Repository as a tool for bibliometric analysis

Peter van der Togt
Repository / Metis Manager
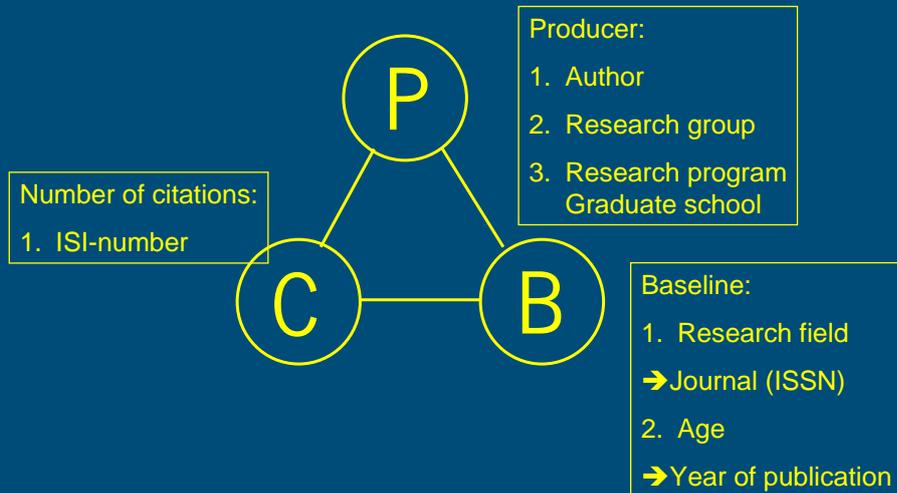
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Bibliometric analysis

- Compare number of citations on a scientific article with other scientific articles in the same research field and age.
- Aggregation:
  - Author
  - Science group
  - Research group / Chair group
  - Graduate school / Research program
  - Range of years (2002-2007)

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Required per publication

Number of citations:

1. ISI-number

Producer:

1. Author
2. Research group
3. Research program
   Graduate school

Baseline:

1. Research field
→ Journal (ISSN)
2. Age
→ Year of publication

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Registration of publications

- Metis
- Administrative tool for Research data
  - Wageningen UR Staff
  - Organisations
  - Research projects
  - Publications – Metadata

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Registration at Wageningen UR

- **Data entry by local contact person**
  - +/- 200 local users
  - Secretaries / Management assistants
- **Validation by Library staff**
- **All records are exported to Repository (WaY – Wageningen Yield)**

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Registration in Metis

P

Producer

B

Baseline

☑	org. (A)	Experimental Zoology (EZO)			
	org. (B)				
	org. (C)				
	functie	Promovendus (AIO / OIO)			
		tijdelijk	01-11-2004	01-10-2008	

auteur	Lentink	D.		Dr Ir	1e
mede auteur(s)	Müller	U.K.		Dr	2e
	Stamhuis	E.J.			3e
	Kat	R.	de		4e
	Gestel	W.J.H.	van	Ir	5e

titel resultaat	How swifts control their glide performance with morphing wings				
classificatie	wetensch. publ. Refereed		verslagjaar	2007	jaar uitgave 2007
soort resultaat	artikel in tijdschrift		status	gevalideerd	

tijdschrift	Nature				
issn	0028-0836	volume nummer	446	reeks nummer	
aantal pagina's	4	pagina (vanaf)	1082	(t/m)	1085
URL	http://dx.doi.org/10.1038/nature05733			Opmerking	Samenvatting

code onderzoek	WIAS

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Retrieve ISI-number

- Search address on Wageningen UR Institutes
- 9600 hits
- Download records
- ISI-number

C

Citations

ISI Web of Knowledge℠ *Take the next step*

| All Databases | Select a Database | Web of Science | Additional Resources |

Search | Search History | Marked List (0)

ALL DATABASES

Search for:

| Wageningen | in | Address |
Example: Unilever SAME India

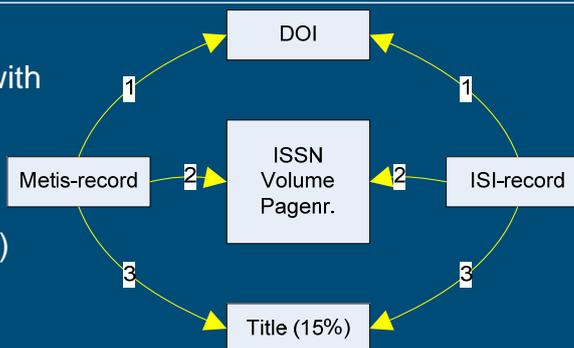| AND | | in | Author |
Example: O'Brian C OR OBrian C**

| AND | | in | Publication Name |
Example: Cancer OR Journal of Cancer Research and Clinical Oncology*

Add Another Field >>

Search   Clear

7

Match records

- Match ISI-records with records in Metis
- Onetime action
- Import ISI-number in Repository (WaY)

DOI

Metis-record — 2 → ISSN Volume Pagenr. ← 2 — ISI-record

1   1

3   3

Title (15%)

Metis volgnummer: 051142
ISI-nummer: 000245950400050

C

Citations

8

4

Retrieve Citations (1)

- http://gateway.isiknowledge.com/gateway/Gateway.cgi?GWVersion=2&SrcAuth=ResearchSoft&SrcApp=EndNote&DestLinkType=FullRecord&DestApp=WOS&KeyUT=ISI-number

How swifts control their glide performance with morphing wings

Get it! | NCBI | Print | E-mail | Add to Marked List | Save to EndNote Web | Save to EndNote, RefMan, ProCite | more options

Author(s): Lentink D (Lentink, D.), Muller UK (Muller, U. K.), Stamhuis EJ (Stamhuis, E. J.), de Kat R (de Kat, R.), van Gestel W (van Gestel, W.), Veldhuis LLM (Veldhuis, L. L. M.), Henningsson P (Henningsson, P.), Hedenstrom A (Hedenstrom, A.), Videler JJ (Videler, J. J.), van Leeuwen JL (van Leeuwen, J. L.)

Source: NATURE   Volume: 446   Issue: 7139   Pages: 1082-1085   Published: APR 26 2007

Times Cited: 4   References: 30   Citation Map   beta

C

Citations

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Retrieve Citations (2)

isi_nr: 000244743800002, citatie: 8
isi_nr: 000249798300004, citatie: 6
isi_nr: 000179685700025, citatie: 16
isi_nr: 000186206700008, citatie: 29
isi_nr: 000185076500011, citatie: 11
isi_nr: 000184532900023, citatie: 76
isi_nr: 000184326300004, citatie: 10
isi_nr: 000188371500002, citatie: 1
isi_nr: 000188079400018, citatie: 11
isi_nr: 000220246500015, citatie: 60
isi_nr: 000188646500011, citatie: 3
isi_nr: 000222560100010, citatie: 21
isi_nr: 000229465500009, citatie: 13

- +/- 10350 records
- Tool to do the job
- ISI launches API April 2009

C

Citations

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Essential Science indicators

- ## Retrieve Baselines

Fields	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
All Fields	16.99	16.28	15.43	14.04	12.44	10.43	8.47	6.02	3.39	1.20	0.15
Agricultural Sciences	10.58	10.40	10.26	9.12	8.07	7.08	5.59	3.81	2.13	0.64	0.10
Biology & Biochemistry	28.08	26.43	25.35	22.70	19.74	16.66	13.27	9.23	5.18	1.83	0.19

Agricultural Sciences	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	All Years
0.01 %	591	406	471	264	338	255	238	147	41	17	29	264
0.10 %	206	185	183	158	116	122	79	55	27	11	10	128
1.00 %	85	81	77	64	55	49	36	24	14	6	3	52
10.00 %	26	26	25	23	20	17	14	10	6	3	1	16

- ## Retrieve Science field for each Journal

B

Baseline

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Used tools

- Publications in Repository
- Citation data from ISI Web of Knowledge
- Baselines from Essential Science indicators

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Output

- http://library.wur.nl/way/search/wos.php

Research Field	N	C	Wavg	CPP	CI	RI	%T10 (T10)	%T1 (T1)	%NC (NC)
Agricultural Sciences	1	1	1.08	1.00	0.93	0.93	0% (0)	0% (0)	0% (0)
Biology & Biochemistry	2	2	13.30	1.00	0.15	0.10	0% (0)	0% (0)	50% (1)
Clinical Medicine	1	0	15.94	0.00	0.00	0.00	0% (0)	0% (0)	100% (1)
Computer Science	1	3	0.93	3.00	3.23	3.23	100% (1)	0% (0)	0% (0)
Plant & Animal Science	25	162	128.13	6.48	1.26	1.31	12% (3)	0% (0)	12% (3)
All research fields	**30**	**168**	**159.38**	**5.60**	**1.05**	**1.23**	**13% (4)**	**0% (0)**	**17% (5)**

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Output

Year of publication	N	C	Wavg	CPP	CI	RI	%T10 (T10)	%T1 (T1)	%NC (NC)
2002	6	50	62.19	8.33	0.80	0.90	0% (0)	0% (0)	17% (1)
2003	3	25	23.58	8.33	1.06	1.06	0% (0)	0% (0)	0% (0)
2004	4	42	26.08	10.50	1.61	1.61	25% (1)	0% (0)	0% (0)
2005	4	25	24.29	6.25	1.03	1.30	0% (0)	0% (0)	0% (0)
2006	5	15	12.09	3.00	1.24	1.51	40% (2)	0% (0)	20% (1)
2007	8	11	11.15	1.38	0.99	1.16	13% (1)	0% (0)	38% (3)
All years	30	168	159.38	5.60	1.05	1.23	13% (4)	0% (0)	17% (5)
H6:	8								

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Why repository?

- One-time registration of publication – multiple use
- one-time action per record
  - ISI-number
  - Research field
- Easy update of citations and baselines
- Different analyses on same dataset
- Management tool:
  - Tenure track
  - Awards
  - Balanced scorecard
- Increase quality of repository

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Other developments in Metis / WaY

- Personal Metis
- Java version of Metis for Contact persons
- DAI (Digital Author Identifier)
- Import of Personal from WBA
- Year of Open Access
- Encourage uploading of author version

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End

- Thank you for your attention
- Special thanks to Charles Leon

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