Common elements (chapters) of a scientific paper

Title
Authors
Abstract, Summary
Keywords
Introduction
Materials and methods (or Methods)
Results
'Extras':
Figures
Tables
Discussion
(Conclusion)
(Acknowledgements)
References

Click to add title

Title

rules:

1. Define the essence in as few words as possible.
2. State the subject and aspect of the study (if essential state the method!).
3. Provide the core of what makes your work different .
4. Put the most important and the most attractive segment of the study at the beginning of the title. Make the title 'catchy'.

?

Title examples:

The role of propolis in growth of tumor cells

Inhibiting effect of propolis on growth of tumor cells

Inhibiting effect of propolis on growth of tumor cells in mice

Tumor growth stopped in mice treated with propolis

The role of flow velocity in the vertical distribution of particulate organic matter on moss-covered travertine barriers of the Plitvice Lakes (Croatia)

Local?

Distribution of particulate organic matter at tufa barriers under different flow conditions

The effect of [illegible] waste from the [illegible] quarry on the stream macroinvertebrate assemblage.

Something on the accident problem on the job due to alcoholism -
Nešto iz problematike nesreća na poslu uslijed alkoholizma

Title Special effects!

Siltation disturbance in a mountain stream: aspect of functional composition of benthic community ☺

A review of methodology used to measure leaf litter decomposition in lotic environments: Time to turn over an old leaf?

Calcite deposition in karst waters is promoted by leaf litter breakdown and *vice versa.*

The study of species in the era of biodiversity: a tale od stupidity

Dam nation: a geographic census of American dams and their large-scale hydrologic impacts

More cold tolerant plants for a warmer world

Crassulacean acid metabolism: plastic, fantastic

Rolling stones and mosses: effect of substrate stability on bryophyte communities in streams

Authors

Lead (1st) author / Corresponding author / Main author

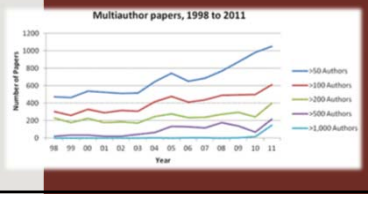
Equally contributing authors

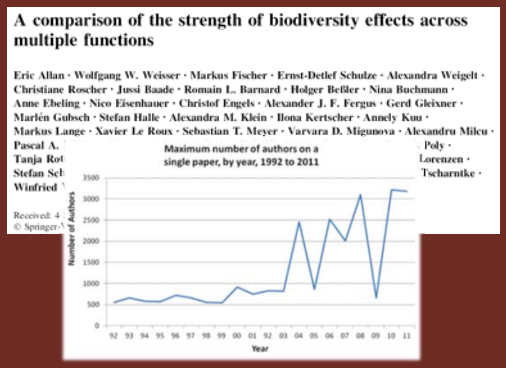
Špoljar, M; Dražina, T*; Ostojić, A; Miliša, M; Gligora-Udovič, M; Štafa, D. Bryophyte communities and seston in a karst stream (Jankovac Stream, Papuk Nature Park, Croatia).*

**contributed equally to this work*

Last author

Number of authors




A comparison of the strength of biodiversity effects across multiple functions

Eric Allan · Wolfgang W. Weisser · Markus Fischer · Ernst-Detlef Schulze · Alexandra Weigelt · Christiane Roscher · Jussi Baade · Romain L. Barnard · Holger Beßler · Nina Buchmann · Anne Ebeling · Nico Eisenhauer · Christof Engels · Alexander J. F. Fergus · Gerd Gleixner · Marlén Gubsch · Stefan Halle · Alexandra M. Klein · Ilona Kertscher · Annely Kuu · Markus Lange · Xavier Le Roux · Sebastian T. Meyer · Varvara D. Migunova · Alexandru Milcu · Pascal A. Poly · Tanja Rot Lorenzen · Stefan Sch Tscharntke · Winfried

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Authors

Ethics!

All Oecologia submissions are required to include a declaration of authorship, including submissions with a single author. The declaration must include an explanation of the contribution or activity of each author to the final product. Submit the declaration of authorship as a footnote on the manuscript title page, using capital initials of authors. When two or more authors share the same initials spell out the last (or middle) name of each to distinguish them.

AJT and SSW conceived and designed the experiments. AJT and CR performed the experiments. AJT, CR, FKB analyzed the data. AJT, CR, SSW wrote the manuscript; other authors provided editorial advice.

Principle - author is a person who has contributed to the paper by deed or thought

The person that can publicly discuss and defend the content of the paper at least in part.

Authors

Li Yan

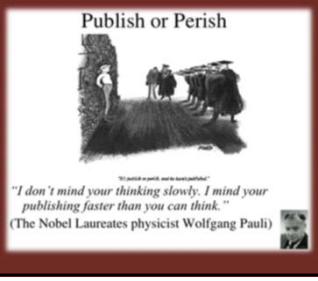
Wei Yang (left)
Yang Wei (right)

X. Wang

China, Japan and S Korea = 1/5 of Science Citation Index (SCI)
China = 8.4 %

ISNI International Standard Name Identifier
Author ID: 9738402300 Scopus
Open Researcher and Contributor ID
ORCID

Ethics!



Scientometrics - evaluating authors, papers and journals

What counts?

Papers, books, projects, teaching, popular, …

→ Number or quality

Measurements of scientific quality: Bibliometrics

Secondary publications - databases

Current contents (CC)
Science citation index (expanded) SCI
Web of Science (WoS)
Journal Citation Reports (JCR)

Clarivate Analytics

Clarivate Analytics

3.55 B$
-1.5 B$
?

Scopus

Other - Zoological record, Biological abstracts, BIOSIS Previews

Scientometrics - evaluating authors, papers and journals

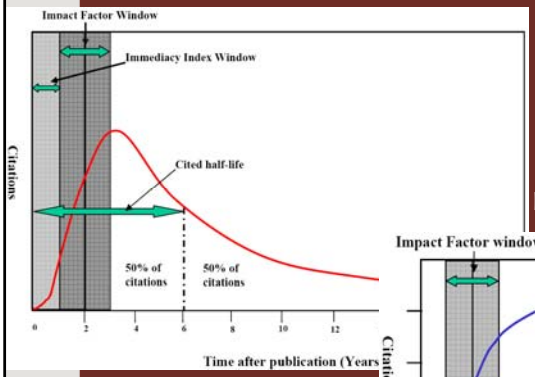
Number of cites of author, paper and journal
Journal impact factor
(*GARFIELD, E. Science 122 (1955) 108-111.*)

$$\text{IF 2014} = \frac{\text{Number of citations in 2014. of all papers published in 2012. \& 2013.}}{\text{Number of papers published in the journal in 2012. \& 2013.}}$$

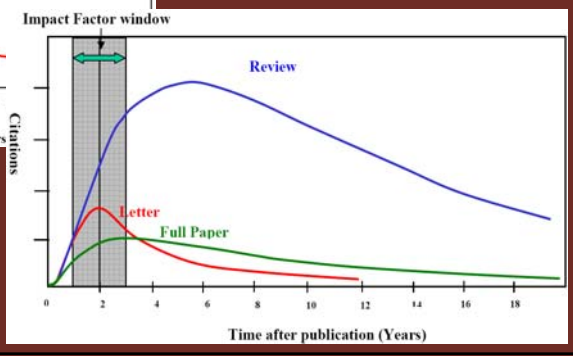
Alternative: Eigenfactor http://www.eigenfactor.org/
5 years, no self cites, ranks cites, cost-effectiveness

Scopus http://www.journalmetrics.com/

Scientometrics - evaluating authors, papers and journals



Impact factor - shortcomings
Non transparent calculation
Forced ↑ numerator
and ↓ denominator
Self citation
Inferiority of 'uncommon' studies



Scientometrics - evaluating authors, papers and journals

Journal quartile ranking (Q1-Q4)

Median IF

Q1 { Q2 { Q3 { Q4 {

Journals from: subject categories AGRICULTURAL ENGINEERING

Mark	Rank	Abbreviated Journal Title (linked to journal information)	ISSN	Total Cites	Impact Factor
☐	1	BIORESOURCE TECHNOL	0960-8524	56974	5.039
☐	2	BIOMASS BIOENERG	0961-9534	12920	3.411
☐	3	IND CROP PROD	0926-6690	6703	3.208
☐	4	BIOSYST ENG	1537-5110	2945	1.367
☐	5	PADDY WATER ENVIRON	1611-2490	361	1.247
☐	6	AQUACULT ENG	0144-8609	1400	1.232
☐	7	J IRRIG DRAIN ENG	0733-9437	2685	1.086
☐	8	T ASABE	2151-0032	7176	0.843
☐	9	APPL ENG AGRIC	0883-8542	1272	0.491
☐	10	REV BRAS ENG AGR AMB	1807-1929	1118	0.481
☐	11	ENG AGR-JABOTICABAL	0100-6916	669	0.410
☐	12	AMA-AGR MECH ASIA AF	0084-5841	86	0.057

+

/2

Category (linked to category information)	Total Cites	Median Impact Factor
AGRICULTURAL ENGINEERING	94309	1.159

For 2013, the journal BIOLOGICAL CONTROL has an Impact Factor of 1.873.

Category Name	Total Journals in Category	Journal Rank in Category	Quartile in Category
BIOTECHNOLOGY & APPLIED MICROBIOLOGY	165	92	Q3
ENTOMOLOGY	90	15	Q1

Alternative: SCImago http://www.scimagojr.com/

Scientometrics - evaluating authors, papers and journals

San Francisco Declaration on Research Assessment
http://am.ascb.org/dora/

DORA Declaration on Research Assessment

Do not use journal-based metrics, such as Journal Impact Factors

Some of the guidelines for authors and organizations:
- Account for the variation in article types and in different subject areas when metrics are used, or compared
- Provide computational access to data
- Mandate the citation of primary literature

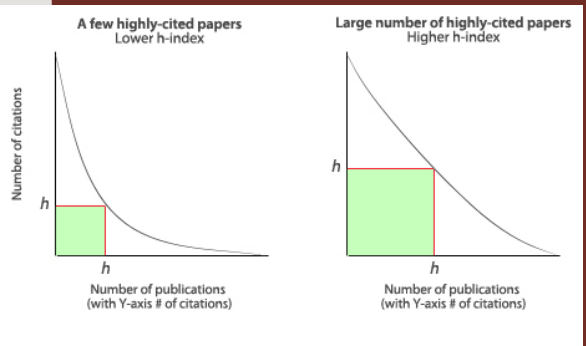
Furter inquiry/reading:
- http://altmetrics.org/tools/
- https://opencitations.wordpress.com/2013/01/03/open-letter-to-publishers/
- http://www.ascb.org/dora/a-letter-to-thomson-reuters/

Scientometrics - evaluating authors, papers and journals

h-index

HIRSCH, J.E. 2005. An Index to Quantify an Individual's Scientific Research Output. Proceedings of the National Academy of Sciences, PNAS. 102, 46: 16569-16572.

Author has h-index of X if X of his (N_p) papers has at least X citations, the rest of his papers (N_p – X) have ≤ X citations.



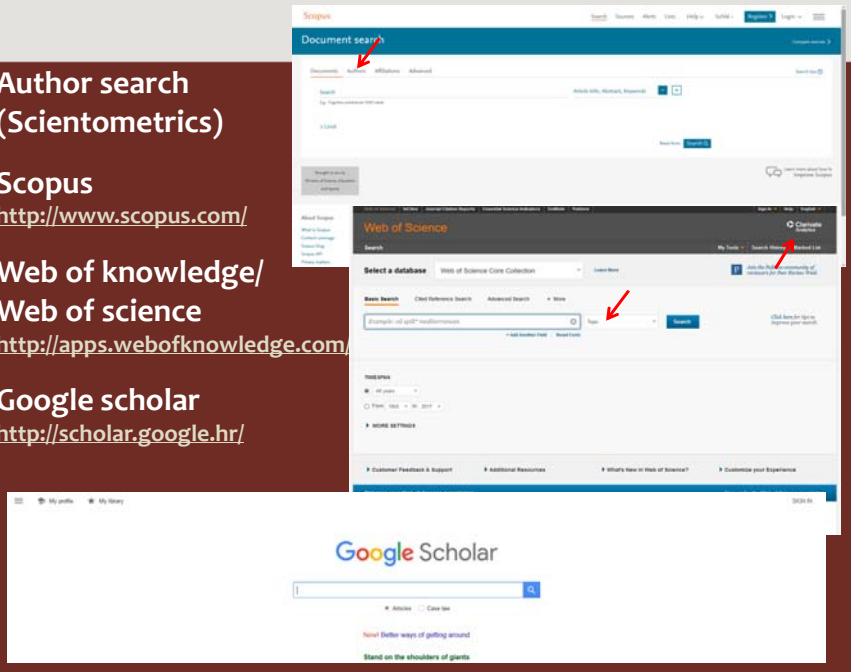
Number	Title	Citations
1	A	120
2	B	110
3	C	11
4	D	10
5	E	8
6	F	7
7	G	6
8	H	2
9	I	0

Author search (Scientometrics)

Scopus
http://www.scopus.com/

Web of knowledge/ Web of science
http://apps.webofknowledge.com/

Google scholar
http://scholar.google.hr/



Author search (Scientometrics)

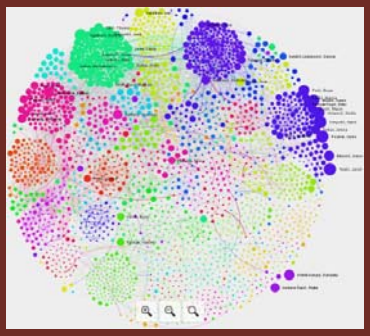
Scopus
http://www.scopus.com/home.url

Web of knowledge/ Web of science
http://apps.webofknowledge.com/

Google scholar
http://scholar.google.hr/

CroSBi
http://bib.irb.hr/pretrazivanje_jednostavno

Hrvatski znanstveni krajobraz
http://sci.bioinfo.hr/



Academic Ranking of World Universities - The Shanghai List

Center for World-Class Universities of Shanghai Jiao Tong University (CWCU) http://www.shanghairanking.com/

Criteria:
- Nobel Laureates, Fields Medalists (Al 10%+St 20%)
- Highly cited researchers (20%) http://highlycited.com/
- Papers published in Nature or Science (20%)
- Significant amount of papers indexed by SCIE & SSCI (20%)
- Per capita academic performance of an institution (10%)

Times Higher Education World University Rankings
https://www.timeshighereducation.com/world-university-rankings

Quacquarelli Symonds World University Rankings
http://www.topuniversities.com/qs-world-university-rankings