ale, Ebrahim, Nader

Documents (18)  h-index (5)  Citations (118)  Co-authors (33)

Citations by year

<table>
<thead>
<tr>
<th>Year</th>
<th>Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>1</td>
</tr>
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1. **Leading Effective Global Virtual Teams: The Consequences of Methods of Communication**
   By: Morgan, Lisa; Pauca-Caceres, Alberto; Wright, Gillian
   SYSTEMIC PRACTICE AND ACTION RESEARCH  Volume: 27  Issue: 6  Pages: 607-624  Published: DEC 2014
   [Full Text from Publisher] [View Abstract]

2. **Understanding the attitudes, knowledge sharing behaviors and task performance of core developers: A longitudinal study**
   By: Licorish, Sherlock A.; MacDonell, Stephen G.
   INFORMATION AND SOFTWARE TECHNOLOGY  Volume: 50  Issue: 12  Special Issue: SI  Pages: 1578-1596  Published: DEC 2014
   [Full Text from Publisher] [View Abstract]

3. **A Calibrated Group Decision Process**
   By: Rokou, Elena; Kiriopoulos, Konstantinos
   GROUP DECISION AND NEGOCIATION  Volume: 23  Issue: 6  Special Issue: SI  Pages: 1369-1384  Published: NOV 2014
   [Full Text from Publisher] [View Abstract]

4. **Satisfaction with outcome and process from web-based meetings for idea generation and decision making**
   [Abstract]

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Results found: 1218
Sum of the Times Cited [?] : 15217
Sum of Times Cited without self-citations [?] : 10399
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Citing Articles without self-citations [?] : 7210
Average Citations per Item [?] : 12.49
h-index [?] : 58
Users can view citation trends for any entity in the rankings list. For example, if the user clicks on the name CHINESE ACAD SCI:

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Source: MASSIMILIANO CARLONI (2014) THE NEW JCR, Journal Citation Reports on INCITES, Strategic Business Manager, Thomson Reuters
They will be taken to the Citation Trends Page for the Chinese Academy of Sciences, which shows a trend graph, normalized citation data, and raw citation data:

Source: MASSIMILIANO CARLONI (2014) THE NEW JCR, Journal Citation Reports on INCITES, Strategic Business Manager, Thomson Reuters
Practical Advice

• Find out what’s Hot
  – http://info.scopus.com/topcited/
  – http://top25.sciencedirect.com/

• Find the trends of the subject area
  – Search tips (including alerts)
  – Journals, authors, publications per year (Scopus)

• Evaluate which journal is right for your article
  – Impact Factor
  – Subject Specific Impact Factor (http://tinyurl.com/scopusimpact+)
  – SCIImago Journal & Country Ranking (http://scimagojr.com/)
  – Journal Analyzer
  – h-Index

• Find out more about the journals
  – Who are the editors?
  – Guide for authors
  – Article of the future
  – http://beta.cell.com/erickson/

Source: How To Get Your Article Published: From title to references, From submission to revision Presented by: Anthony Newman, Elsevier, Amsterdam, Birmingham, Nov. 2010

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Your paper is **worthless** if no one reads, uses, or cites it.

A research study is meaningful **only if**…

- it is clearly described, so
- someone else can use it in his/her studies
- it arouses other scientists’ interest and
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By submitting a manuscript you are basically trying to sell your work to your community…

Source: [How To Get Your Article Published: From title to references, From submission to revision](https://www.elsevier.comعالی) Presented by: Anthony Newman, Elsevier, Amsterdam, Birmingham, Nov. 2010
Positive correlation between downloads and citations partly due to the effect of citations upon downloads.

Age distribution of citations to Arxiv and non-ArXiv papers

Move curve by 6 months to the right

Source: Henk F. Moed, (2011) "New developments in electronic publishing and bibliometrics", CWTS, Leiden University, Netherlands & Elsevier, Amsterdam, Netherlands
Citations lead to downloads

[Moed, J. Am Soc Inf Sci Techn, 2005]

Paper B published; it cites A

Paper C published; it cites A and B

Download of A increases

Paper A published

Source: Henk F. Moed, (2011) "New developments in electronic publishing and bibliometrics", CWTS, Leiden University, Netherlands & Elsevier, Amsterdam, Netherlands
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Search publications by:
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Source: Rachel Mangan, (2010), WEB OF KNOWLEDGE UPDATE TRAINING, MIMAS

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Citation report shows an average of 7.81 citations per paper for that journal, year and document type.

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17. Rachel Mangan, (2010), WEB OF KNOWLEDGE UPDATE TRAINING, MIMAS
22. Ale Ebrahim, N. (2016). Academic social networking (ResearchGate & Academia) and the research impact. Retrieved from Research Support Unit, Centre for Research Services, Institute of Research Management and Monitoring (IPPP)*, University of Malaysia: https://dx.doi.org/10.6084/m9.figshare.3464156.v1