

Scopus: Empower Your Research at Every Step

Nicholas Pak Solutions Consultant Elsevier Research Solutions

n.pak@elsevier.com

August 2018

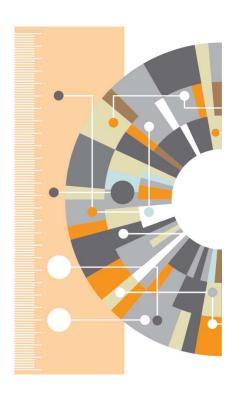
Empowering Knowledge

Scopus: Empower Your Research at Every Step



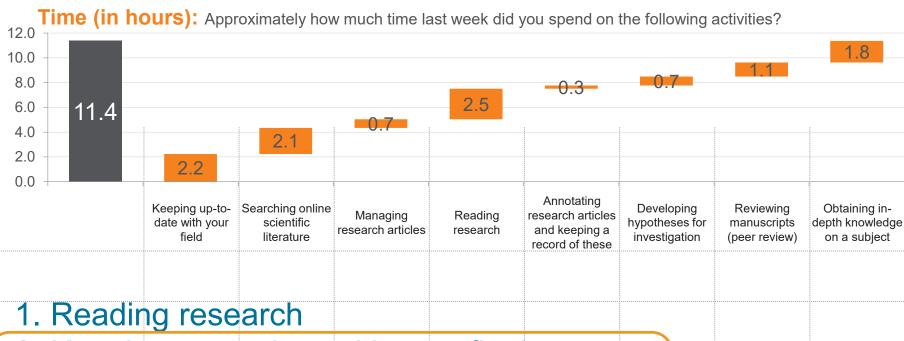
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Scopus | 13 3

Exploring Literature



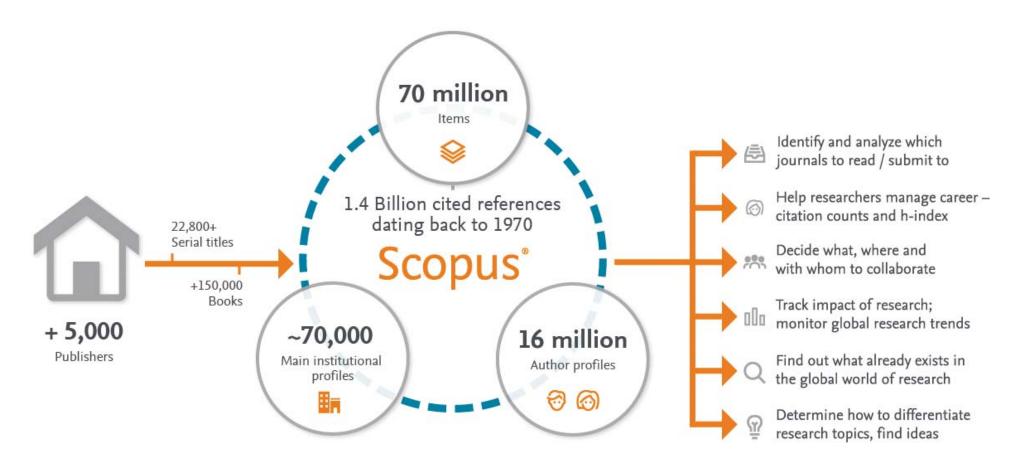
- 2. Keeping up-to-date with your field
- 3. Searching online scientific literature
- 4. Obtaining in-depth knowledge on a subject

The researchers' challenge is in these use cases

Source: Researcher Behaviour, June 2014, Customer Insights

Scopus is the world's largest abstract and citation database of peer-reviewed scientific literature

What is Scopus?





The Bibliographic Indexing Leader

Scopus is the largest abstract and citation database of peer-reviewed scholarly literature, making it a highly recommended resource for discovering the world of research

Scopus

Scopus
delivers a
comprehensive
view on the
world of
research.

No packages, no add-ons.

One all-inclusive subscription.





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Get to know

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Historical Depth



TODAY



1788

Records back to

1788

References are included on records back to

1970

recently added
195 million
references and
now covers
11.5 million
records between

1970-1995

In total:

69+ M records

1.4 B cited



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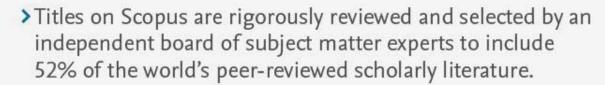
Expert Curation

There are 100,750* active scholarly titles

Of which 43,947* are peerreviewed







^{*} Source: Ulrich's Web Global Serials Directory, August 1, 2017





The Premier Source of Profiles

Scopus includes over 12M author profiles, which are automatically created whenever new data is uploaded. We offer a feedback feature to ensure each author's profile is distinct and kept up-to-date. No other A&I database matches Scopus for precision and recall.

Scopus

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comprehensive
view on the
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research.

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The Scopus Data Model

The data that goes into **Scopus** follows the model that **articles** are written by **authors** who are affiliated with **institutions**.

This relational data model means that Scopus can tell you who is researching what in global literature and where they are doing it with higher accuracy than anyone else.





Quiz

How many items are there in Scopus?



What content is in Scopus?



Global Representation means global discovery

Across all subjects and content types

Scopus includes content from more than 5,000 publishers and 105 different countries

- 40 different languages covered
- Updated daily
- Multiple regional content types covered (journals, conferences, books, book series)

Number of Journals by subject area					
	Journals	Conference	Books		
Physical Sciences 12,263	23,507 Peer-reviewed journals 301 Trade journals 3,784 Active Gold Open Access journals >8,000 Articles in Press Full metadata, abstracts and cited references	106K Conference events 8.3M	613 Book series 38K		
Health Sciences 13,819		Conference papers Mainly Engineering and Computer Sciences	Volumes 1.5M Items		
Social Sciences 10,905			165,768 Stand-alone books 1.34M		
Life Sciences 6,809			Items Focus on Social Sciences and A&H		

Source: Scopus.com, January 30, 2018



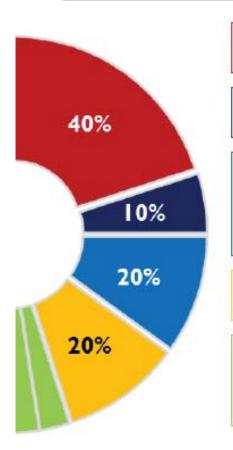
World university rankings – QS

University Rankings use a combination of expert opinion (surveys) and objective data (including from Scopus)

QS

QS World University Rankings — <a href="http://www.topuniversities.com/university-rankings/world-university-rankings/world

Formerly (until 2009) produced with Times Higher Education as THE-QS World University Rankings



Academic reputation (40%)

From QS Global Academic Survey with almost 63,700 responses for 2014/15

Employer reputation (10%)

From QS Global Employer Survey with 28,800 responses for 2014/15

Publication and citation data from Scopus is used

Citations per faculty (20%)

Citation counts from last five years considered Citation data source: Scopus Author self-citations excluded Normalised by staff FTE figures

Scopus

Faculty/student ratio (20%)

FTE values used for faculty and students

International students (5%)

Proportion of students that are international

International faculty (5%)

Proportion of faculty that are international

QS World University Rankings



- Teaching and research outputs are key pillars of an institution's mission. Institutional research quality is measured using the *Citations per Faculty* metric. To calculate it, the total number of citations received by all papers produced by an institution is calculated across a five-year period by the number of faculty members at that institution.
- To account for the fact that different fields have very different publishing cultures papers concerning the Life Sciences are responsible nearly half of all research citations as of 2015 citations are normalized. This means that a citation received for a paper in Philosophy is measured differently to one received for a paper on Anatomy and Physiology, ensuring that, in evaluating an institution's true research impact, both citations are given equal weight.
- All citations data is sourced using Elsevier's Scopus database, the world's largest repository of academic journal data. This year, QS assessed 99 million citations from 10.3 million papers once self-citations were excluded.

World university rankings – THE

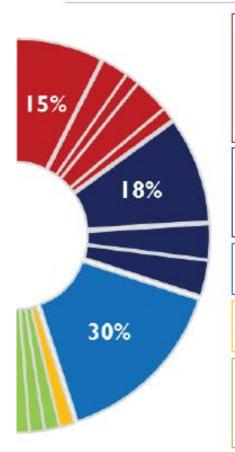
University Rankings use a combination of expert opinion (surveys) and objective data (including from Scopus)

THE

THE World University Rankings - http://www.timeshighereducation.co.uk/world-university-rankings/

Published since 2010 by the Times Higher Education

Broke away from the QS-partnered rankings prior to 2010 edition



Teaching: the learning environment (30%)

Academic reputation survey: reputation for teaching (15%)

Staff to student ratio (4.5%)

Ratio of doctoral to bachelor's degrees awarded (2.25%)

(Field-weighted) number of doctorates awarded per staff FTE (6%)

Institutional income per staff FTE (2.25)

Publication and citation data from Scopus is used

Research: volume, income and reputation (30%)

Academic reputation survey: reputation for research excellence (18%)

(Field-weighted) research income per staff FTE (6%)

(Field-weighted) research output per staff FTE (6%)

Citations: research influence (30%)

(Field-weighted) citations in 2006-11 to papers published 2006-10

Scopus

Industry income: innovation (2.5%)

Income from industry per staff FTE

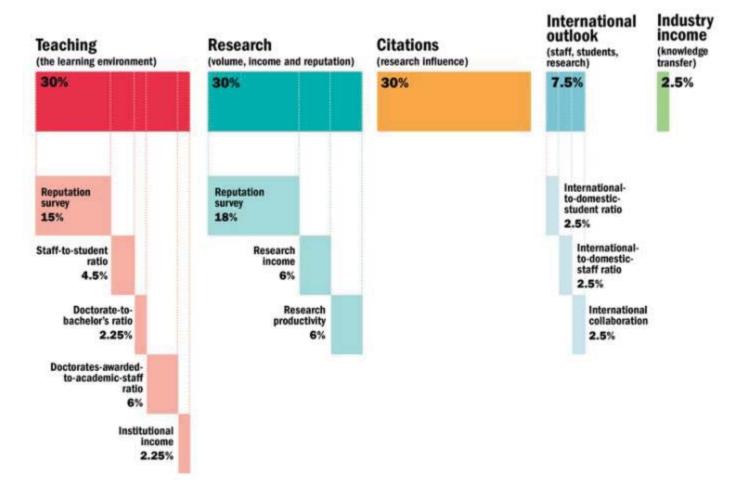
International outlook: staff, students and research (7.5%)

Ratio of international to domestic students (2.5%)

Ratio of international to domestic staff (2.5%)

(Field-weighted) proportion of research papers with international co-authors (2.5%)

Times Higher Education World University Rankings





Times Higher Education World University Rankings

- THE examines research influence by capturing the number of times a university's published work is cited by scholars globally. Elsevier provides bibliometric data for this, and examines more than 56 million citations from 11.9 million journal articles, conference proceedings and books and book chapters published over five years. The data include the 23,000 academic journals indexed by Elsevier's Scopus database and all indexed publications between 2011 and 2015. Citations to these publications made in the six years from 2011 to 2016 are also collected.
- The data is normalised to reflect variations in citation volume between different subject areas. This means that institutions with high levels of research activity in subjects with traditionally high citation counts do not gain an unfair advantage.
- Country-adjusted and non-country-adjusted raw measure of citations scores are blended
- In 2015-16, THE excluded papers with more than 1,000 authors because they were having a
 disproportionate impact on the citation scores of a small number of universities. This year, these
 papers were incorporated. THE has worked with Elsevier to develop a new fractional counting
 approach that ensures that all universities where academics are authors of these papers will
 receive at least 5 per cent of the value of the paper, and where those that provide the most
 contributors to the paper receive a proportionately larger contribution.

The power of Scopus data & National Science Foundation (NSF)

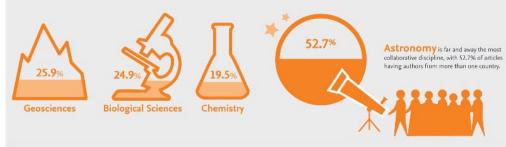
Elsevier Research Intelligence

Elsevier's Scopus Supports the NSF SEI 2016

Global Investment in R&D on the Rise 29,4% North America and East/Southeast Asia North are investing the most America 21.9× \$492 Europe \$367 36.8× South Asia: \$45 (2.7%) East and utheast Asia Central Asia: \$41 (2.5%) \$614 South America: \$40 (2.4%) Middle East: \$34 (2.0%) Australia and Oceania: \$25 (1.5%) Africa: \$13 (0.8%) Billions of U.S. PPP dollars Central America and the Caribbean: \$0.6 (<0.1%)

Research without Borders

The highest levels of international collaboration takes place in the Geosciences, Biological Sciences, and Chemistry.



"The use of the Scopus database represents a substantial increase in the global coverage of bibliometric data compared to prior years. The change...allows NSF to present data on the most highly cited S&E publications as well as on a broader set of publications that provide insight into trends in emerging and developing countries."

Science and Engineering Indicators 2016

Source: National Science Board. 2016. Science and Engineering Indicators 2016. Arlington, VA: National Science Foundation (NSB-2016-1)

https://www.elsevier.com/research-intelligence/promo/nsf-sei





Leading in Quality & Quantity

Scopus continually processes, enriches and makes available a vast quantity of data, with rigorous quality-control standards to maintain the integrity of the database.

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Scopus
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view on the
world of
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The Gold Standard









Scopus is recognized for its excellence by

4,000 universities







150 leading research organizations

who continue to choose Scopus for research assessment and evaluation purposes over any other competitor.







Leading in Quality & Quantity

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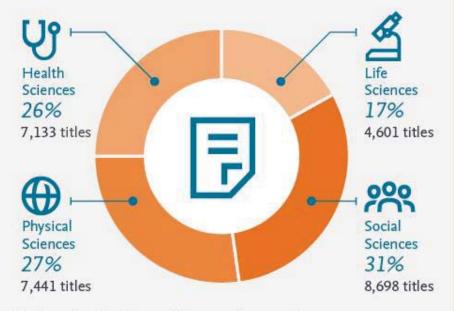
Scopus
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Complete Coverage Across the Sciences

Scopus integrates broad and deep coverage of quality peer-reviewed literature and web resources across science, technology, health, the social sciences and the humanities. Titles on Scopus are classified under four subject clusters.



^{*} Includes active titles. Titles may fall into more than one subject area





Leading in Quality & Quantity

Scopus continually processes, enriches and makes available a vast quantity of data, with rigorous quality-control standards to maintain the integrity of the database.

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A World of Data to Mine

3.7 TB
Data stored in content repository









Scopus delivers all metadata as provided by publishers, including: author(s), affiliation(s), document title, year, electronic identification (EID), source title, volume/issue/pages, citation count(s), source, document type and digital object identifier (DOI).



Scopus delivers a comprehensive view on the world of research

No packages, no add-ons.

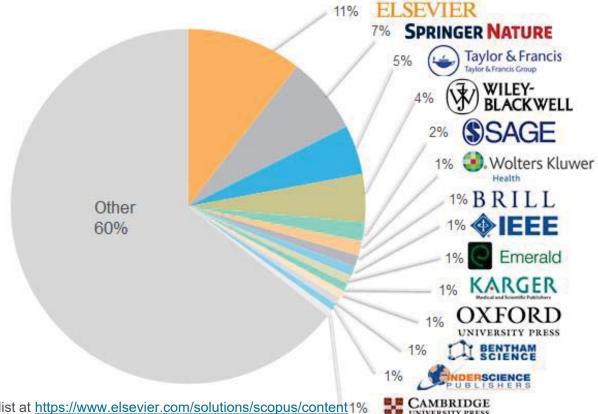
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Scopus

The Bibliographic Index Leader

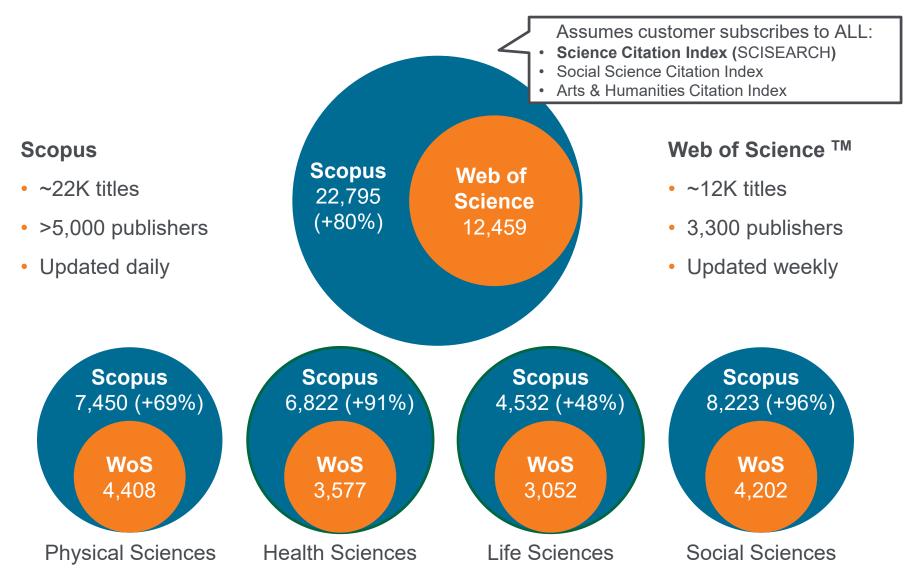
>70M records and over 23,500 active titles from more than 5K international publishers. More than 3,759 Gold Open Access journals indexed, 165K books and 8,3M conference proceedings*

Unbiased, comprehensive journal coverage with titles from many reputable scholarly publishers:



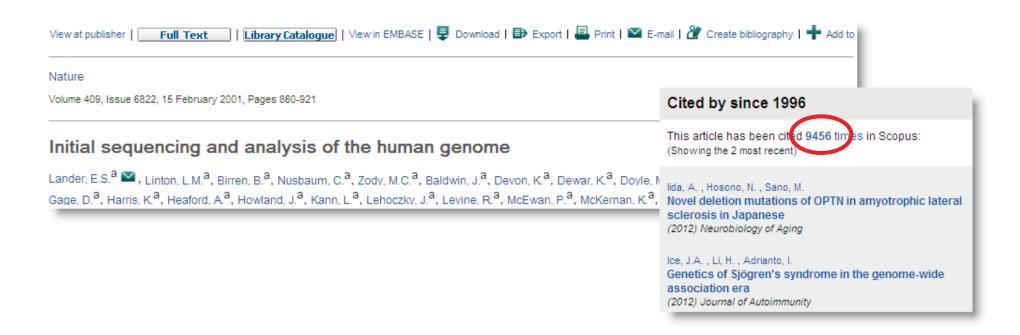
Source: Feb 2018 title list at https://www.elsevier.com/solutions/scopus/content 1%

Overall Content Comparison with Web of Science



Source: Web of Science Real Facts, Web of Science Core Collection title list and Scopus' own data (May 2016)

Broader coverage = higher citations

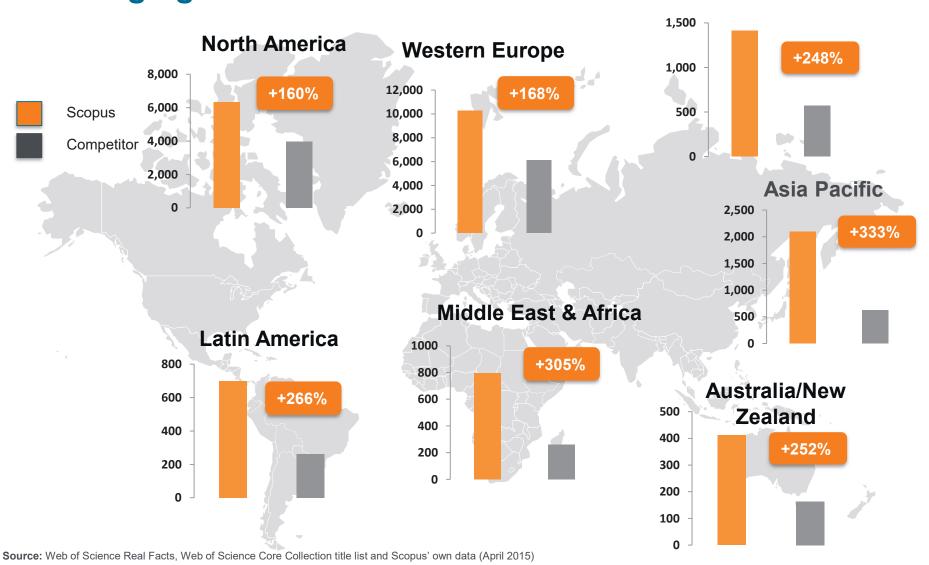


Web of Science®

Inte: Initial sequencing and analysis of the human genome
Author(s): Lander ES; Linton LM; Birren B; et al.
Group Author(s): Int Human Genome Sequencing Conso
Source: NATURE Volume: 409 | Issue: 6822 | Pages: 860-921 | DOI: 10.1038/35057062 | Published: FEB 15 2001

8,870 in Web of Science

What does Scopus's content advantage mean for emerging countries? Eastern Europe incl Russia



Funding data being added to Scopus as we speak

inding



 Add full text acknowledgement sections to Scopus

The Role of Gender in Scholarly Authorship

Jevin D. West ☑, Jennifer Jacquet, Molly M. King, Shelley J. Correll, Carl T. Bergstrom

Published: July 22, 2013 • http://dx.doi.org/10.1371/journal.pone.0066212

Abstract

Gender disparities appear to be decreasing in academia according to a number of metrics, such as grant funding, hiring, acceptance at scholarly journals, and productivity, and it might be tempting to think that gender inequity will soon be a problem of the past. However, a large-scale analysis based on over eight million papers across the natural sciences, social sciences, and humanities reveals a number of understated and persistent ways in which gender inequities remain. For instance, even where raw publication counts seem to be equal between genders, close inspection reveals that, in certain fields, men predominate in the prestigious first and last author positions. Moreover, women are significantly underrepresented as authors of single-authored papers. Academics should be aware of the subtle ways that gender disparities can occur in scholarly authorship.

Copyright: © 2013 West et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

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Competing interests: The authors have declared that no competing interests exist.

PLoS ONE

Volume 8, Issue 7, 22 July 2013, Article number e66212

Open Acces

The Role of Gender in Scholarly Authorship (Article)

West, J.D.a M, Jacquet, J.b, King, M.M.c, Correll, S.J.c, Bergstrom, C.T.ad

Funding: This work was supported in part by NSF grant SBE-0915005 to CTB, NSF Graduate Research Fellowship grant DGE-1147470 to MMK, and a generous gift from JSTOR. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Gender disparities appear to be decreasing in academia according to a number of metrics, such as grant funding, hiring, acceptance at scholarly journals, and productivity, and it might be tempting to think that gender inequity will soon be a problem of the past. However, a large-scale analysis based on over eight million papers across the natural sciences, social sciences, and humanities reveals a number of

Funding Details

Number; Acronym; Sponsor: SBE-0915005; NSF; National Science Foundation

EMTREE medical terms: article; author, classification algorithm; female; funding; gender bias; human; humanities; male; natural science; productivity; publishing; scholarly authorship; scientifi

literature; sex ratio; social discrimination; sociology; trend study; writing

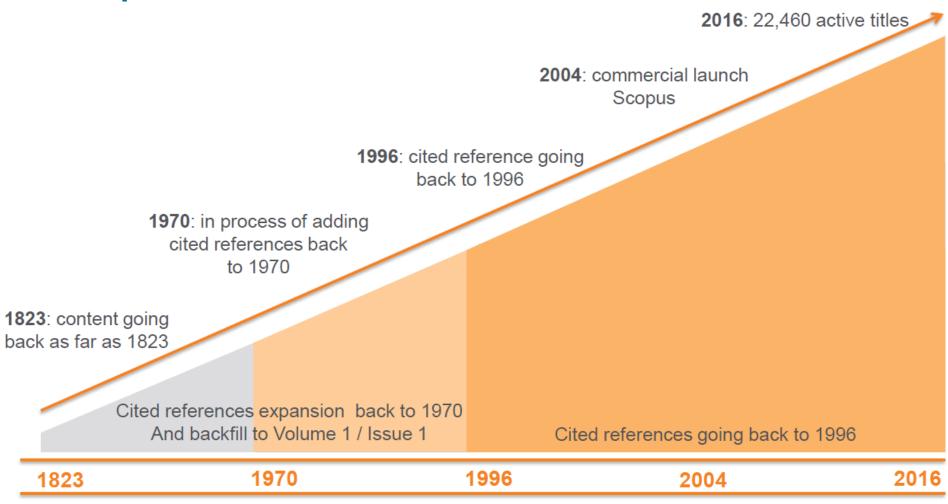
MeSH: Authorship; Humans; Publications; Sex Factors; Sexism; Time Factors Medline is the source for the MeSH terms of this document.

ISSN: 19326203 CODEN: POLNC Source Type: Journal Original language: English
DOI: 10.1371/journal.pone.0068212 PubMed ID: 23894278 Document Type: Article

Funding Detail

Number; Acronym; Sponsor: SBE-0915005; NSF; National Science Foundation

Scopus Content has Evolved Over the Past 12 Years







Scopus

Scopus

Ongoing Scopus Expansion Programs at No Extra Costs



Pre-1996 Cited Reference Expansion Program Cited references going back to 1970, 8M+ articles



Conference Expansion Program

+1,000 new titles, +6,000 events, +400K papers and +5M references

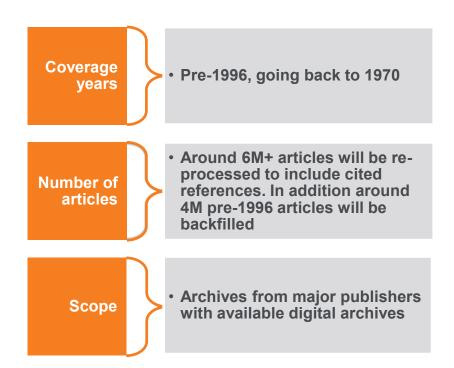


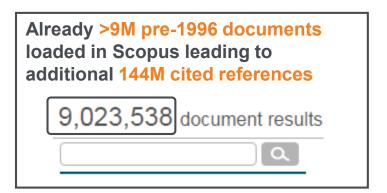
Books Expansion Program

120K books back to 2005. +20K every year

Already in Scopus: Elsevier, Springer, Wiley, Brill, De Gruyter, Woodhead, Karger, Oxford University Press, Edward Elgar, Maney, Intellect, IOS Press, Pan Stanford, University of California Press, Princeton University Press, Edinburgh University Press, Delft University Press, Duke University Press, McGill Queens University Press, Project Muse (60+ UPs), OECD and more...

Adding cited references to pre-1996 items in Scopus





Impact this project has on Scopus and on you:

- 62 Full publisher archives were/are processed leading to >9M new/updated articles.
- Author profiles and accompanying h-indexes are more complete and at par or above the competition.
- >40% Of all pre-1996 content in Scopus has been updated or added via this initiative.

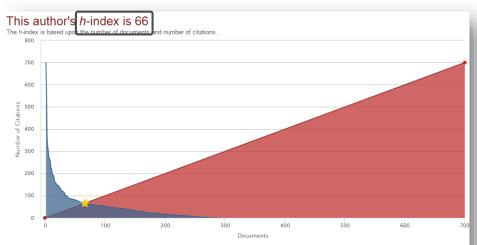
h-index of researchers who started publishing before 1996 is increasing

Scopus

Jean Pierre Sauvage (Nobel prize in Chemistry, 2016)

Universite de Strasbourg, Institut de Science et d'Ingénierie Supramoléculaires (ISIS), Strasbourg, France

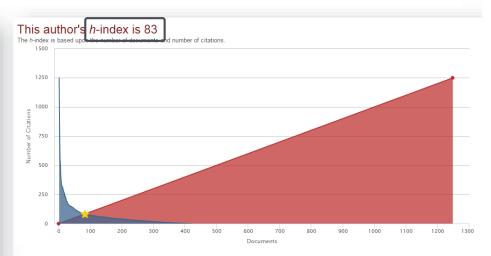
Author ID: 35515477700



Documents published between: 1996 - 2016

Number of publications: **292** Number of citations: **15,346**

h-index: 66



Documents published between: 1971 - 2016

Number of publications: 418 Number of citations: 26,767

h-index: 83

Increasing Coverage of Conference Papers with Focus on Engineering and Computer Sciences

Coverage years

• Backfill from 2005 - 2012 (8 years)

Number of conferences

 Around 1,000 new conference titles, 6,000 conference events, 400K conference papers and 5M references

Which conferences

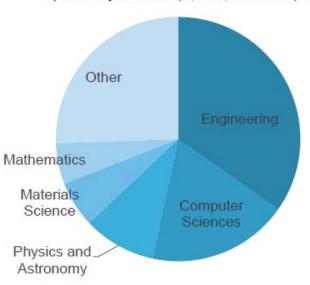
 Serial and one-off conferences from authoritative, respected lists. Focus of engineering and engineering-related subject fields



"Relying on journal publications as the sole demonstration of scholarly achievement.

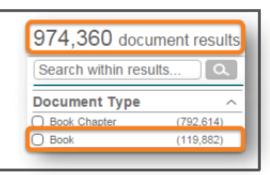
ignores significant evidence of accomplishment in computer science and engineering. CRA expresses appreciation for the steps Elsevier has taken to improve the coverage of Scopus in recent years."

Breakdown of conference papers in Scopus per subject field (7,285,226 total):



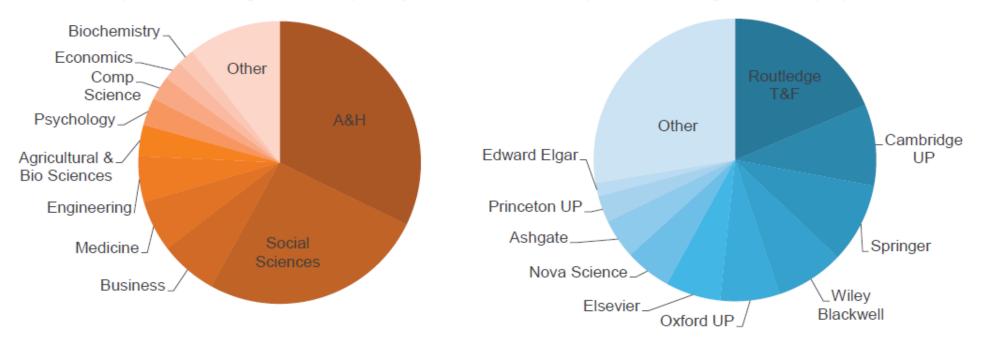
Increasing Coverage of Books with Focus on Social Sciences and Arts & Humanities

In addition to 30K book volumes from series, 120K books loaded in Scopus. 15 – 20K new books per year going forward



Scopus books coverage breakdown per subject field:

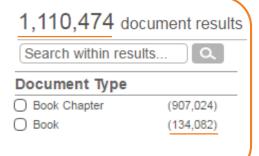
Scopus books coverage breakdown per publisher:



Source: January 2016 Books Title list at https://www.elsevier.com/solutions/scopus/content

Non-serial books in Scopus

More than 134K books are present in Scopus today. The main area of focus is non-serial books in Humanities and Social Sciences. This, next to the 34K book volumes already online, yield over 1.1M items in Scopus.com.



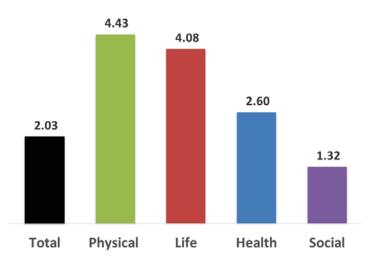
HIGHER MORLD WORLD WORLD

Books to be included in World University Rankings analysis for first time

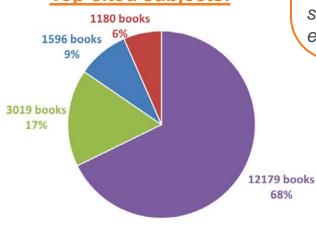
Arts and humanities research will be better represented in the 2016-17 global league table

'The addition of books ensures that the rankings go even further in capturing research excellence in the arts, humanities and social sciences', per THE rankings editor Phil Baty.

Average Citations per Book:



Top cited subjects:



■ Social Sciences ■ Physical Sciences ■ Health Sciences ■ Life Sciences

More info: https://www.timeshighereducation.com/news/books-be-included-world-university-rankings-analysis-first-time

Transparent Scopus selection criteria for serial content

<u>All</u> titles should meet <u>all</u> minimum criteria in order to be considered for Scopus review:

Peer-review

English abstracts

Regular publication

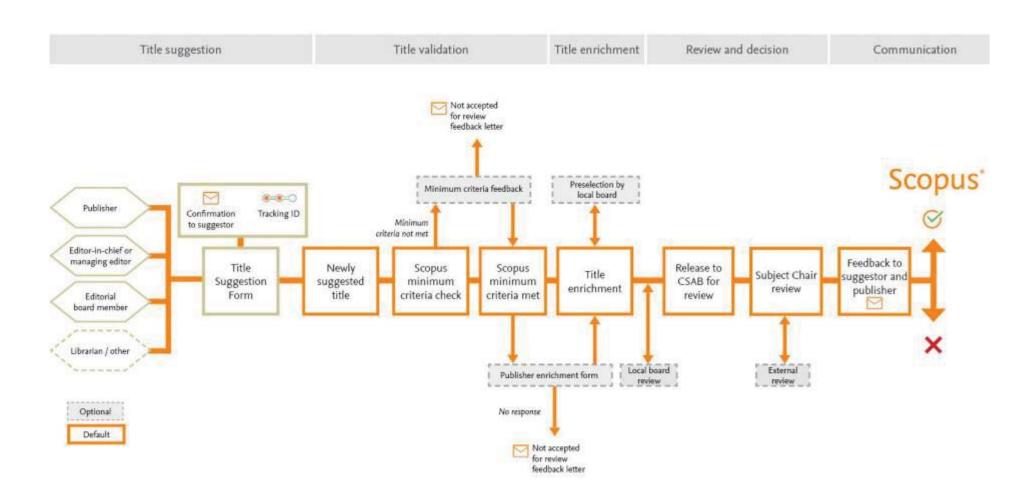
Roman script references

Pub. ethics statement

Eligible titles are reviewed by the Content Selection & Advisory Board according to a combination of 14 quantitative and qualitative selection criteria:

Journal Policy	Quality of Content	Journal Standing	Regularity	Online Availability
 Convincing editorial concept/policy Type of peer-review Diversity geographic distribution of editors Diversity geographic distribution of authors 	 Academic contribution to the field Clarity of abstracts Quality and conformity with stated aims & scope Readability of articles 	 Citedness of journal articles in Scopus Editor standing 	No delay in publication schedule	 Content available online English-language journal home page Quality of home page

Continuous, online title review process for selecting new journals for Scopus coverage





Objective, High-quality Resources

All titles on **Scopus** are selected by the independent Content Selection & Advisory Board, which is strict about quality and publishing ethics. Furthermore, we are transparent about our selection policy, criteria and title evaluation process: https://www.elsevier.com/solutions/scopus/content/content-policy-and-selection

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Content
Selection &
Advisory Board
(CSAB)

All journals covered by Scopus are approved by an independent Content Selection & Advisory Board (CSAB).

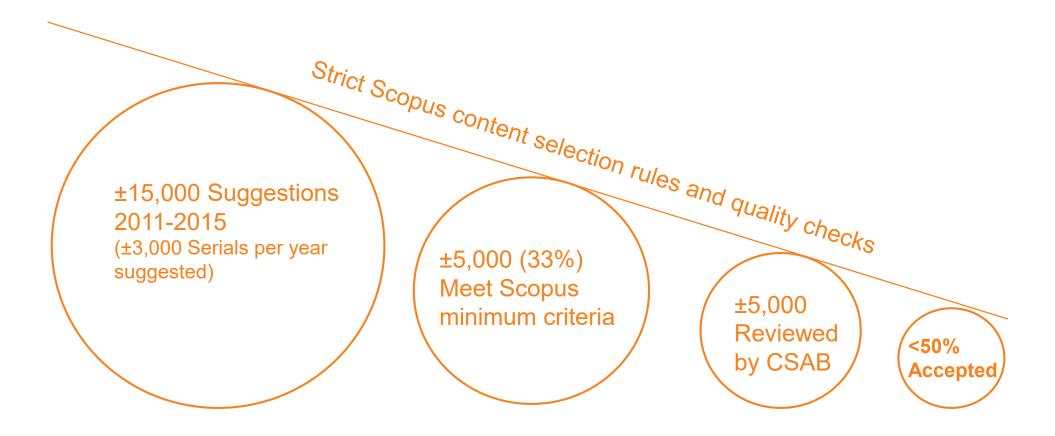
CSAB members are subject experts from all over the world and chosen for their expertise in specific subject areas. Many have (journal) editor experience.





Less than half of the reviewed titles are selected for Scopus coverage

The CSAB is selective and strict on quality: in total 5,411 **titles reviewed** (2011 –2015) of which 2,587 **(48%) accepted** for Scopus



Ongoing content curation of the Scopus base to ensure continuous high quality content

Curation of the full journal base is essential and expected by our customers and users.



Direct feedback from users and stakeholders on poor performing journals

Identification of poor performing journals using metrics and benchmarks

"Radar" to predict journals with outlier performance

Review:

Re-evaluation by the Content Selection & Advisory Board (CSAB)

Curate:

Content Curation

Scopus

Transparent, annual re-evaluation process to ensure titles continue to meet high quality standards

Full Scopus Journal base

Year 1

Analyze full Scopus journal corpus performance based on set metrics & benchmarks

Flag underperforming journals & inform journal publishers

Year 2

Analyze full Scopus journal corpus performance based on set metrics & benchmarks

Flag underperforming journals & inform journal publishers

CSAB review

If a journal underperforms for <u>2 consecutive years</u>, CSAB will re-evaluate the title based on Scopus selection criteria

Flagged journals for which concerns are raised, CSAB will re-evaluate the title based on Scopus selection criteria

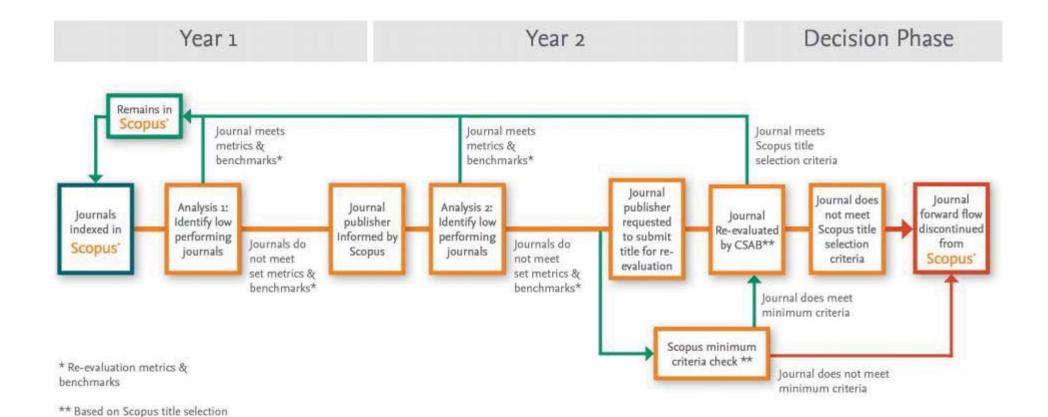
CSAB decision

Continue forward flow

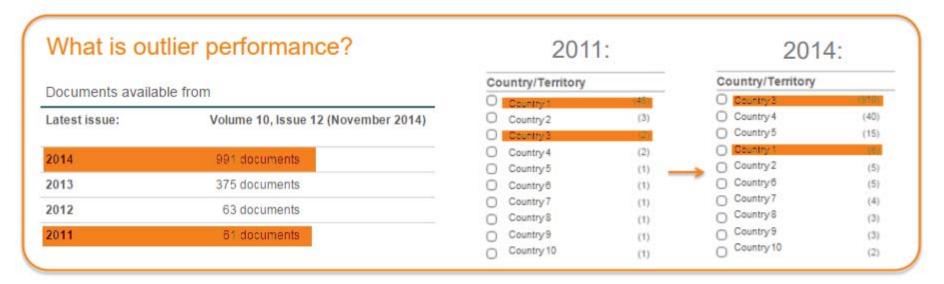
or

Discontinue forward flow

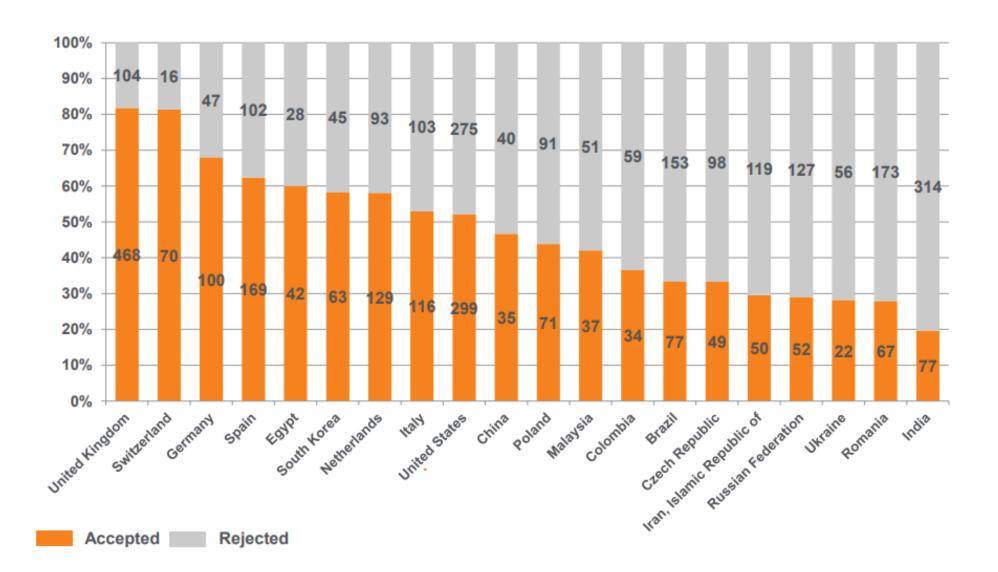
criteria



"Radar" that identifies journals with outlier performance

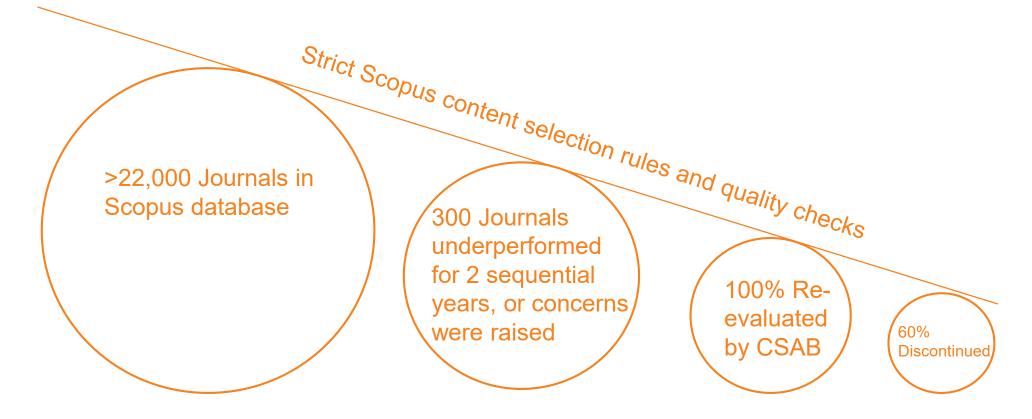


- Elsevier colleagues were challenged to create a "Radar" that can identify, flag and ultimately predict outlier performance of journals
- Examples of predicting behaviours:
 - Total article output and sudden article output growth
 - Geographical diversity among authors and editors
 - Shift in received citations and percentage of self-citations
- The "radar will be rolled out to flag outlier journals on a regular basis
- Flagged journals will be reviewed by the CSAB for continuation of Scopus coverage



2016 Re-evaluation results

- All journal publishers were informed by Scopus of the Re-evaluation outcome of their journal in December 2016.
- If discontinued = Journal forward flow discontinued per January 1, 2017.



Quiz

 How many criteria does the CSAB take into consideration when deciding if a journal qualifies to be indexed on Scopus?



Searching Scopus - Demonstration

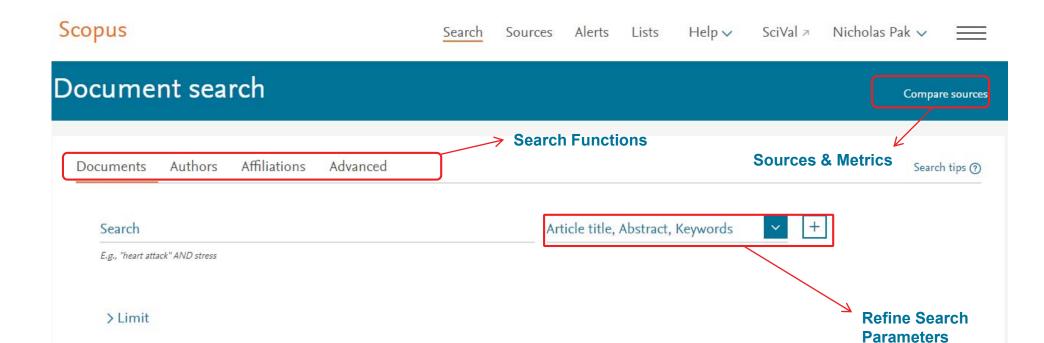


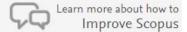
Empowering Knowledge

Key Features & Functions - Scopus

- Facilitates major tasks researchers have
 - Searching citations & indexes
 - Browsing & searching sources
 - Viewing & storing articles
 - Search History
 - Documents Download
 - Author Search
 - Affiliation Search
- Stay up-to-date
 - Alerts
 - RSS

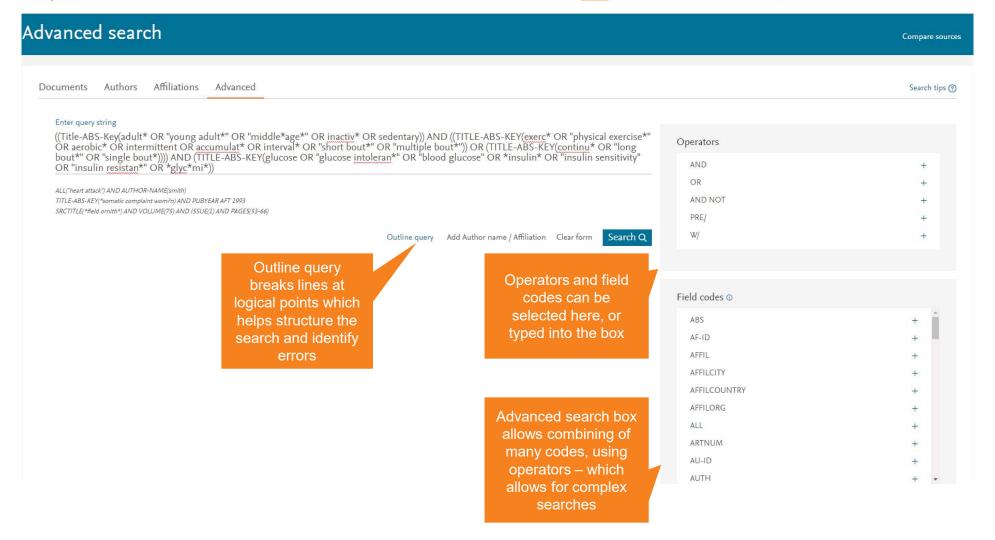
Scopus 47



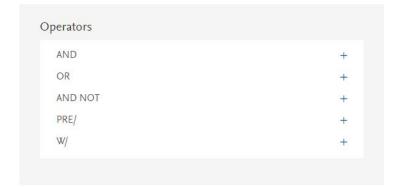


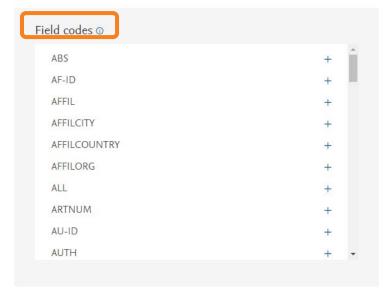
Reset form Search Q

Scopus



Advanced Search Field Codes – 64!!





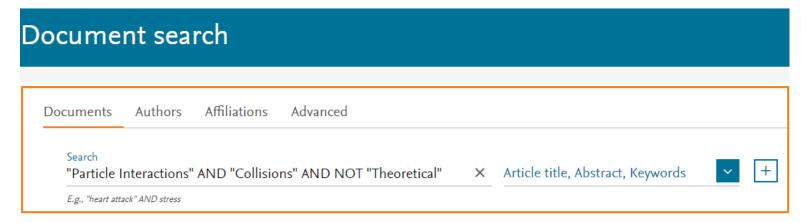
Operators and field codes can be added by typing it in the query field, clicking on the "+" icon or by clicking on the "add" button in the example pop out.

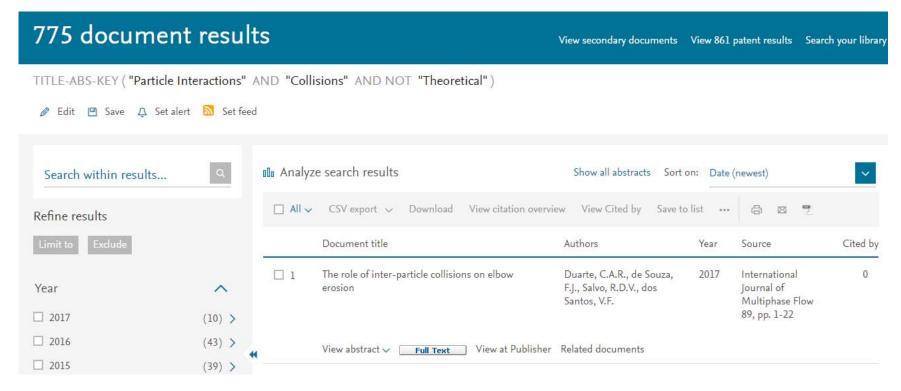
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AUTHCOLLAB	
AUTHKEY	
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CASREGNUMBER	
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FUND-ACR
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INDEX
INDEXTERMS
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LANGUAGE

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OR	CID
PA	GEFIRST
PA	GELAST
PA	GES
PM	ID
PU	BDATETXT
PU	BYEAR
RE	F
SE	QBANK
SE	QNUMBER
SR	CTITLE
SR	CTYPE (XX)
SU	BJAREA(XX)
TIT	LE
TIT	LE-ABS
TIT	LE-ABS-KEY
TIT	LE-ABS-KEY-AUTH
TR	ADENAME
VO	LUME
WE	BSITE

Advanced search strings can be used in Document Search tab.





Search Functionality

Choosing Search Terms

- Use specific search terms that are closely related to your research topic
- Include alternative words and abbreviations
- Avoid words that are too general

Use Boolean Operators

- AND
 - Finds documents that contain ALL of the terms
 - Use this when the terms must appear and may be far apart from each other
 - Example: "Programmable Logic Controller AND Elevator"

OR

- Finds documents that contain any of the terms
- Use OR when at least one of the terms must appear (such as synonyms, alternate spellings, or abbreviations)
- Example: micromouse OR picomouse

AND NOT

- Excludes documents that include the specified term from the search
- Use AND NOT to exclude specific terms. This connector must be used at the end of a search.
- Example: micromouse OR picomouse AND NOT rodent

Search Functionality

Finding Variations of a Word

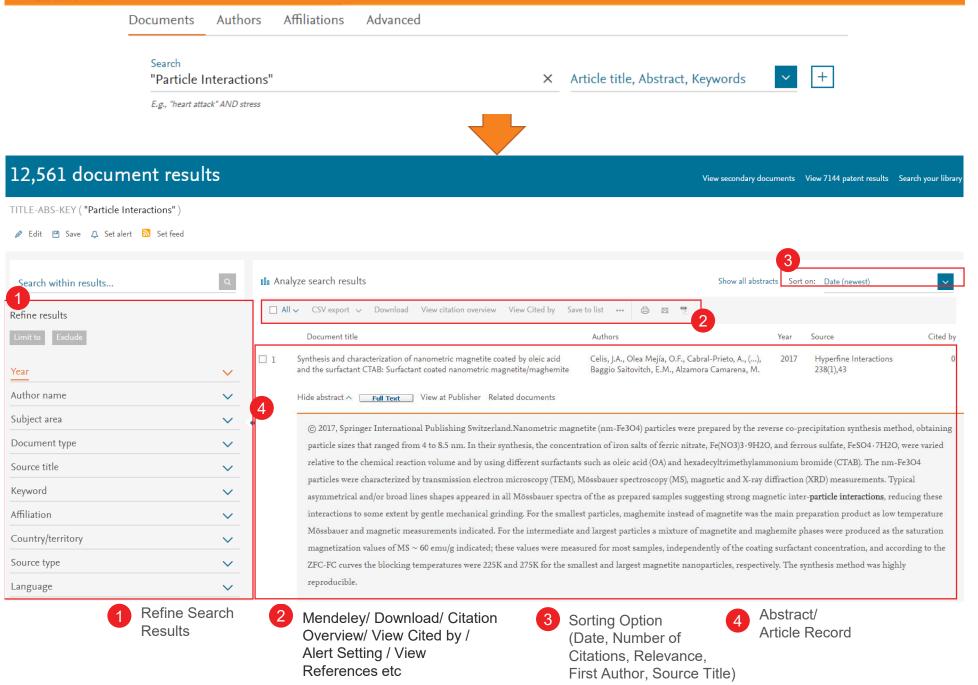
- To search for an exact phrase, including any stop words, spaces and punctuation, enclose the phrase in braces or inverted commas: {air con} or "air con"
- Special characters are included in the search
- Wildcards are searched as characters

Finding Phrases

- Use wildcard characters to search for variations of a word
- Question mark (?) replaces a single character anywhere in a word. Use
 1 question mark for each character you want to replace
- Asterisk (*) replaces multiple characters anywhere in a word; it can be used to replace 0 and more characters.

Exercise

- Remote Control Automated Fire Ignition System
 - 2 Document Results Search for "Fire Ignition System", add search field, use the AND Boolean modifier, and include "Automat*"
 - 113 Document Results Search for "Ignition System", add search field, use the AND Boolean modifier, and include "Automat*"
- Smart Controller for Air Conditioning System
 - 2,121 Document Results Search for "controller", add search field, use the AND Boolean modifier, and include "air con*"
 - 4 Document Results Search for "smart controller", add search field, use the AND Boolean modifier, and include "air con*"
- Interpretation of the deep cracking phenomenon of tungsten monoblock targets observed in high-heat-flux fatigue tests at 20 MW/m2
 - 1 Document Results Search for "deep cracking phenomenon", add search field, use the AND Boolean modifier, and include "tungsten monoblock"



View all metrics >

Scopus

Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and As

Author/Article Information

Volume 506, Issue 3, 1 July 2003, Pages 250-303

GEANT4 - A simulation toolkit (Article)

Agostinelli, S.ªe, Allison, J.ªs 💌, Amako, K.e, Apostolakis, J.ª, Araujo, H.ªi, Arce, P.almx, Asai, M.9ai, Axen, D.º, Banerjee, S.lbh, Barrand, G.ªn, Behner, F.¹, Bellagamba, L.º, Boudreau, J.bº, Broglia, L.ªr, Brunengo, A.º, Burkhardt, H.a., Chauvie, S. bibk, Chuma, J.h., Chytracek, R.a., Cooperman, G.a., Cosmo, G.a., Degtyarenko, P.d., Dell'Acqua, A.a., Depaola, G.t., Dietrich, D.a., Enami, R.a., Feliciello, A.b., Ferguson, C.b., Fesefeldt, H.b., Folger, G.a., Foppiano, F.ac, Forti, A.as, Garelli, S.ac, Gianni, S.a., Giannitrapani, R.bn., Gibin, D.mbb, Gomez Cadenas, J.J.mbo, Gonzalez, I.a., Gracia Abril, G.n., Greeniaus, G. hpag, Greiner, W.af, Grichine, V.f. China China a wah in anah in

- a European Organization for Nuclear Research (CERN) Switzerland, United States
- European Space Agency (ESA), ESTEC, Netherlands stituto Nazionale di Fisica Nucleare (INFN). Italy

Metrics

Abstract

View references

GEANT4 is a toolkit for simulating the passage of particles through matter. It includes a complete range of functionality including tracking, geometry, physics models and hits. The physics processes offered cover a comprehensive range, including electromagnetic, hadronic and optical processes, a large set of long-lived particles, materials and elements, over a wide energy range starting, in some cases, from 250 eV and extending in others to the TeV energy range. It has been designed and constructed to expose the physics models utilised, to handle complex geometries, and to enable its easy adaptation for optimal use in different sets of applications. The toolkit is the result of a worldwide collaboration of physicists and software engineers. It has been created exploiting software engineering and objectoriented technology and implemented in the C++ programming language. It has been used in applications in particle physics, nuclear physics, accelerator design, space engineering and medical physics. © 2003 Elsevier Science B.V. All rights reserved.

Author keywords

Distributed software development; Geometrical modelling; Object-oriented technology; Particle interactions; Simulation; Software engineering

Indexed keywords

Particle interactions

Engineering controlled terms: Computer simulation; High energy physics; Nuclear physics; Object oriented programming; Particle accelerators; Software engineering agineering main heading: Nuclear instrumentation

ISSN: 01689002 CODEN: NIMAE Source Type: Journal Original language: English

Cited Documents

References (131)

O All → CSV export → Print | ME-mail | Save to PDF | * Create b Keywords of the articles

(1998) GEANT4: An Object-oriented Toolkit for Simulation in HEP. Cited 21 time CERN/LHCC 98-44, GEANT4 Web page

http://cern.ch/geant4

Amako, K.

Giani, S.

Proceedings of CHEP94 San Francisco, CA, USA, LBL-35822 CONF-940492 **Abstract and**

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PlumX Metrics

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Social Media and Citations

Metrics ②

The design of JLAMT: An aided tool for large-scale complex physical modeling

10474 69 Citations in Scopus

140.44 Field-Weighted Citation Impact

Ma, Y., Fu, Y., Qin, G.M. (2019) Advances in Intelligent Systems and Computing

Geant4 simulation for commissioning of proton therapy centre

Tan, H.Q., Phua, J.H., Tan, L. (2019) IFMBE Proceedings

Quantifying the spatial and angular distribution of lethal neutrons for treating planning

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Simulation of antiproton-nuclear annihilation at rest

(2004) IEEE Nuclear Science Symposium Conference Record

Hadronic shower models in GEANT4 - The frameworks

Wellisch, J.P. (2001) Computer Physics Communications

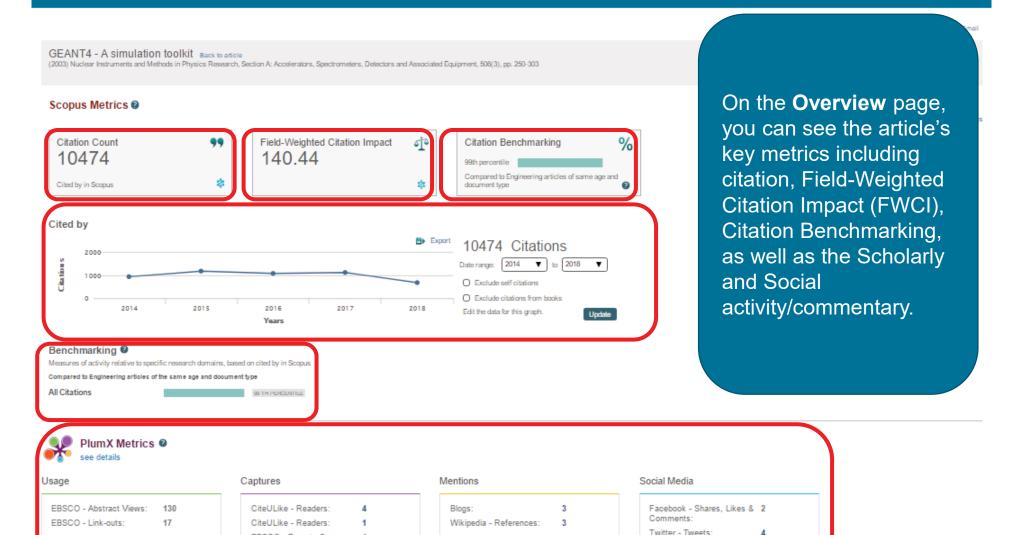
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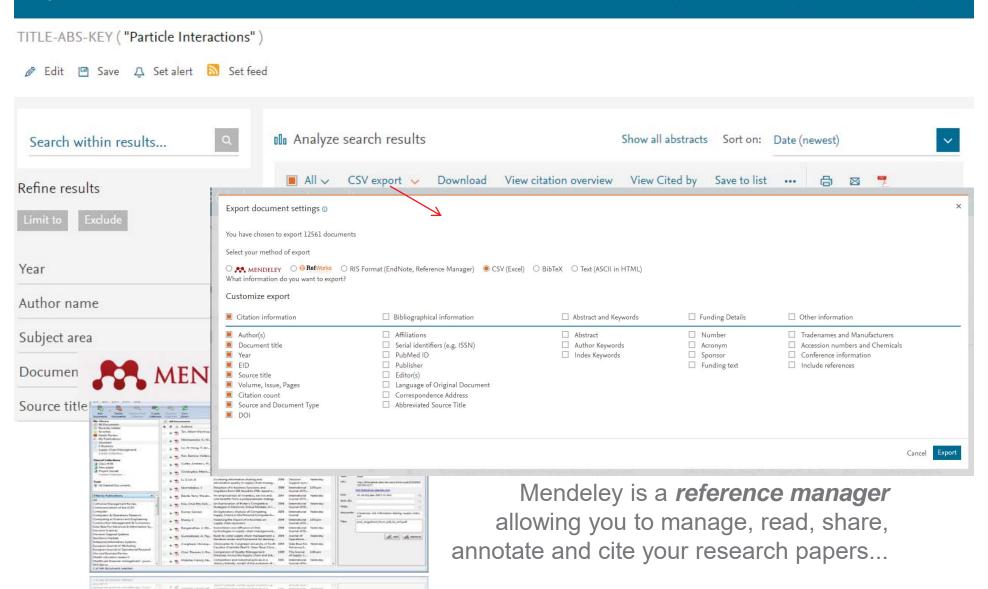
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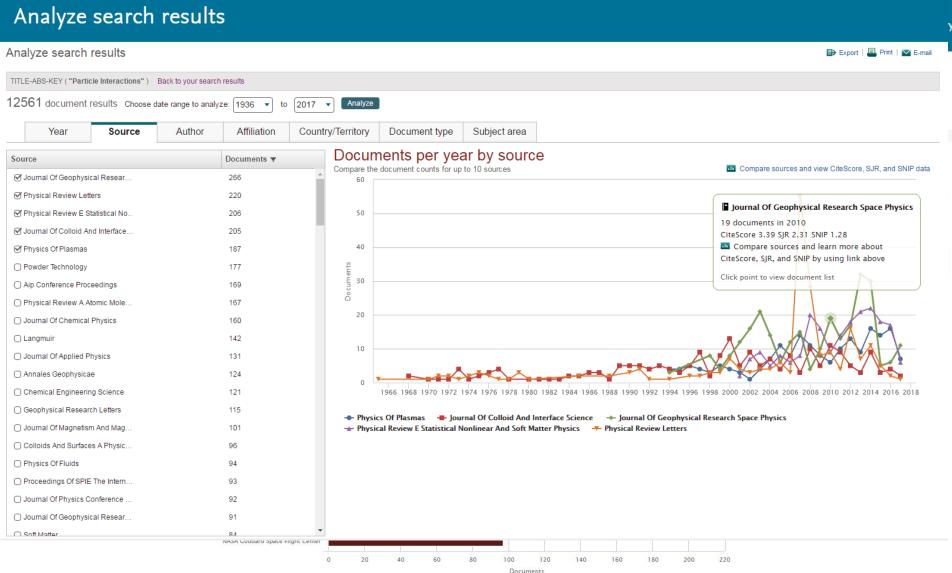
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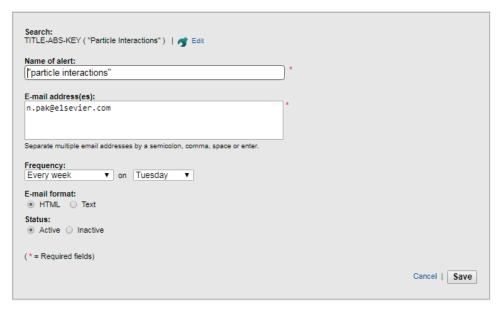


Setting up Search Alerts

Scopus Search Sources Alerts Lists Help∨ SciVal → Nicholas Pak ∨ ≡

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A Search Alert is a saved search that you can schedule to run at certain intervals. If any new results are found you will receive an e-mail with the first 25 results and a link into Scopus to access all new results. (Privacy Policy)



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ORCID

Empowering Knowledge

What is the Challenge? Scholarly Name Ambiguity

Many researchers that too closely resemble one another.

Researchers publish under name variations.







Dr. Smith Dr. Smith

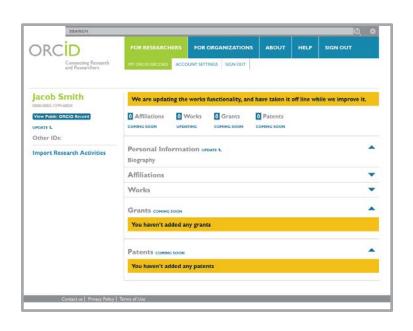


Dr. Smith Dr. J. Smith

Dr. James Smith

What is the solution? ORCID!

ORCID, the Original Researcher Contributor ID, provides a persistent digital identifier that distinguishes you from every other researcher and, through integration in key research workflows such as manuscript and grant submission, supports automated linkages between you and your professional activities ensuring that your work is recognized.







Dr. Smith

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Empowering Knowledge

PlumX Metrics

PLUMX

Metrics Categories



USAGE (clicks, downloads, views, library holdings, video plays)



CAPTURES (bookmarks, code forks, favorites, readers, watchers)



(blog posts, comments, reviews, Wikipedia links)



(+1s, likes, shares, tweets)



CITATIONS (citation indexes, patent citations, clinical citations)

Plum Print

The five categories of metrics are displayed for quick and easy understanding in a data visualization known as the Plum Print. When you rollover the Plum Print, more detail for each of the categories is visible. You can also click on it to get to all the detail for the metrics.

- The Plum Print is dynamic, each circle in the Plum Print represents the metrics in the associated category by color.
- The larger the circle, the more metrics in that category.
- There is a variety of ways to represent the Plum Print on article pages or in result lists
- Designed to communicate engagement without a score







NOTE: In the JBS platform the Usage category will not be displayed in the rollover.

Plum Print Examples



An example of a Plum Print for an article that has metrics balanced in all categories. Link to article on PlumX.



An example of a Plum Print with a lot of Citations and Captures, a small amount of Usage, and no Mentions or Social Media. Link to article on PlumX.



An example of a Plum Print with an outsized amount of Social Media.

Link to article on PlumX.

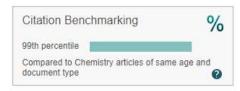
The rise of graphene Back to article (2007) Nature Materials, 6(3), pp. 183-191

Scopus Metrics @

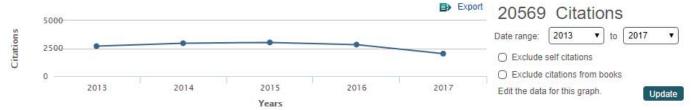
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Measures of activity relative to specific research domains, based on cited by in Scopus Compared to Chemistry ▼ articles of the same age and document type All Citations 99 TH PERCENTILE



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Captures

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Mentions

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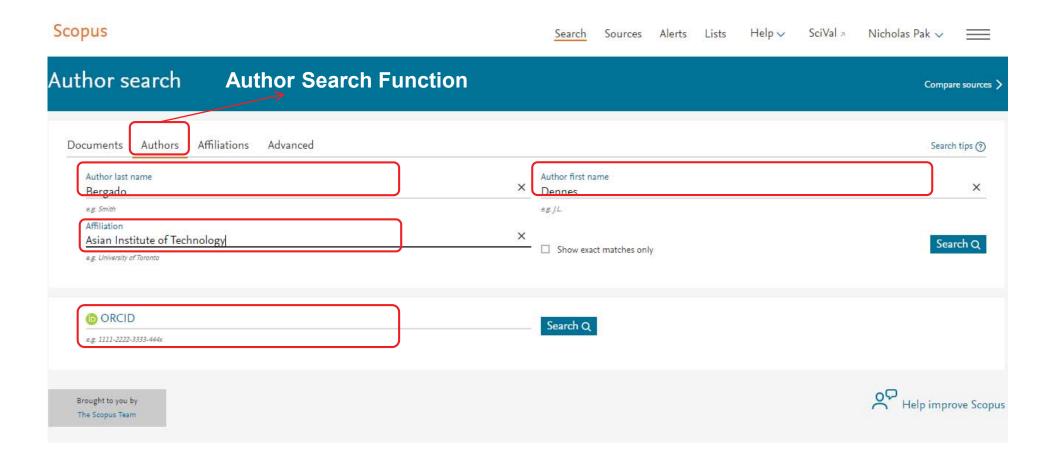


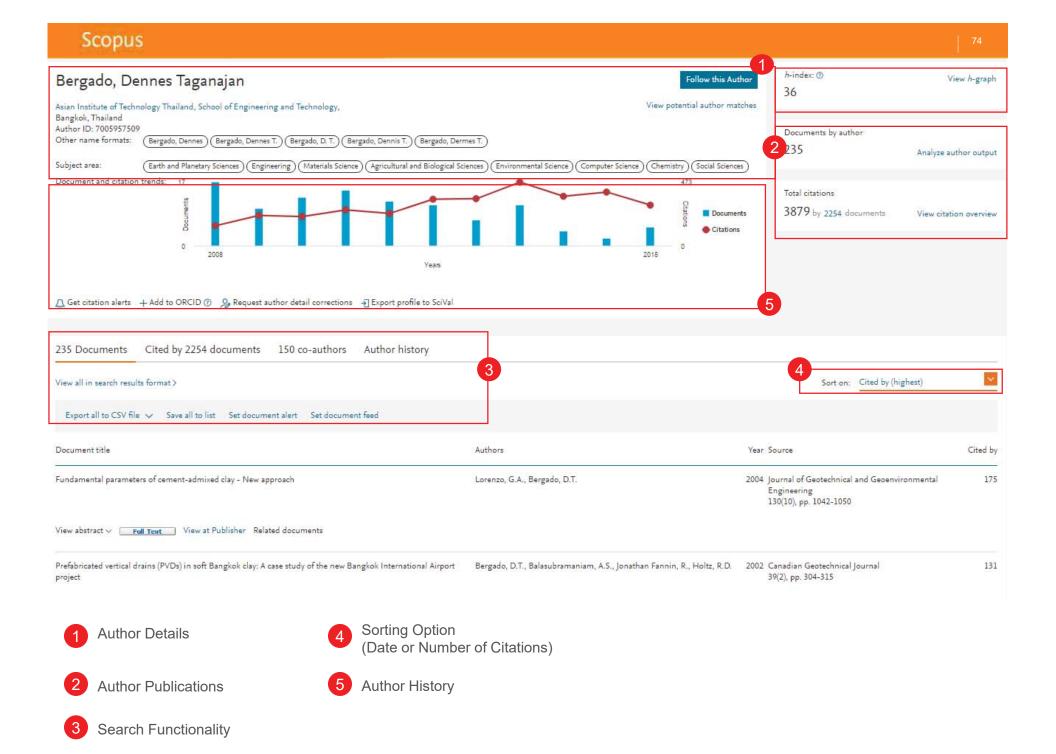


Author Search

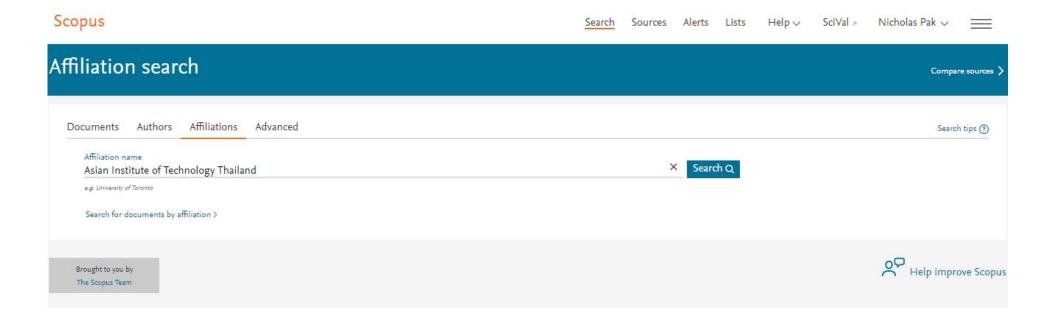
Scopus 73

Author Search

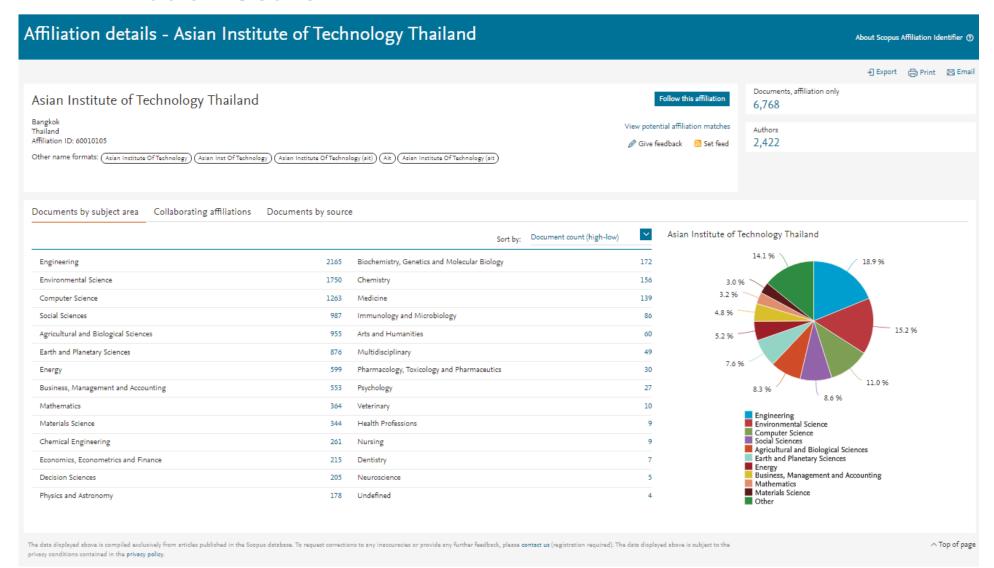




Affiliation Search



Affiliation Search

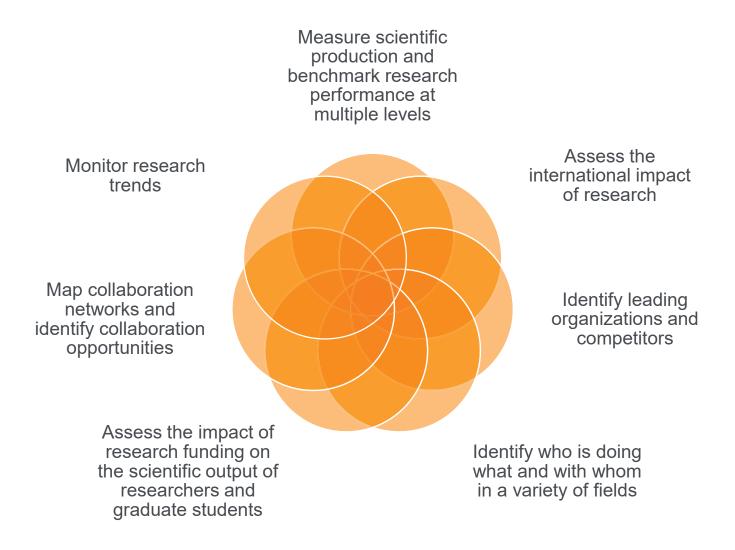




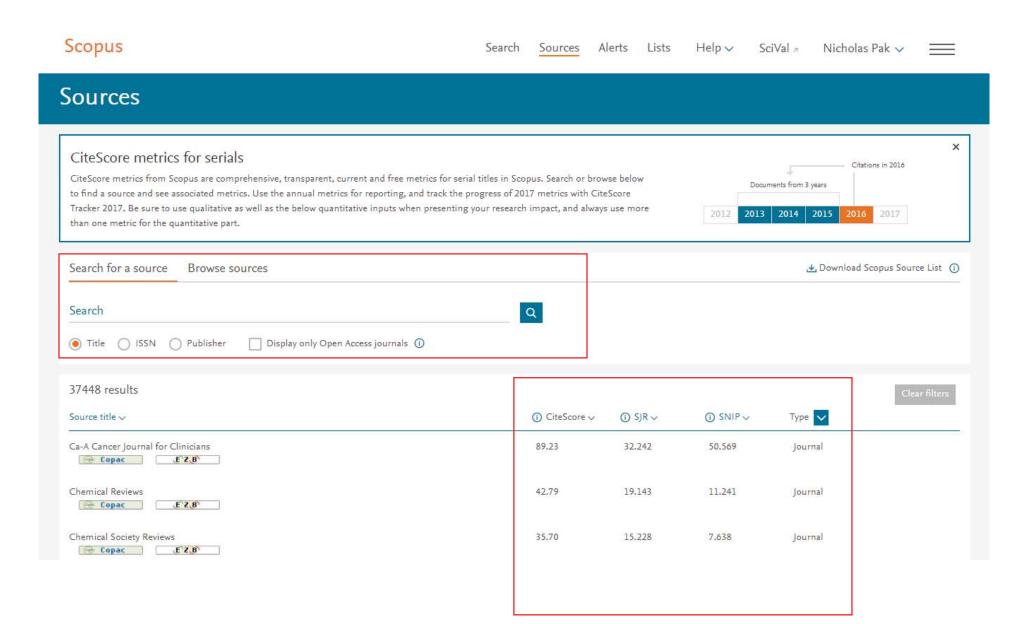
Source Browser & Journal Analyser



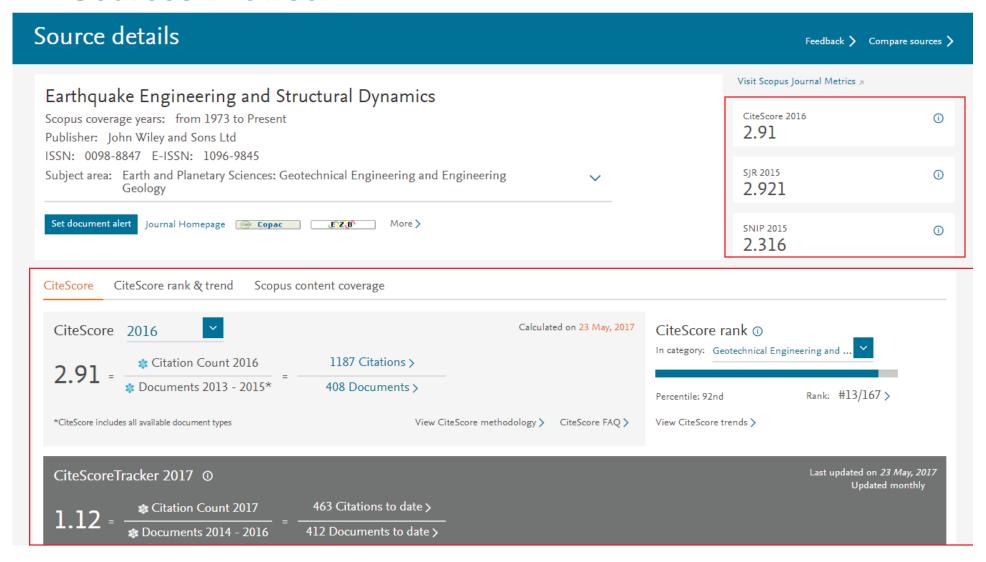
Metrics allow us to:



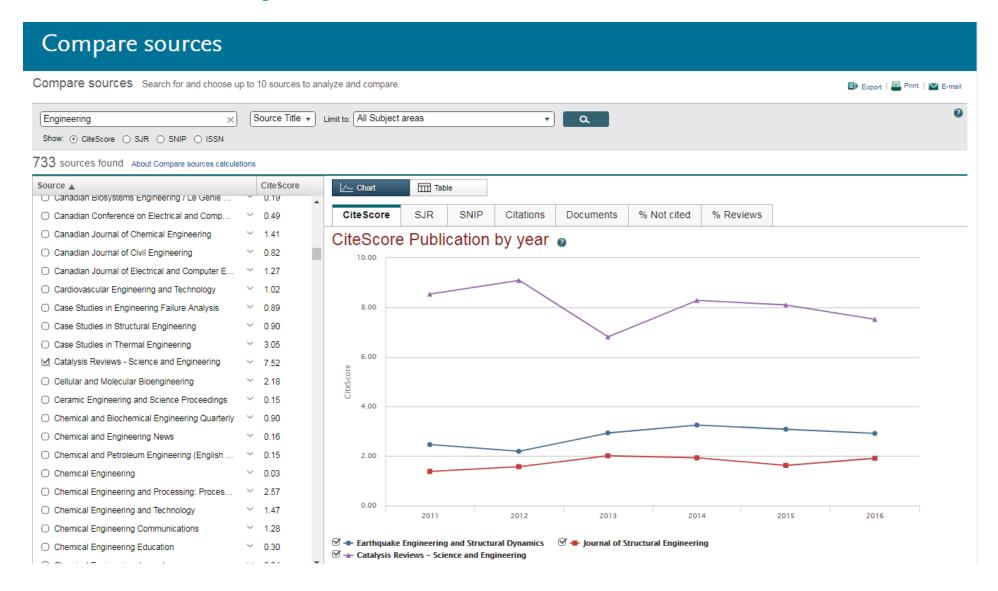
Sources Browser



Sources Browser



Journal Analyser



How to choose a metric

Always use both qualitative and quantitative input into your decisions

Always use more than one research metric as the quantitative input

There are 6 factors, which can affect the value of a metric:

- Size
- Publicationtype
- Manipulation
- Discipline
- Database coverage
- Time

	Size- normalized?	Field- normalized?	Publication- type- normalized?	Resistant to database coverage?	Difficult to manipulate?	Time- independent?
Scholarly Output						
Journal Count						
Journal Category Count						
Citation Count						
Cited Publications						
Citations per Publication						
Number of Citing Countries						
Field-Weighted Citation Impact						
Collaboration						
Collaboration Impact						
Academic-Corporate Collaboration						
Academic-Corporate Collaboration Impact						
Outputs in Top Percentiles						
Publications in Top Journal Percentiles						
h-indices						

Journal Metrics in Scopus: CiteScore, SNIP and SJR CiteScore

- A metric that gives a more comprehensive, transparent and current view of a journal's impact.
- A 3 year citation window
- CiteScore's numerator and denominator both include all document types. This includes articles, reviews, letters, notes, editorials, conference papers and other documents indexed by Scopus are included. The numerator and the denominator used in the CiteScore calculation are thus consistent.





- SNIP = Sourced Normalized Impact per Paper
- Refined metric calculation, better corrects for field differences
- Outlier scores are closer to average
- Readily understandable scoring scale with an average of 1 for easy comparison

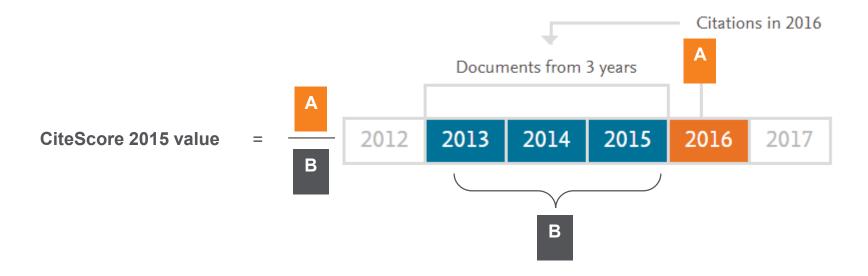
SJR



- SJR = SCImago Journal Rank
- More prestigious nature of citations that come from within the same, or a closely related field
- Overcome the tendency for prestige scores the quantity of journals increases
- Readily understandable scoring scale with an average of 1 for easy comparison

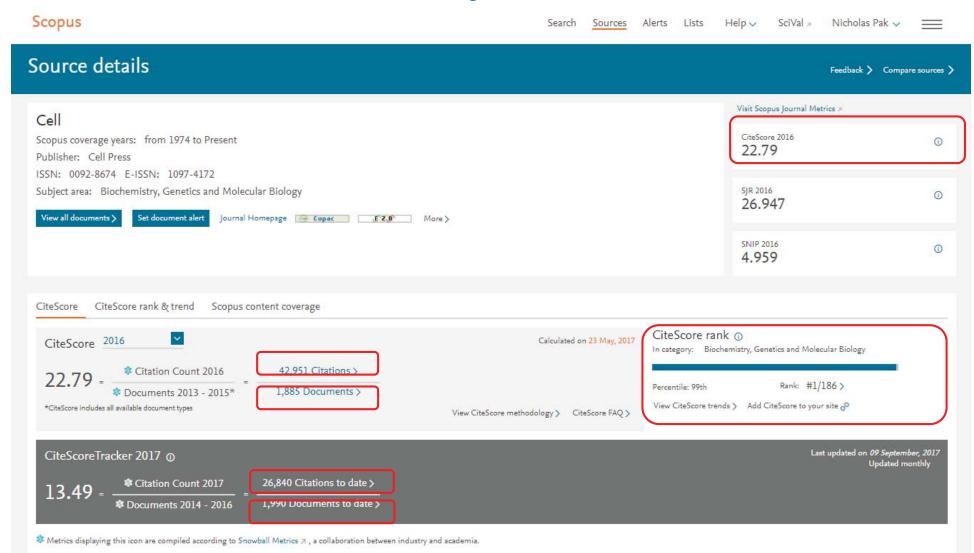
www.journalmetrics.com

CiteScore is a simple metric for all Scopus serial titles



CiteScore	Impact Factor
A = citations to 3 years of documents	A = citations to 2 or 5 years of documents
B = all documents indexed in Scopus, same as A	B = only citable items (articles and reviews), different from A

CiteScore is one of a family of related metrics



Each metric provides a complementary measure of performance

	Measures	Open to validation in Scopus?	Size- normalized?	Subject field- normalized?	Communicates magnitude?	Update frequency
CiteScore	Citations per document	Yes	Yes	No	Yes	
CiteScore Percentile	Relative position within subject field based on CiteScore	Yes	Yes	Yes	No	Annually,
Citation Count	Raw impact of a journal on the research community	Yes	Yes	No	Yes	and monthly for CiteScore
Document Count	Raw scale of a serial title within the research community	Yes	Yes	No	Yes	Tracker metrics
% cited	Consistency with which a serial title's contents are reliably cited	Yes	Yes	No	No	
SNIP	Relative citations per document	No	Yes	Yes	No	Annually
SJR	Prestige of citing sources	No	Yes	Yes	No	7 amamy

The main advantages of CiteScore metrics

Comprehensive

Based on Scopus, the world's broadest abstract and citation database

CiteScore metrics will be available for all serial titles, not just journals

CiteScore metrics could be calculated for portfolios

Transparent

CiteScore metrics will be available for **free**

CiteScore metrics are easy to calculate for yourself

The underlying database is available for you to interrogate

Current

Current values are provided on a regular basis

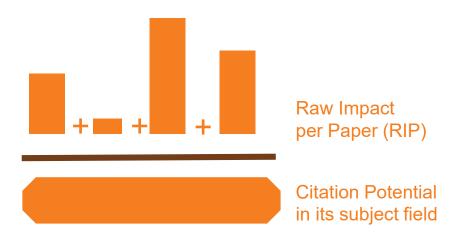
New serial titles will have
CiteScore metrics the year
after they are indexed in
Scopus

SNIP – Source Normalized Impact per Paper



All **22K** journals have a **Source-Normalized Impact per Paper** (SNIP) measuring contextual citation impact by weighting citations per subject field

- Peer-reviewed papers only
- Field's frequency and immediacy of citation
- Database coverage
- Journal's scope and focus
- Measured relative to database median



Includes a Field's Frequency and Immediacy of Citation, Database Coverage, Journal's Scope and Focus, Measured Relative to Database Median

Journal	RIP	Cit. Pot.	SNIP (RIP/Cit. Pot.)
Inventiones Mathematicae	1.5	0.4	3.8
Molecular Cell	13.0	3.2	4.0

SJR – SCIMago Journal Rank



- Prestige Per Article Metric prestige is transferred when a journal cites
- Citations are weighted depending on which source it is from
- A journal's prestige is shared equally with its citations
- SJR normalizes for differences in citation behaviour between subject fields:



High impact, many citations

One citation represents lower value



Low impact, few on citations

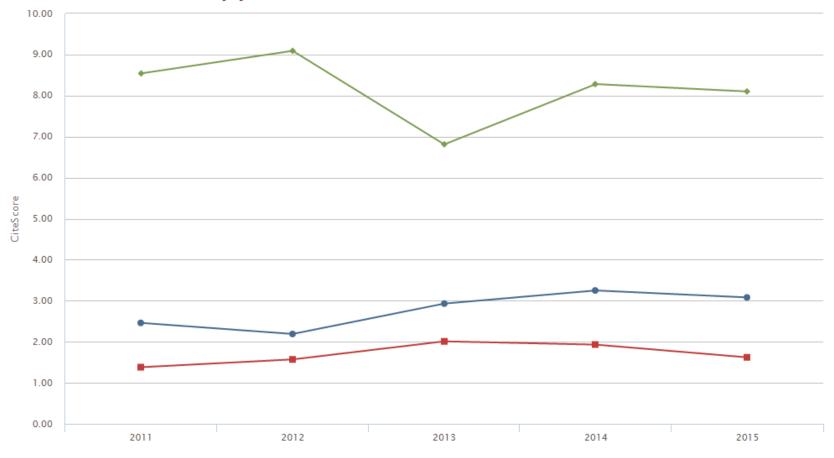
One citation represents higher value

CiteScore Publication by year

🗹 📤 Earthquake Engineering and Structural Dynamics 💮 🖶 Journal of Structural Engineering

R SNIP Citations Documents % Not cited % Reviews
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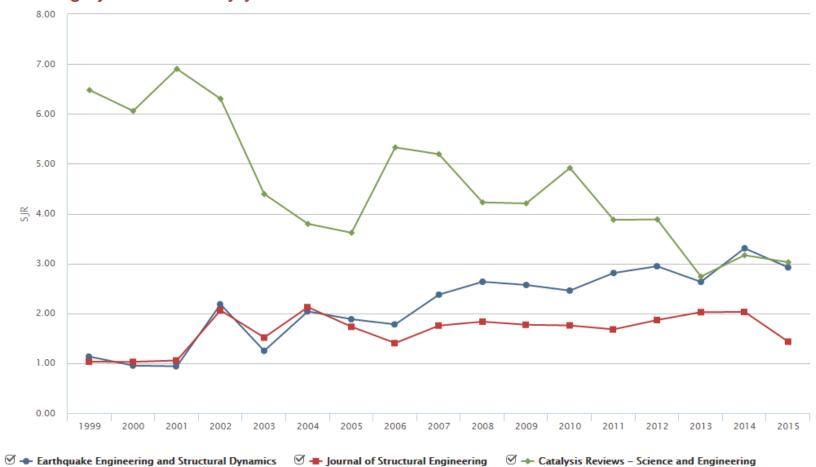
CiteScore Publication by year o



SJR – SCIMago Journal Rank



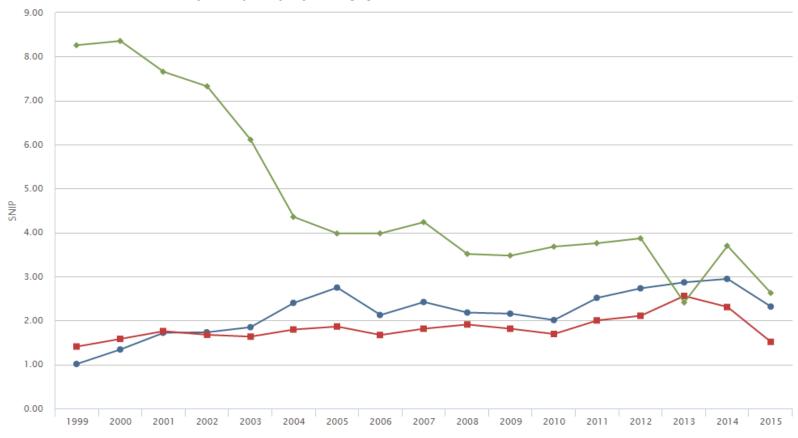
SCImago journal rank by year o



SNIP – Source Normalized Impact per Paper



Source normalized impact per paper by year o

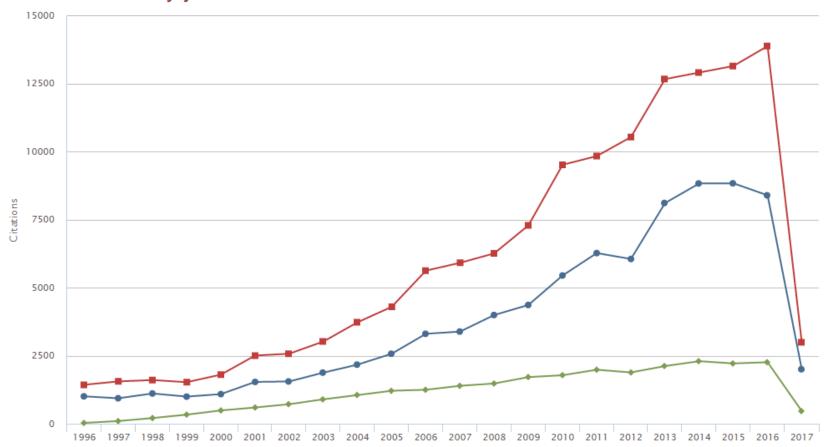


- ✓ ◆ Earthquake Engineering and Structural Dynamics
- 🗹 🖶 Journal of Structural Engineering
- Catalysis Reviews Science and Engineering

Citations



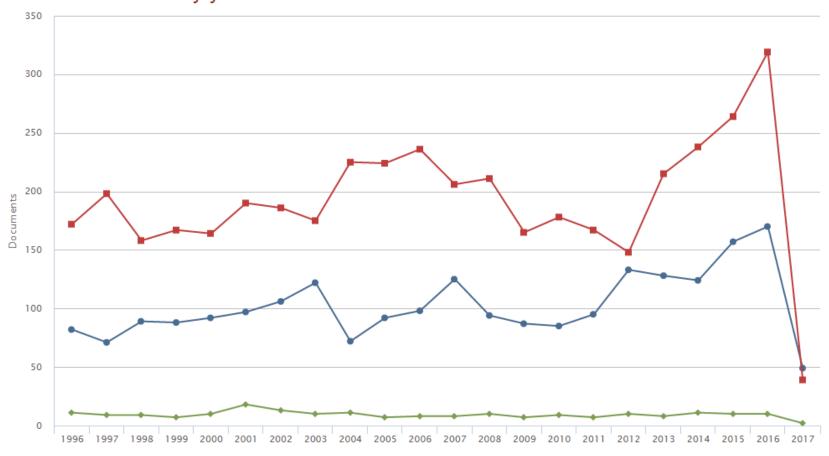
Source citations by year O Exclude source self citations



Documents

CiteScore	SJR	SNIP	Citations	Documents	% Not cited	% Reviews
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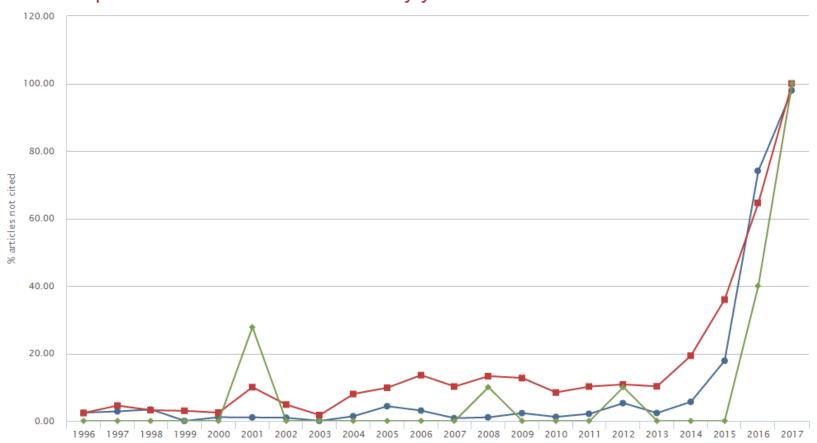
Source documents by year



Percent not Cited



Percent of published documents not cited by year O Exclude source self citations

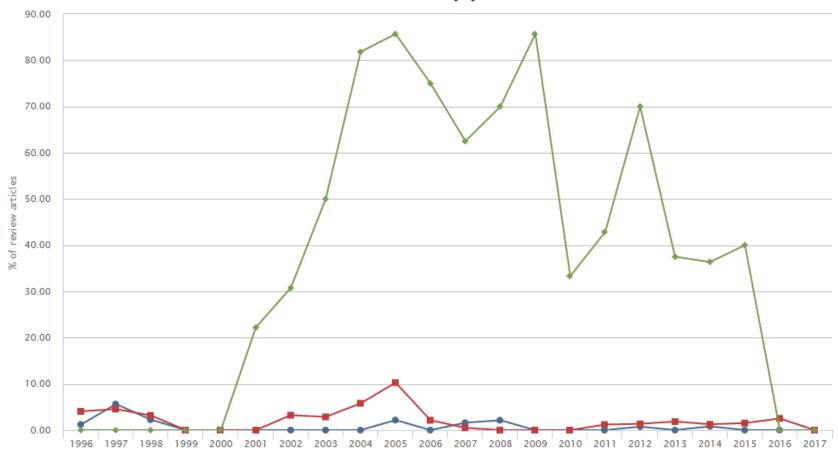


✓ - Earthquake Engineering and Structural Dynamics ✓ - Journal of Structural Engineering ✓ - Catalysis Reviews - Science and Engineering

Percent Reviews

SNIP Citations Documents % Not cited % Reviews	SJR SNIP Citations Documents % Not cited % Reviews	SJR SNIP	CiteScore
--	--	----------	-----------

Percent of documents that are review articles by year



🗹 📤 Earthquake Engineering and Structural Dynamics 🗸 🖶 Journal of Structural Engineering 🗸 🗢 Catalysis Reviews – Science and Engineering



Research Excellence



Empowering Knowledge

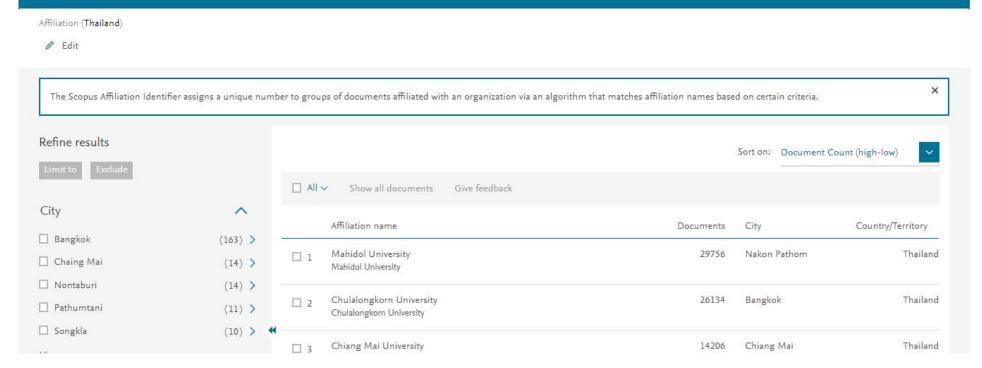
Thailand – Institution Search



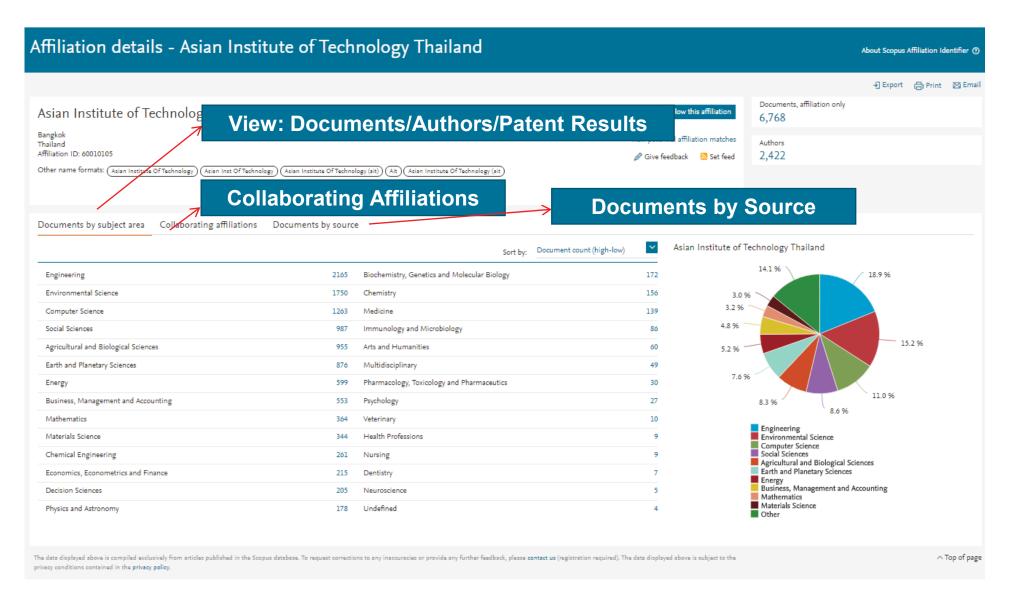
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366 Affiliation results - Thailand

About Scopus Affiliation Identifier >



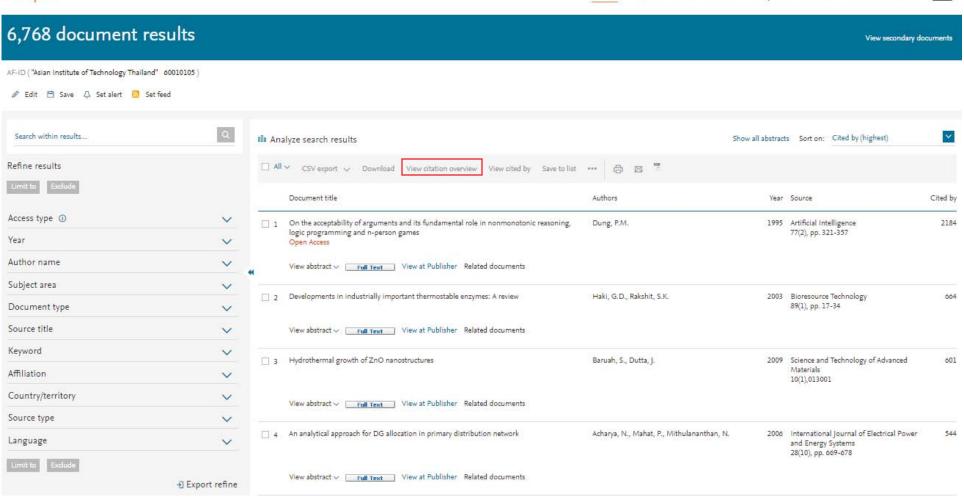
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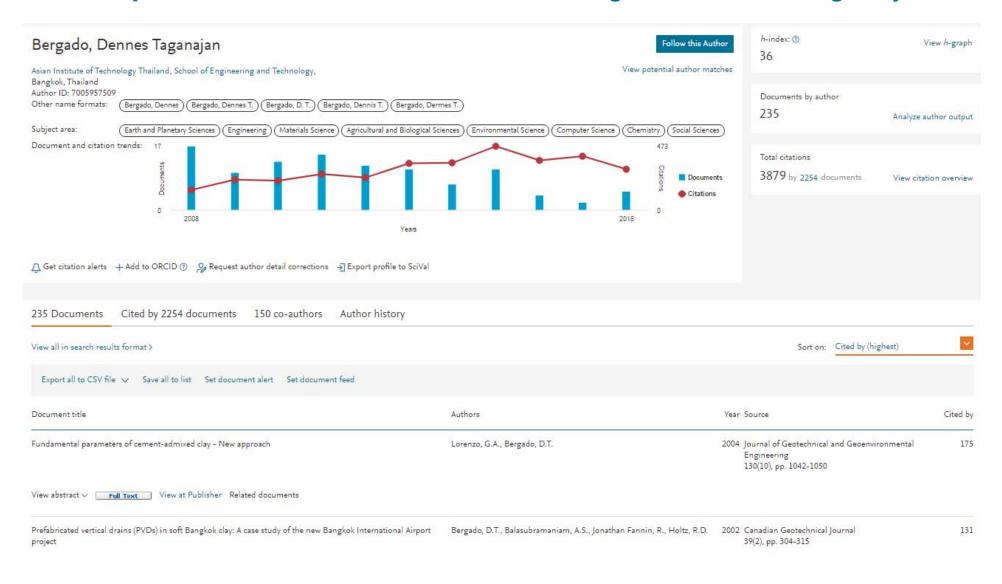


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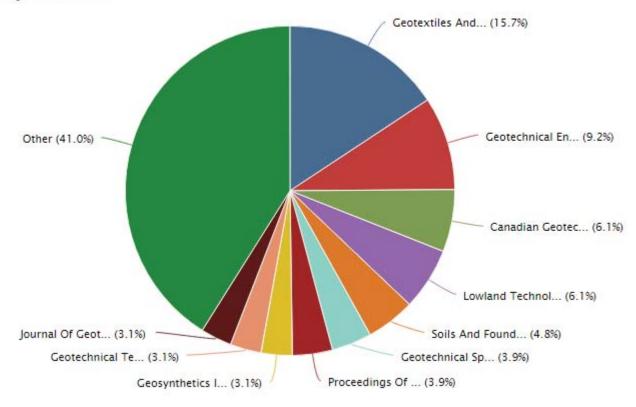
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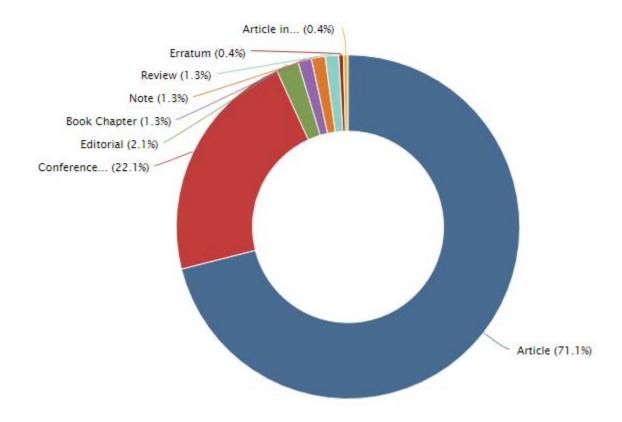




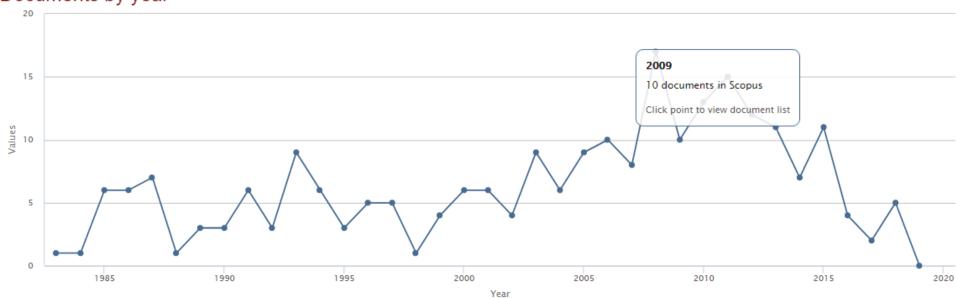
Documents by source



Documents by type



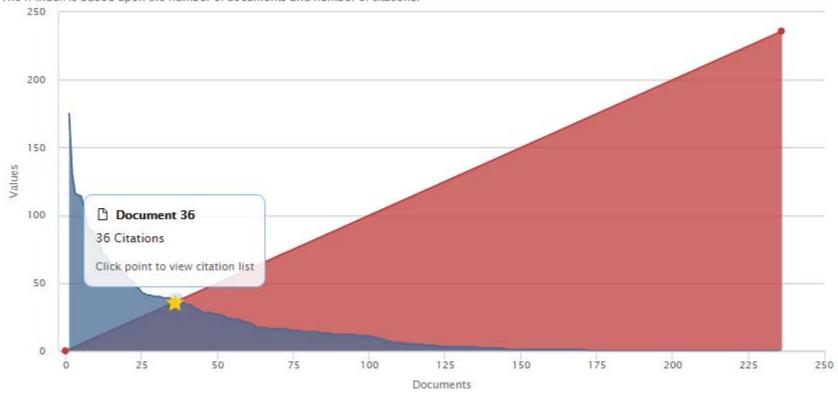
Documents by year



- Bergado, Dennes Taganajan

This author's h-index is 36

The h-index is based upon the number of documents and number of citations.



Note: Scopus is in progress of updating pre-1996 cited references going back to 1970. The h-index might increase over time.

Summary

- Search: Scopus search Document, Author, Affiliation.
- Sources: Browse or search indexed sources or journals by title
- Analytics: Article Metrics, Results Analysis
- Alerts to manage previously saved search

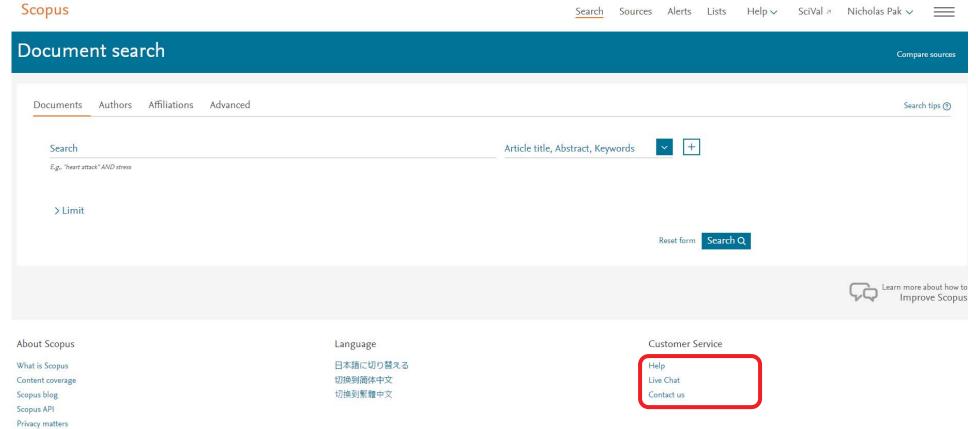


Scopus Help & Resources



Live Chat, Help and Tutorials

Live Onat, Help and Idionals



Thank you!

Important Scopus resources to stay up to date:

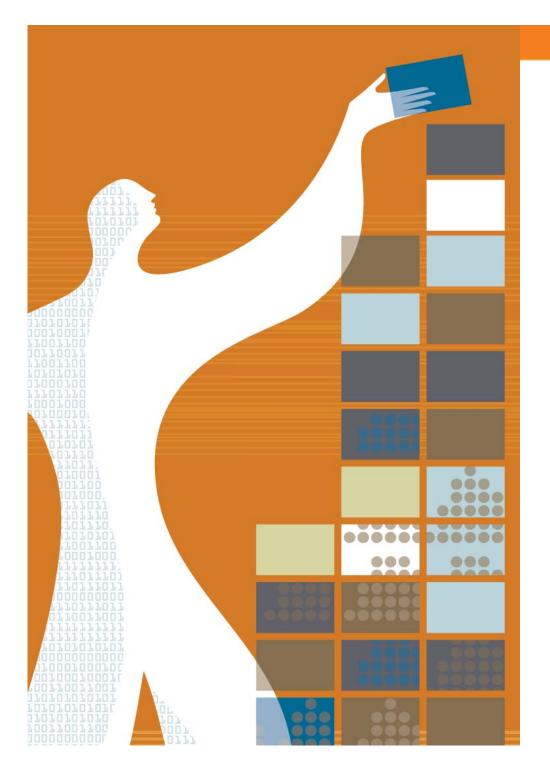
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Scopus Info Site	https://www.elsevier.com/solutions/scopus
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Scopus newsletter	https://communications.elsevier.com/webApp/els_doubleOptInWA?do=0&srv=els_s copus&sid=71&uif=0&uvis=3
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LinkedIn	https://www.linkedin.com/company/scopus-an-eye-on-global-research
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Q & A







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Nicholas Pak n.pak@elsevier.com