

Acesso livre:

Que? Por quê? Como? Onde? Quando?

**Métricas
e
mandatos**

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Acesso livre: Por quê?

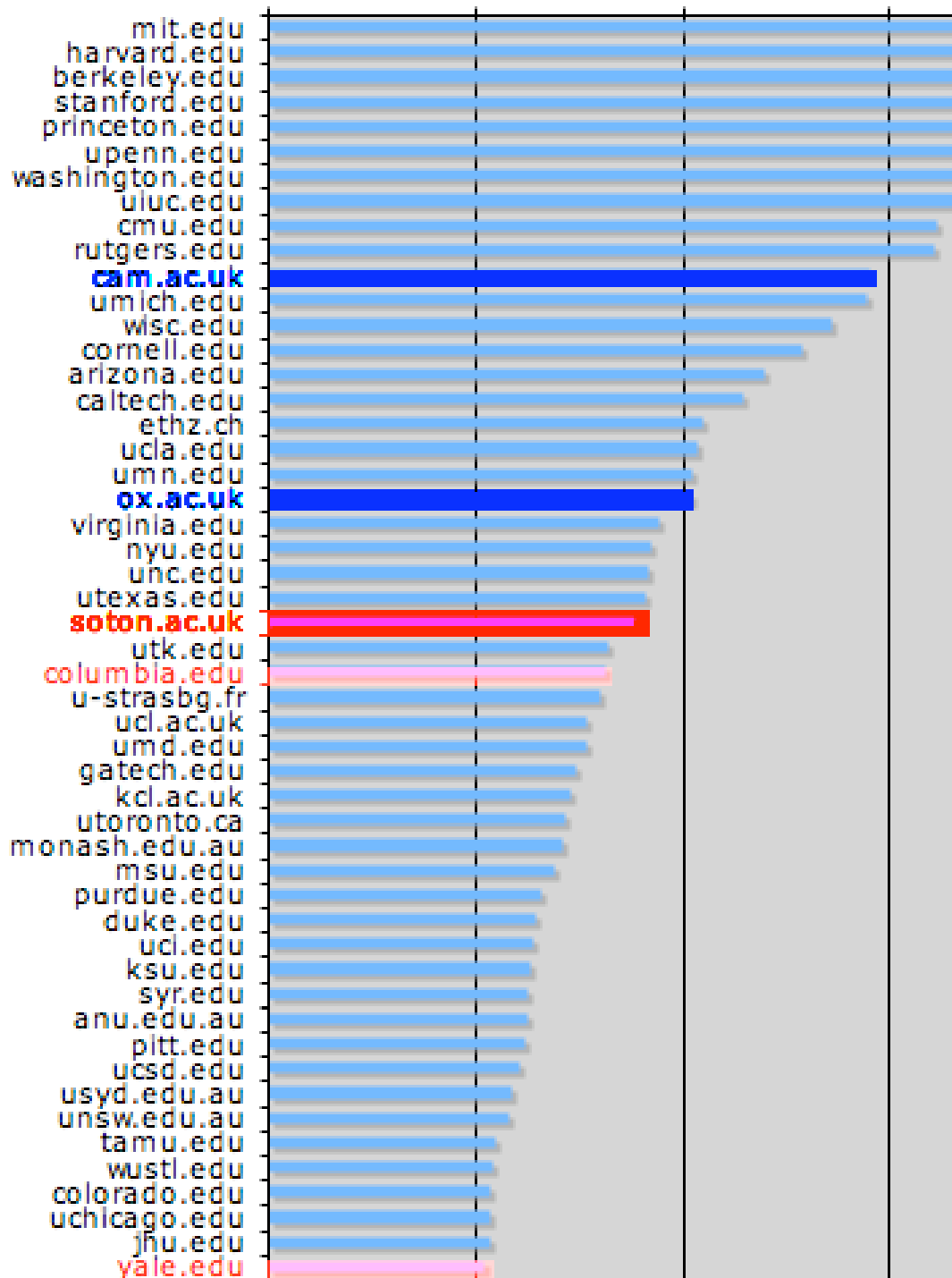
A fim de maximizar:

a **visibilidade** da pesquisa,
o **uso** da pesquisa,
as **aplicações** da pesquisa,
o **impacto** da pesquisa,
a **produtividade** da pesquisa,
o **progresso** da pesquisa,
o **subvenção** da pesquisa

por meio de maximizar o acesso à pesquisa

Acesso livre: Como?

- **Métricas:** As medidas do uso e do impacto quantificarão, avaliarão, navegarão, propagarão e recompensarão os frutos do acesso livre pela via verde
- **Mandatos:** As exigências para auto-arquivar, adotadas por todas as universidades e agências de fomento à pesquisa , gerarão o acesso livre, pela via verde a 100% da produção científica.



The G-factor International University Ranking measures the importance of universities as a function of the number of links to their websites from the websites of other leading international universities.

Why is Southampton ranked 3rd highest in the UK and 25th in the world, above Columbia (27th) and Yale (51st)?

Copyright Peter Hirst, 2006.

1. 24,000 peer-reviewed journals are published worldwide, in all disciplines, in all languages.

**No mundo inteiro,
24.000 periódicos científicos,
avaliados por pares,
são publicados,
em todas as disciplinas,
em todas as línguas.**

2. They publish 2.5 million articles per year.

**2. Esses periódicos publicam,
anualmente, 2.5 milhão de artigos**

3. Most universities and research institutions can only afford to subscribe to a fraction of those journals.

3. A maioria das universidades e das instituições de pesquisa dispõem de recursos capazes de subscrever apenas uma fração desses periódicos.

4. That means that all those articles are accessible to only a fraction of their potential users.

4. Isso significa que todos aqueles artigos são acessíveis apenas a uma fração de seus usuários potenciais.

5. That means that the research is having only a fraction of its potential usage and impact.

5. Isso significa que a pesquisa está tendo somente uma fração de seu potencial de uso e impacto.

6. That means that research is achieving only a fraction of its potential productivity and progress.

6. Isso significa que a pesquisa está conseguindo somente uma fração de seu potencial de produtividade e progresso.

7. In the paper era there was no way to remedy this, but in the web era there is a way: "Open Access" means free access to research journal articles on the Web (immediately and permanently)

7. Na era do papel não havia nenhuma maneira de resolver este problema

Mas na era da *web* há uma maneira:

fornecendo "o acesso livre" aos artigos de periódicos científicos na *web* de forma imediata e permanente

Acesso livre: Que é aquele?

- acesso
- em linha
- livre de custos
- ao texto completo
- **imediatamente**
- permanentemente

Acesso livre: a que?

ESSENCIAL:

A 2.5 milhão artigos en cada ano

En 24.000 periódicos científicos, avaliados por pares,, em todas as disciplinas, em todas as línguas

OPCIONAL:

1. livress
2. Livres de texto
3. Artigos dos revistas
4. Artigos dos jorniaass
5. Música
6. Vídeo
7. Software
8. “conhecimento”

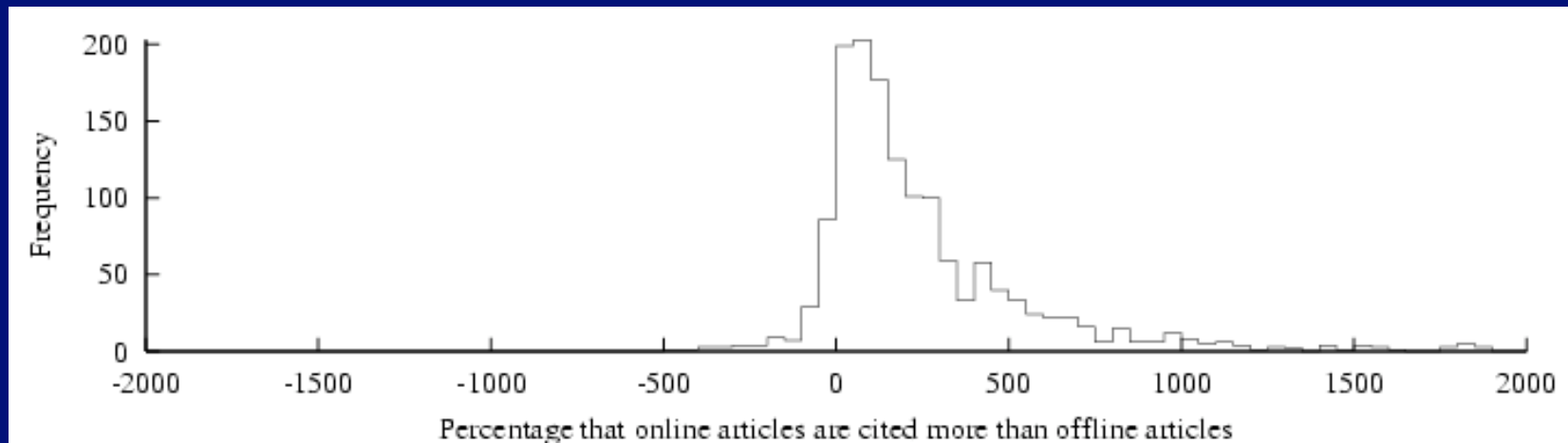
9. Dados

10. Prépublicações inéditas

8. Research that is freely accessible on the web has 25% to 250% greater research impact.

8. Resultado de Pesquisas que estão livremente acessíveis no *web* têm um impacto de 25%-250% maior do que as que não estão.

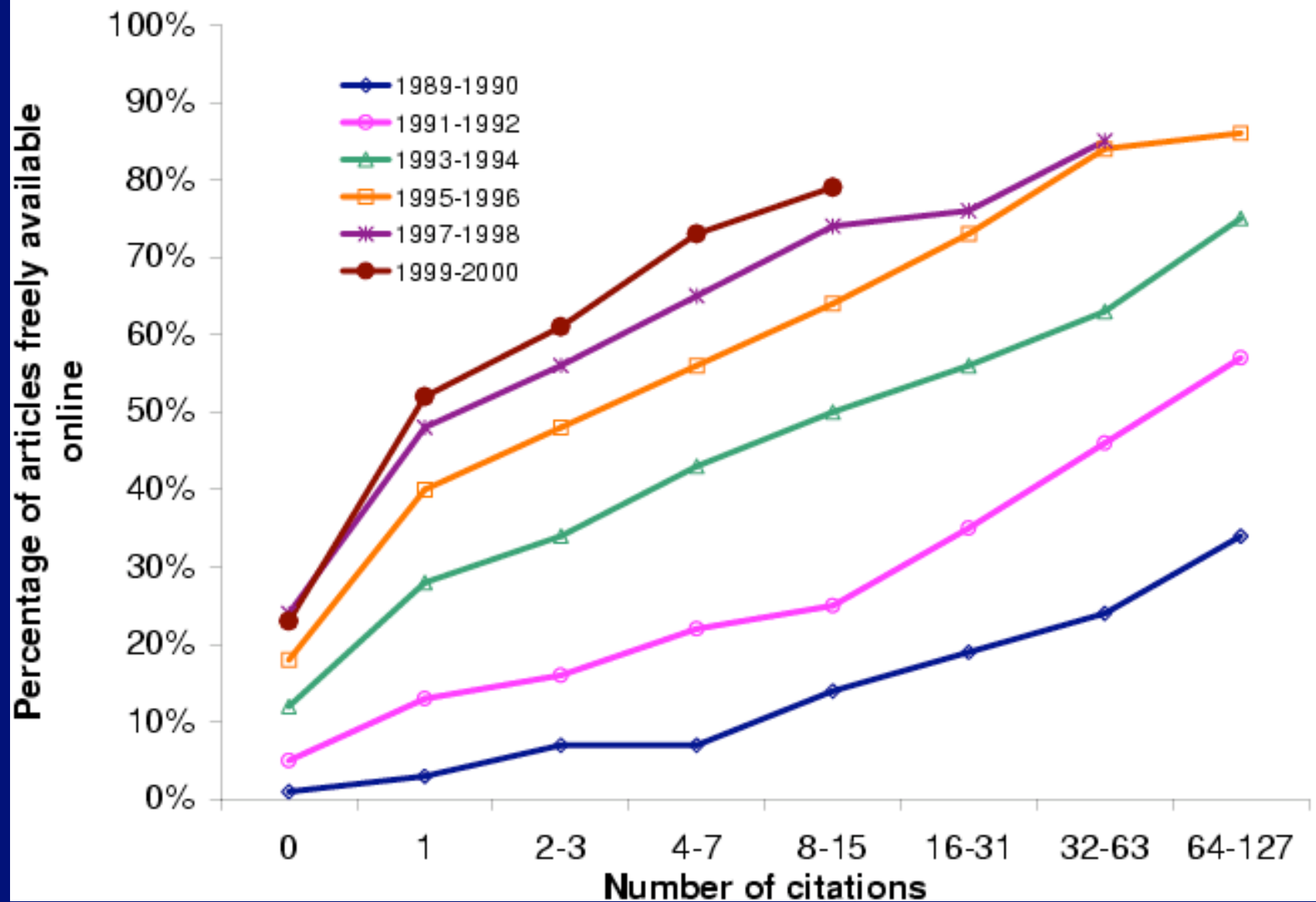
“Online or Invisible?” (Lawrence 2001)



“average of 336% more citations to online articles compared to offline articles published in the same venue”

Lawrence, S. (2001) Free online availability substantially increases a paper's impact Nature 411 (6837): 521.

<http://www.neci.nec.com/~lawrence/papers/online-nature01/>

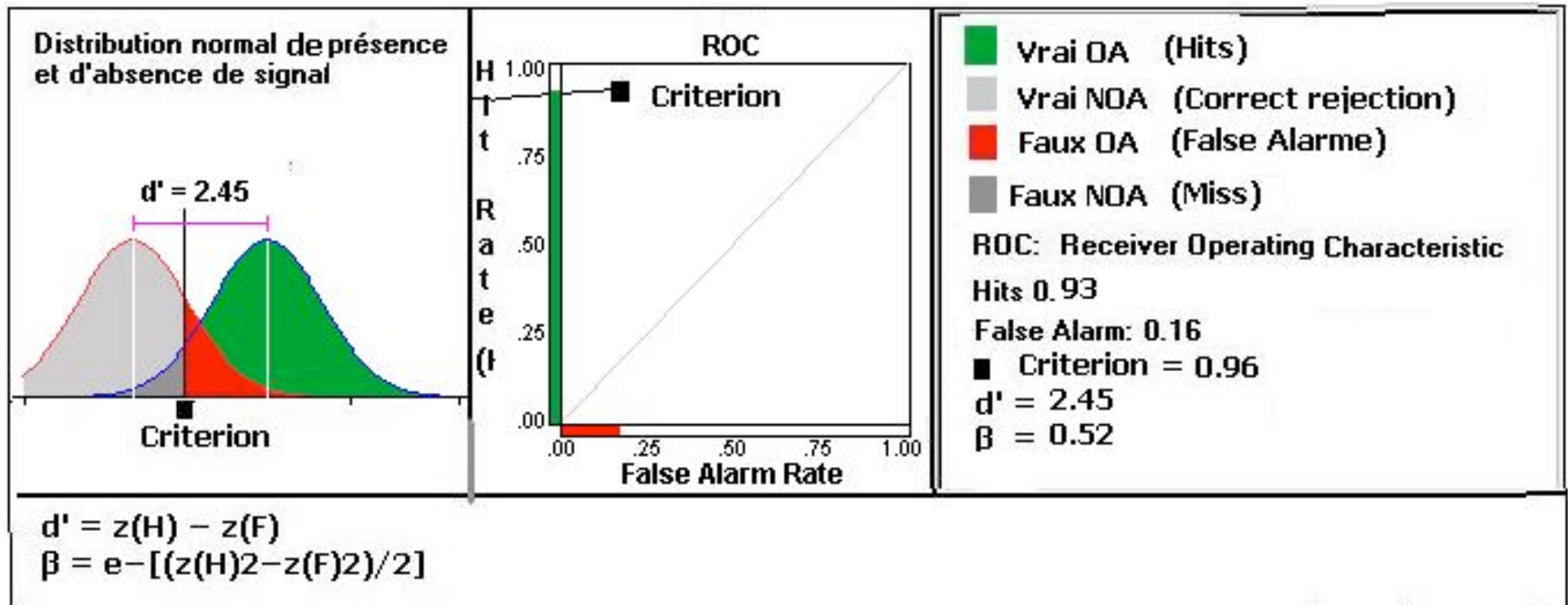


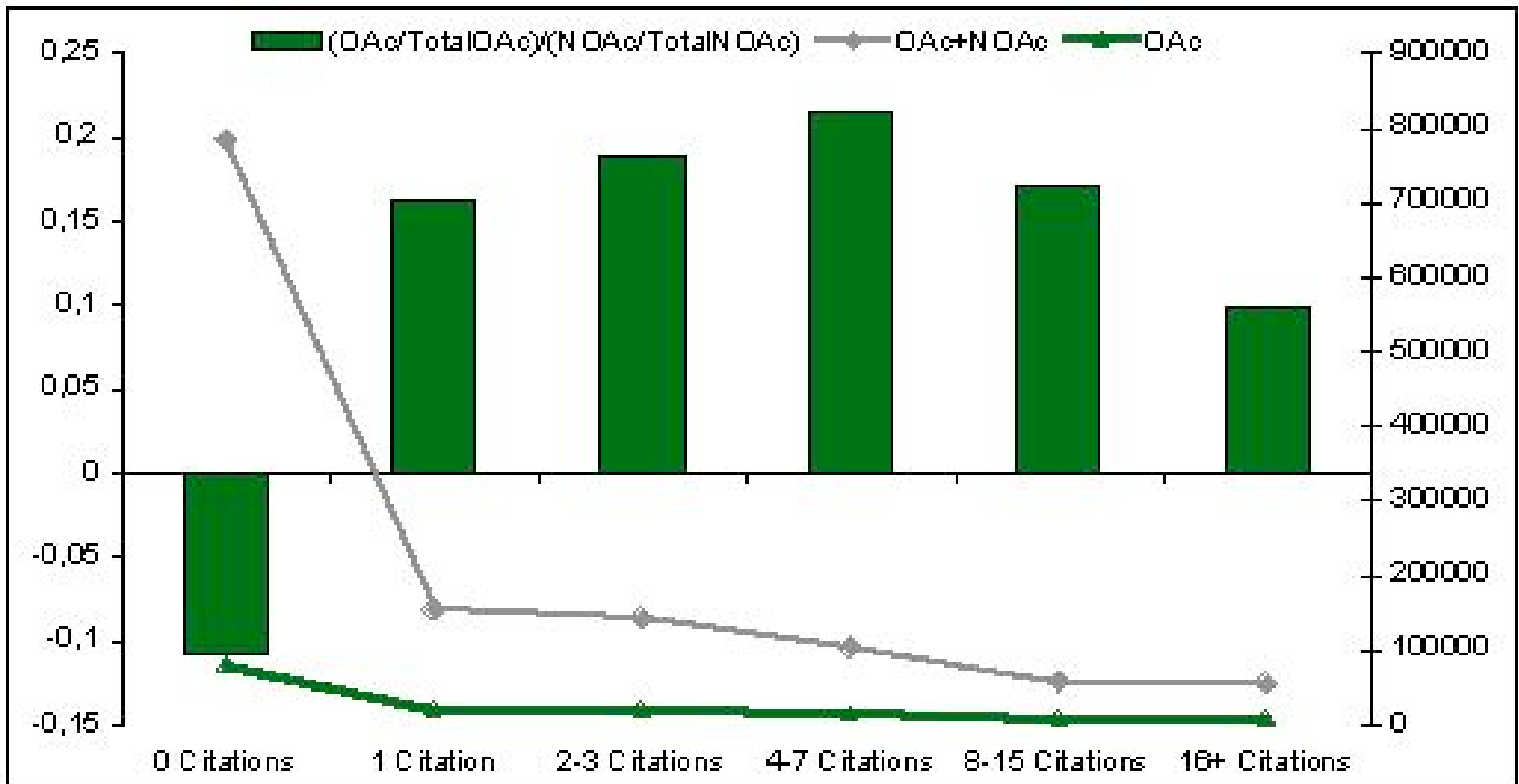
Lawrence (2001) findings for computer science conference papers. More OA every year for all citation levels; higher with higher citation levels

Signal detection analysis of the hit/miss rate of the algorithm that searched for full-text OA papers on the web:

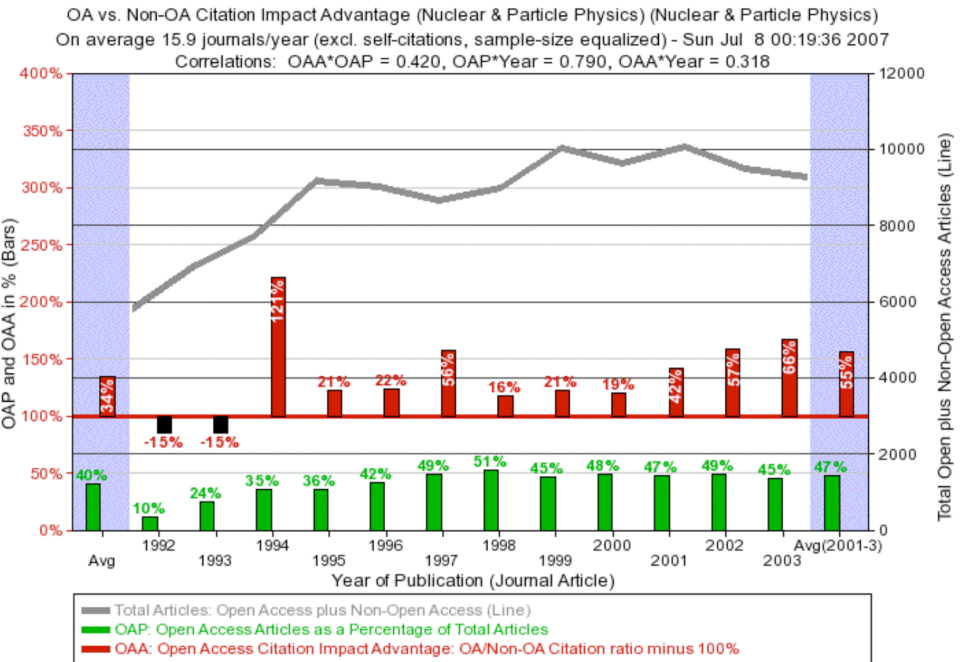
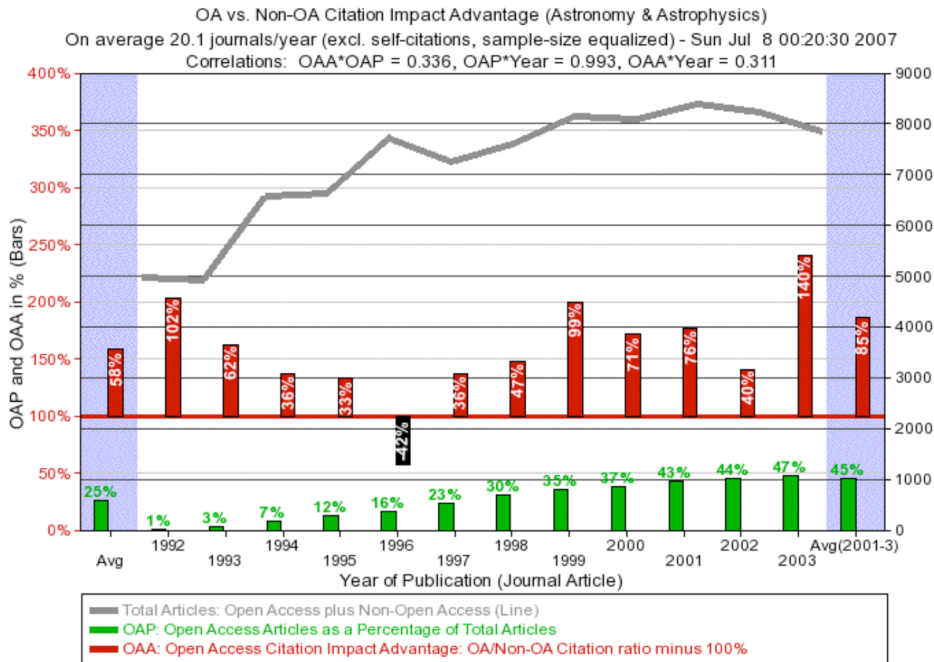
$d' = 2.45$ (sensitivity)

$b = .52$ (bias)

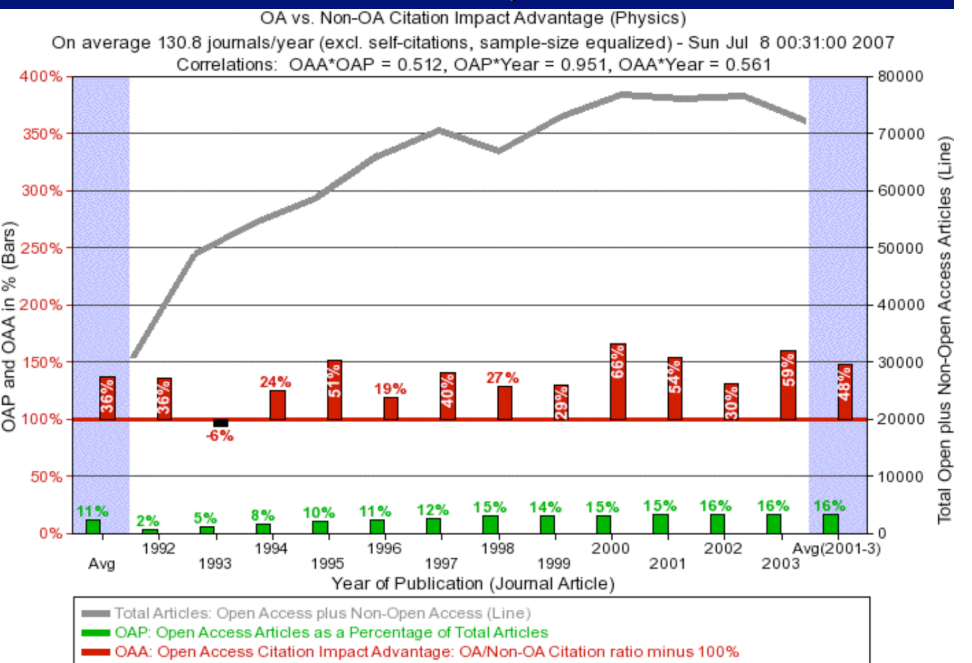
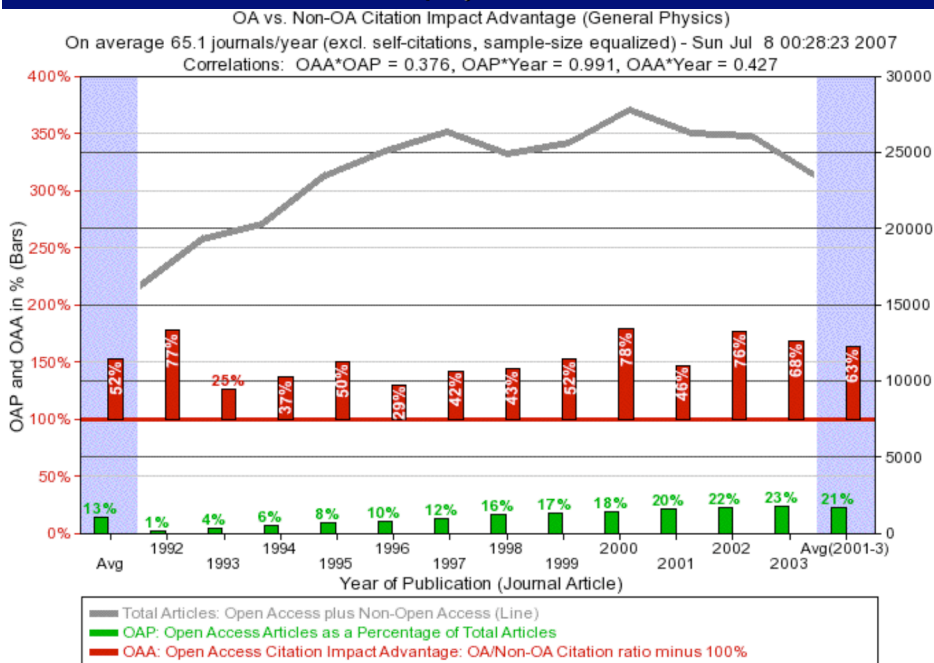




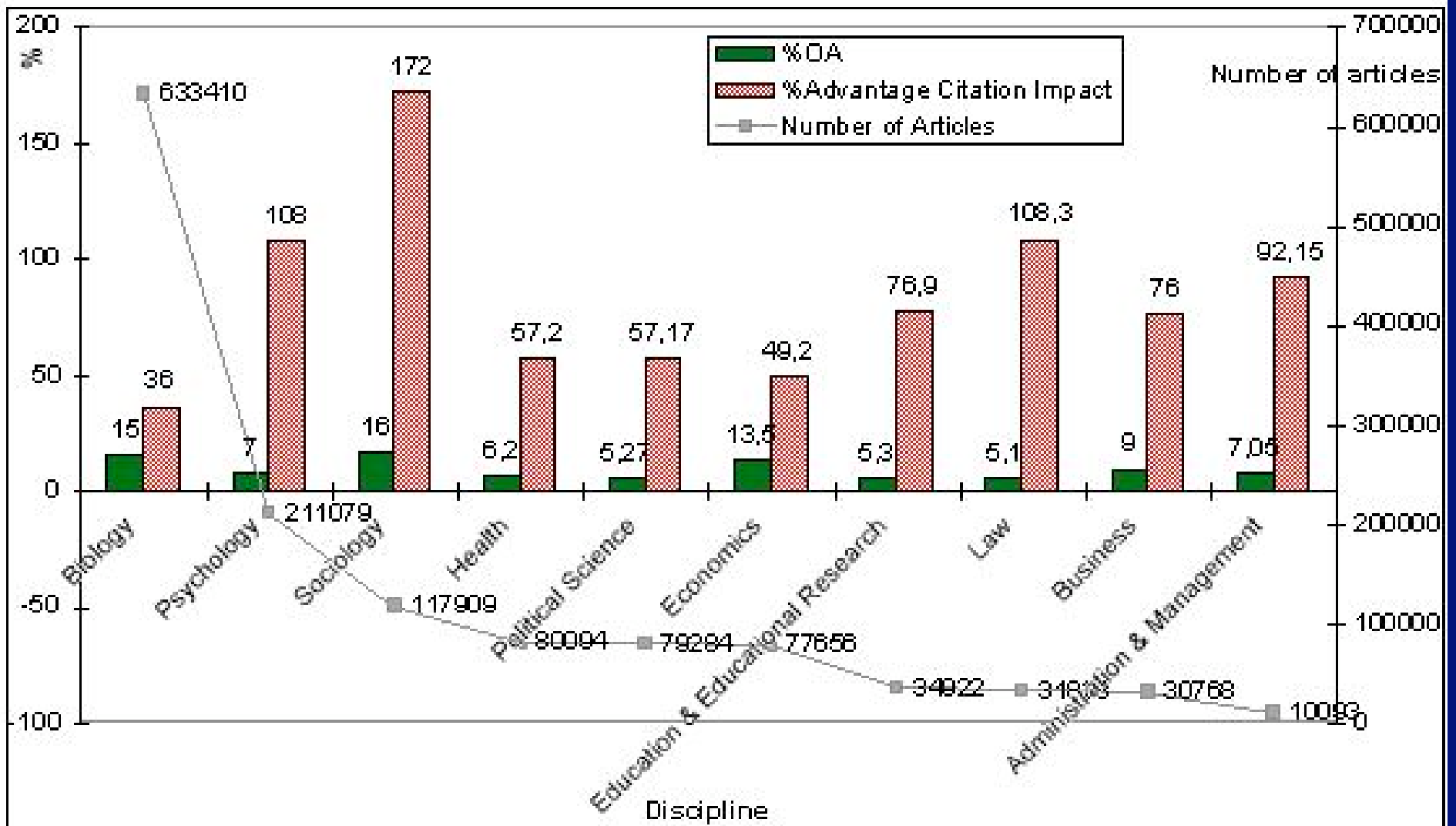
OA_c/NOA_c ratio (across all disciplines and years increases as citation count (c) increases ($r = .98, N=6, p<.005$). Percentage of articles is relatively higher among NOA articles with Citations = 0; it becomes higher among OA articles with citations = 1 or more. The more cited an article, the more likely that it is OA. (Hajjem et al. IEEE DEB 2005)



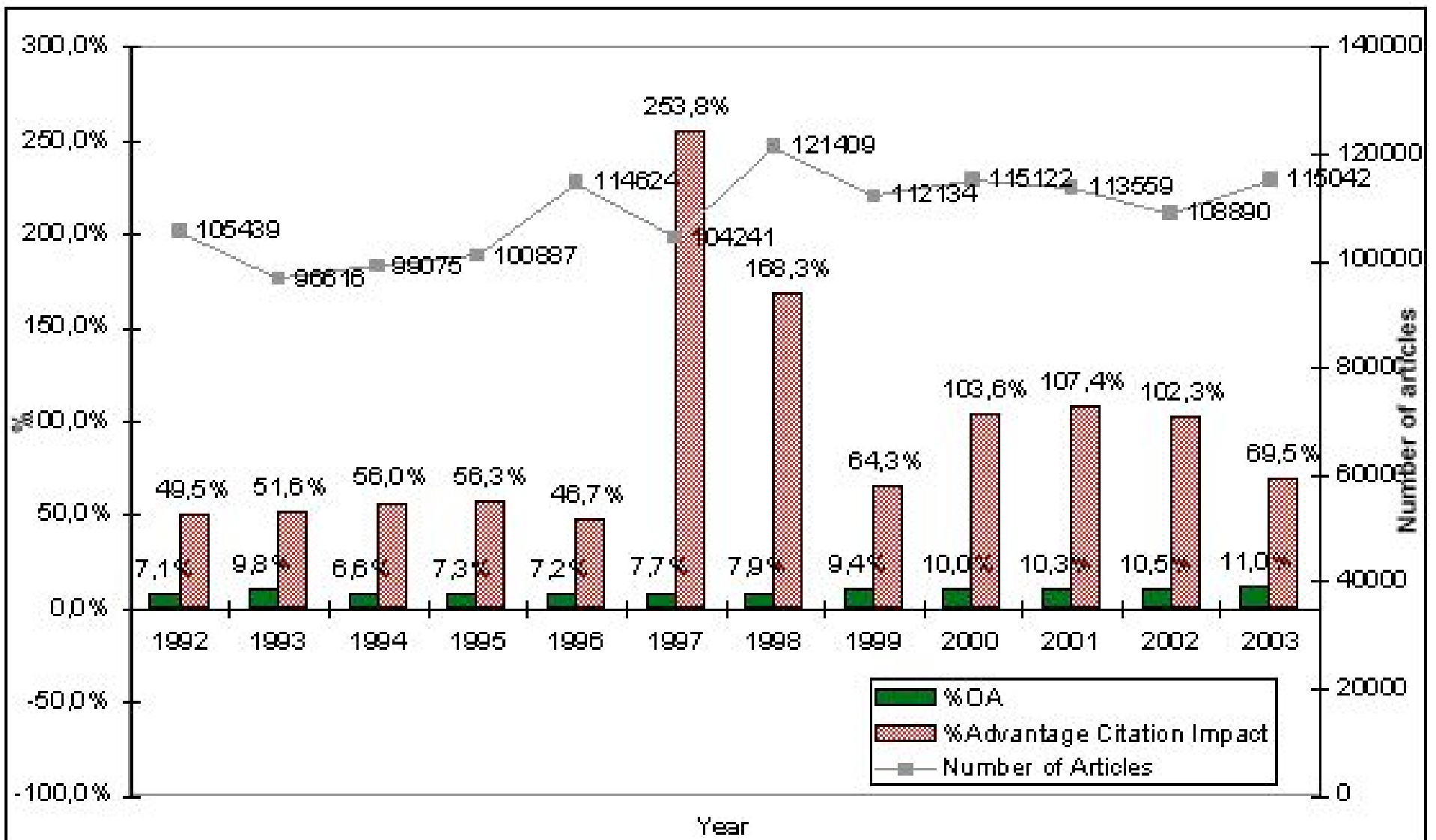
Astrophysics HEP/Nuclear Physics



General Physics Physics



By discipline: total articles (OA+NOA), gray curve; percentage OA: $(OA/(OA+NOA))$ articles, green bars; percentage OA citation advantage: $((OA-NOA)/NOA)$ citation, red bars, averaged across 1992-2003 and ranked by total articles. All disciplines show an OA citation advantage (Hajjem et al. IEEE DEB 2005)



By year: total articles (gray curve), percent OA articles (green bars), and percent OA citation advantage (red bars): 1992-2003, averaged across all disciplines. No yearly trend is apparent in the size of the OA citation advantage, but %OA is growing from year to year. ([Hajjem et al. IEEE DEB 2005](#))

A vantagem do impacto das citações por causa do acesso livre

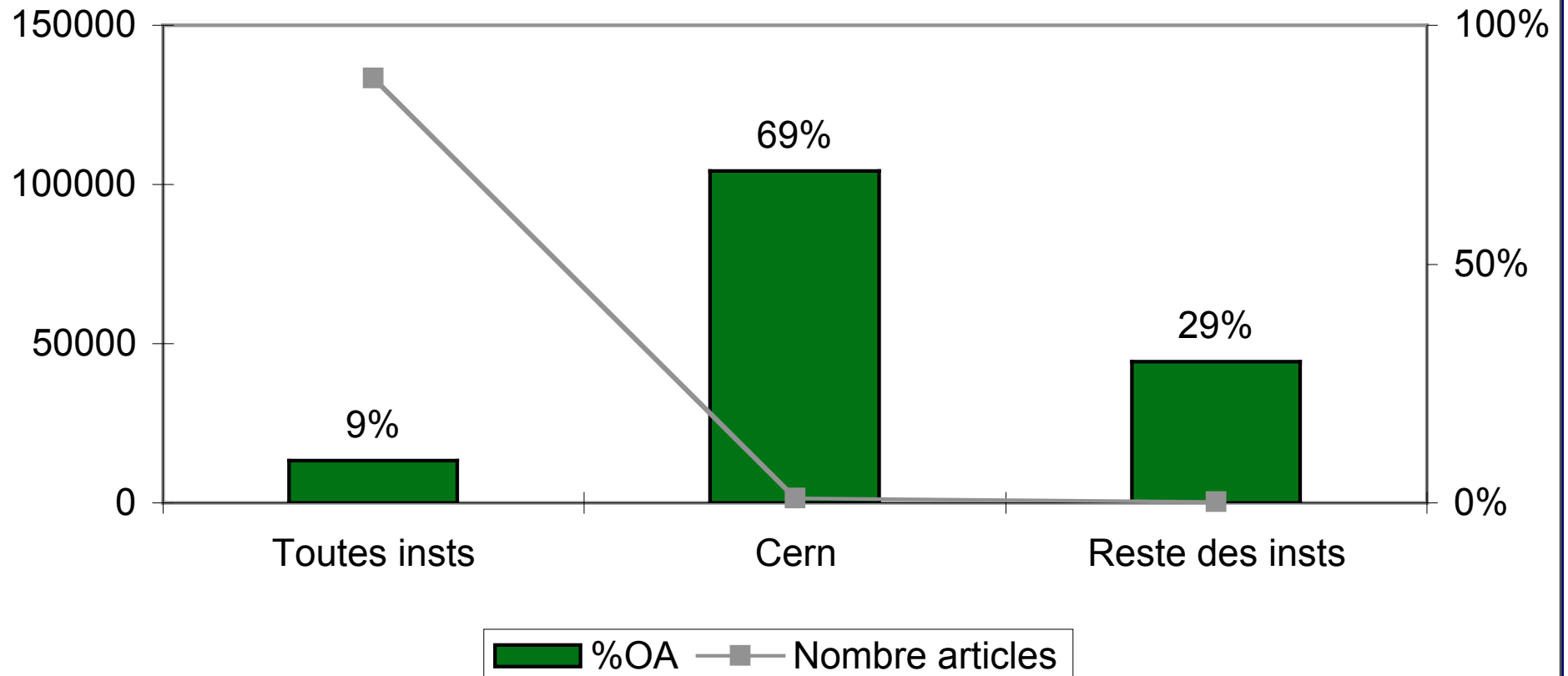
- É real?
- É causal?
- É universal?
- É permanente?
- Como grande é?

OA Advantage

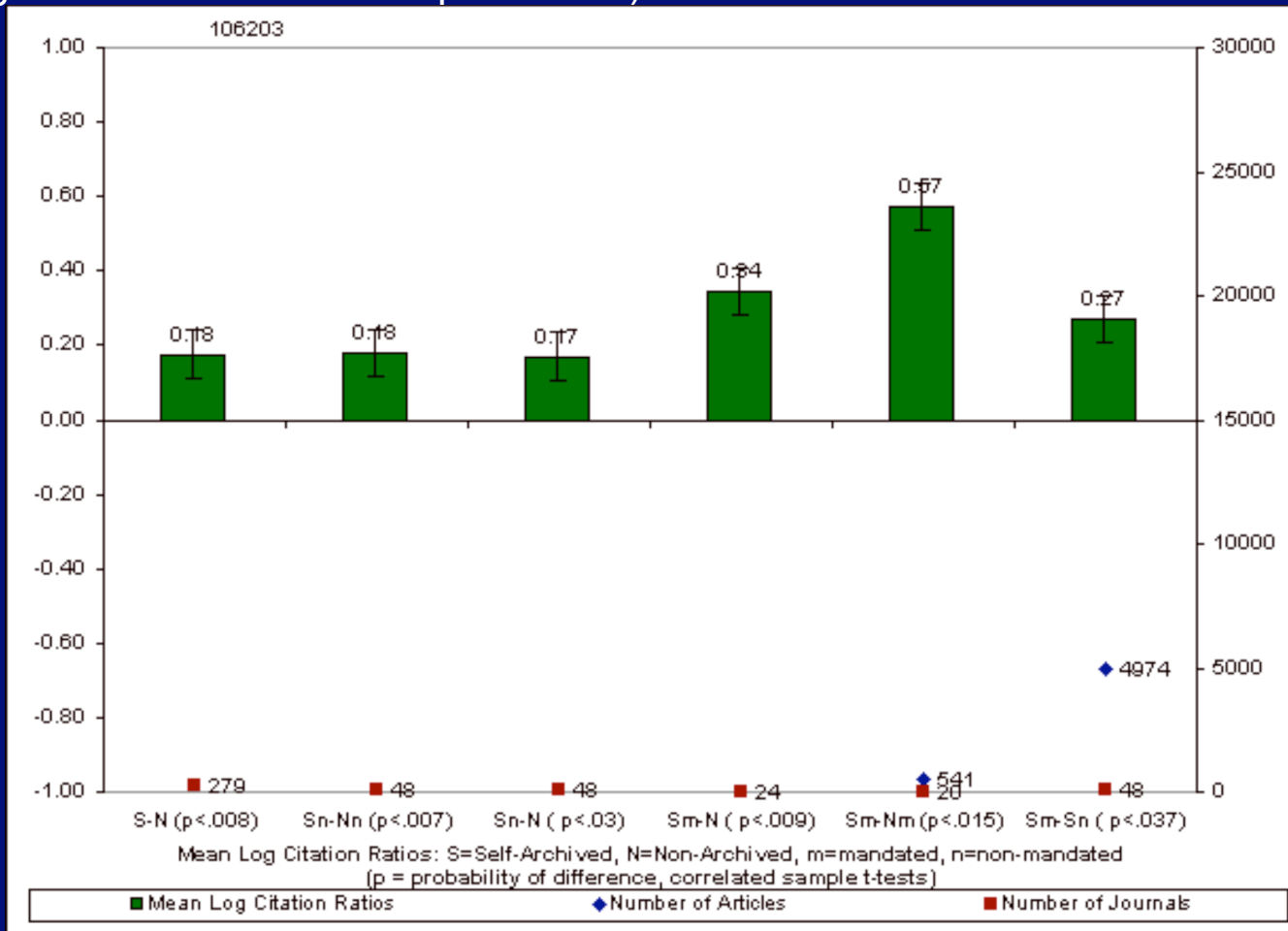
$$OAA = EA + QA + UA + (CA) + (QB)$$

- **EA: Early Advantage:** Self-archiving preprints before publication increases citations (higher-quality articles benefit more)
- **QA: Quality Advantage:** Self-archiving postprints upon publication increases citations (higher-quality articles benefit more)
- **UA: Usage Advantage:** Self-archiving increases downloads (higher-quality articles benefit more)
- **(CA: Competitive Advantage):** OA/non-OA advantage (CA disappears at 100%OA)
- **(QB: Quality Bias):** Higher-quality articles are self-selectively self-archived more (QB disappears at 100%OA)

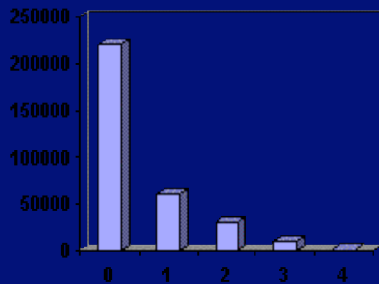
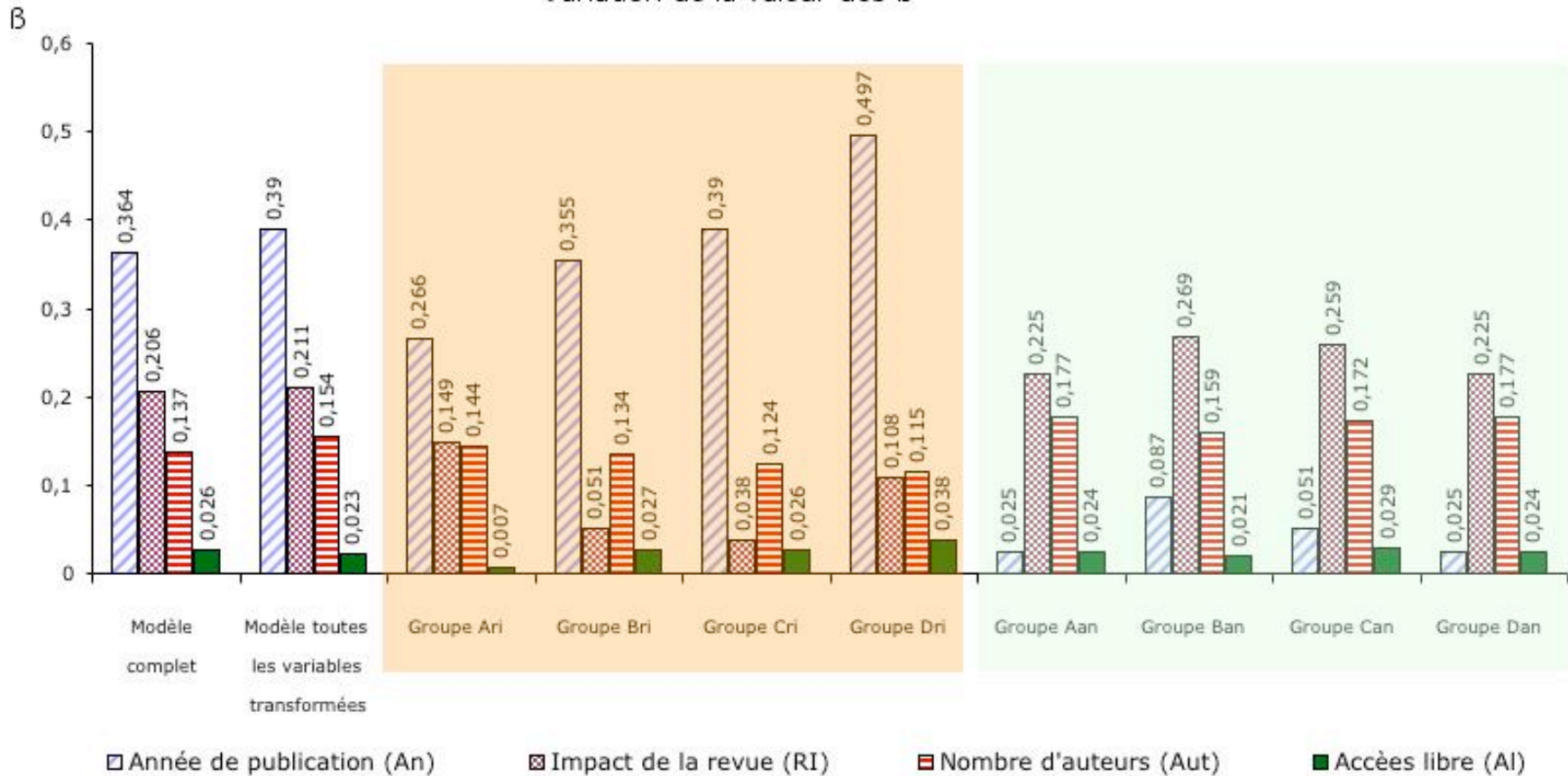
(1) All Institutions
(2) CERN (mandated)
(3) QUT, Soton, Minho (mandated)



Self-Selected Self-Archiving vs. Mandated Self-Archiving II: Within-Journal Citation Ratios (for 2004, all fields). S = citation counts for articles self-archived at institutions with (Sm) and without (Sn) self-archiving mandate. N = citations for non-archived articles at institutions with (Nm) and without (Nn) mandate (i.e., Nm = articles not yet compliant with mandate). Grand average of (log) S/N ratios (106203 articles; 279 journals) is the OA advantage (18%); this is about the same as for Sn/Nn (27972 articles, 48 journals, 18%) and Sn/N (17%); ratio is higher for Sm/N (34%), higher still for Sm/Nm (57%, 541 articles, 20 journals); and Sm/Sn = 27%, so self-selected self-archiving does not yield more citations than mandated; rather the reverse. (All six within-pair differences significant: correlated sample t-tests.)



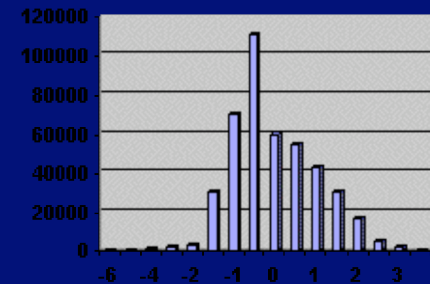
Variation de la valeur des β



Raw citation counts

Multiple Regression Analysis reveals 4 independent influences on citation counts (overall, and in all subsets):

1. article age
2. Factor do impacto do periodico
3. Quantidade de autores
4. Acesso livre



Log citation counts

9. If 100% of research articles were freely accessible, then the usage, impact, productivity and progress of research would be maximised.

9. Se 100% dos artigos, contendo resultados de pesquisa, estivessem livremente acessíveis, então o uso, o impacto, a produtividade e o progresso da pesquisa seriam maximizados.

10. There are two ways to make research freely accessible.

10. Existem duas maneiras de tornar os resultados de pesquisa livremente acessíveis.

11. The Gold way is that publishers convert all their journals into Open Access journals.

11. A via dourada: todos os editores convertem todos os seus periódicos em periódicos de livre acesso.

12. The Green way is that researchers deposit all their published journal articles in their own institution's Open Access Repository.

12. A via verde: Todos os pesquisadores depositam todos seus artigos, publicados em periódicos científicos, no repositório de livre acesso da sua própria instituição.

Limited Access: Limited Research Impact

12-18 Months

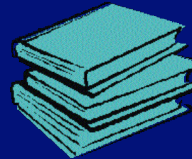
Impact cycle begins:
Research is done



Researchers write pre-refereeing "Pre-Print"



Submitted to Journal



Pre-Print reviewed by Peer Experts – "Peer-Review"



Pre-Print revised by article's Authors

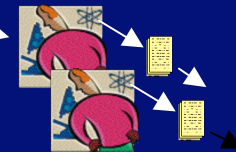
Refereed "Post-Print"
Accepted, Certified, Published by Journal



Researchers can access the Post-Print if their university has a subscription to the Journal



New impact cycles:
New research builds on existing research



Maximized Research Access and Impact Through Self-Archiving

12-18 Months

Impact cycle begins



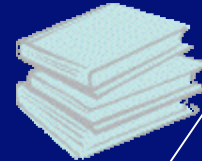
Researchers write pre-refereeing "Pre-Print"



Pre-Print is self-archived in University's Eprint Archive



Submitted to Journal



Pre-Print reviewed by Peer Experts – "Peer-Review"

Pre-Print revised by article's Authors

Refereed "Post-Print" Accepted, Certified, Published by Journal



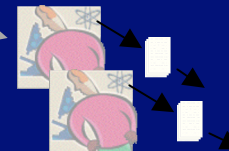
Researchers can access the Post-Print if their university has a subscription to the Journal



New impact cycles:
Self-archived research impact is greater (and faster) because access is maximized (and accelerated)



New impact cycles:
New research builds on existing research



13. But only about 15% of the research is being made freely accessible on the WWW spontaneously today.

13. Mas apenas cerca de 15% dos resultados de pesquisa está sendo disponibilizados de forma livre e espontânea na *web* hoje.

14. Gold Open Access depends on the publishing community.

14. O acesso livre, pela via **dourada,
depende da comunidade de
publicadores.**

15. Green Open Access depends only on the research community.

**15. O acesso livre, pela via verde,
depende somente da comunidade de
pesquisadores.**

16. The research community cannot require the publishing community to convert to Gold Open Access.

16. A comunidade de pesquisadores não pode obrigar a comunidade de publicadores a mudar para a via **dourada.**

17. But the research community can itself convert to Green Open Access.

17. Mas a comunidade de pesquisadores pode converter-se ao acesso livre, pela via verde.

18. Free EPrints software allows all universities to create their own institutional repositories very cheaply and easily.

18. O software livre EPrints permite que todas as universidades gerem seus próprios repositórios, de forma, muito barata e fácil.

19. EPrints repositories are all compliant with the OAI Protocol for metadata harvesting.

19. Todos os repositórios, construídos e mantidos com o software Eprints, são compatíveis com o protocolo OAI-PMH para coleta de metadados.

20. This means that all those distributed repositories are interoperable: their metadata can be harvested and jointly searched as if their contents were all in one central repository.

20. Isto significa que todos esses repositórios distribuídos são interoperáveis: seus metadados podem ser coletados e conjuntamente consultados como se estivessem todos em um repositório central.

21. But creating institutional repositories is only a necessary condition, not a sufficient condition, for providing 100% Open Access.

21. Mas, criar repositórios institucionais é somente uma condição necessária, não uma condição suficiente, para fornecer o acesso livre a 100% dos resultados de pesquisa

Registry of Open Access Repositories (ROAR): 906 arquivos, a maioria vazios!

<http://roar.eprints.org/>

Archive Type

- * Research Institutional or Departmental (467)
- * Research Cross-Institution (77)
- * e-Theses (84)
- * e-Journal/Publication (102)
- * Database (18)
- * Demonstration (24)
- * Other (134)

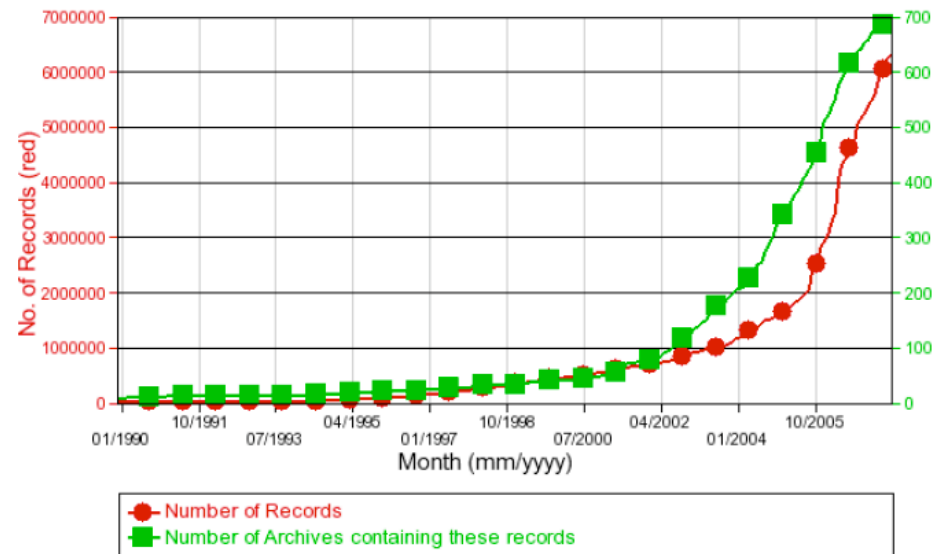
S'ware	Archives	Records	Mean
DSpace	242	937833	5097
EPrints	231	323015	1489
BEPress	56	136158	2670
OPUS	26	13377	608
ETD-db	23	343840	18097
Other (various)	228		

Country

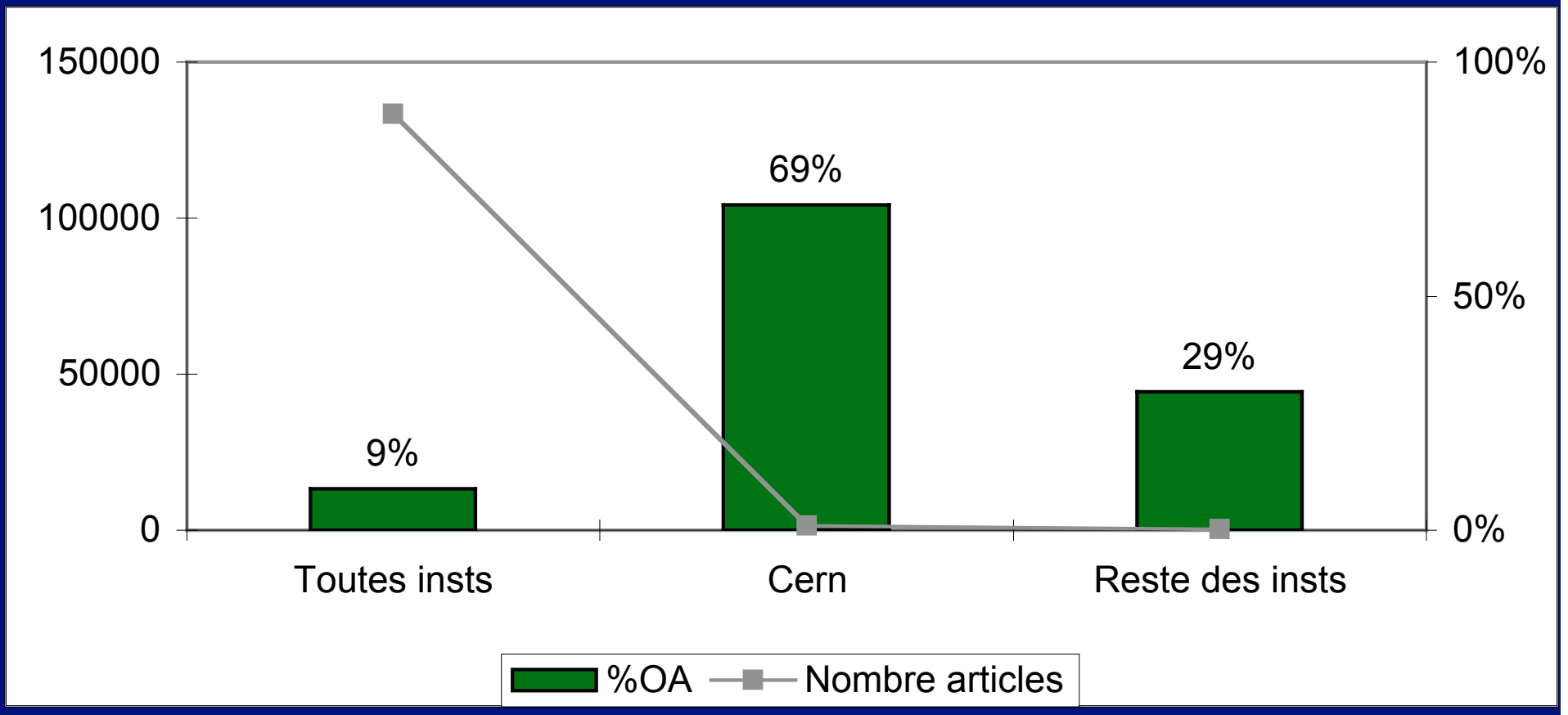
- | | | |
|------------------------|--------------------|-----------------|
| 1 United States (215) | * India (24) | * Ireland (2) |
| 2 United Kingdom (102) | * Netherlands (24) | * Norway (2) |
| 3 Germany (79) | * Belgium (13) | * Russia (2) |
| 4 Brasil (53) | * Denmark (6) | * Greece (2) |
| 5 Canada (40) | * China (5) | * Turkey (1) |
| 6 France (38) | * Mexico (5) | * Argentina (1) |
| 7 Japan (35) | * Finland (4) (11) | * Israel (1) |
| 8 Sweden (34) | * Switzerland (4) | * Slovenia (1) |
| 9 Australia (33) | * Portugal (4) | * Croatia (1) |
| 9 Spain (29) | * Hungary (4) | * Namibia (1) |
| 10. Italy (28) | * Portugal (4) | * Peru (1) |
| | * South Africa (4) | * Taiwan (1) |
| | * Chile (3) | * Pakistan (1) |
| | * Austria (3) | * New Zealand |
| | * Colombia (3) | * Costa Rica |

Registry of Open Access Repositories (ROAR)

Generated by <http://archives.eprints.org/>



2005 Baseline self-archiving rate: 9%
CERN (exijido) 69%
3 autres RIs que têm exigências: 29%



22. Only about 15% of institutional research output is being self-archived spontaneously.

22. Apenas cerca de 15% dos resultados de pesquisa institucional estão sendo auto-arquivados espontaneamente.

23. It is helpful to provide incentives to self-archive, such as download statistics, publicity, help from librarians in depositing, or even small financial incentives. But incentives are not sufficient, and can only increase self-archiving to about 30%.

23. Estimular o auto-arquivamento por meio de incentivos, tais como, estatísticas sobre trabalhos acessados e baixados, publicidades, ajuda de bibliotecários para depositar os trabalhos ou mesmo pequenos incentivos financeiros podem ser úteis, mas não são suficientes. Tais incentivos podem apenas aumentar os depósitos em aproximadamente 30%.

24. The only successful way to guarantee 100% self-archiving is for universities and research funders to require self-archiving as a condition of employment and funding.

24. A única maneira bem sucedida de garantir 100% de auto-arquivamento é as universidades e as agências de fomento à pesquisa exigirem o auto-arquivamento como uma condição de apoio e financiamento.

25. Universities and research funders already require publishing as a condition of employment and funding ("publish or perish"), in order to maximise usage and impact in the paper era.

25. As universidades e os financiadores da pesquisa já requerem que seus pesquisadores publiquem, como uma condição de apoio e financiamento ("publicar ou perecer"), a fim de maximizar o uso e o impacto na era do papel.

26. A self-archiving requirement is just a natural extension of the publishing requirement, for the web era.

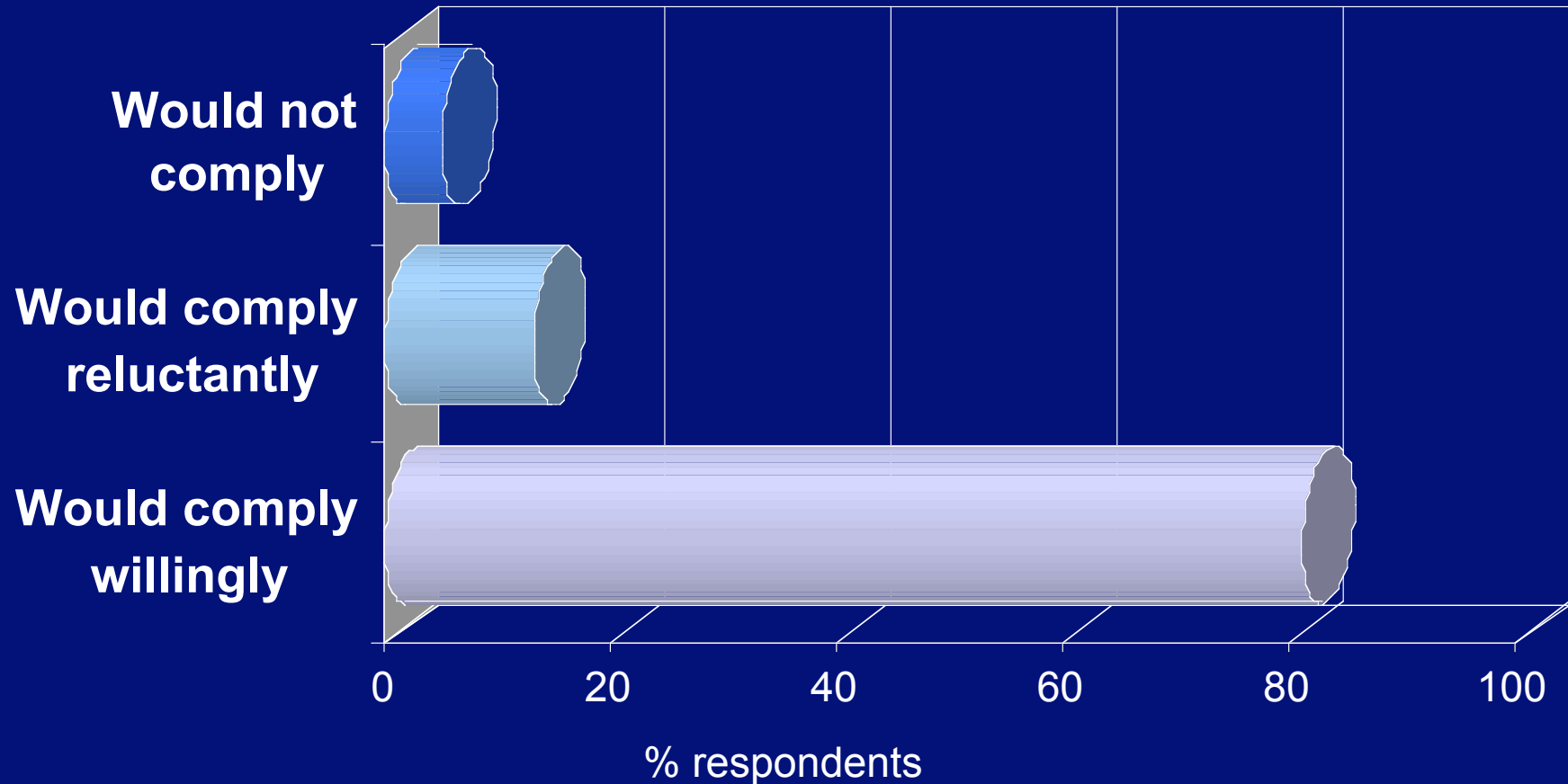
26. Uma exigência para auto-arquivamento é meramente uma extensão natural, na era da *web* da exigência para publicar.

27. International surveys of researchers in all disciplines have already found that 95% of researchers would comply with the requirement to self-archive.

27. Levantamentos internacionais sobre pesquisadores de todas as disciplinas revelam que 95% deles obedeceriam a exigência para auto-arquivar.

Conformar-se ao mandato

(Levantamentos internacionais Key Perspectives através de todas as disciplinas)



Data from Key Perspectives Ltd

28. Comparisons of the self-archiving percentage of institutions with (1) repositories only, (2) repositories plus incentives, and (3) repositories plus incentives plus a self-archiving requirement, show that only (3) is successful in reaching 100% self-archiving.

28. Comparações dos percentuais de auto-arquivamento em instituições que :

(1) simplesmente controem e mantêm repositórios ;

**(2) constroem e mantêm repositórios acrescidos de incentivos ;
e**

(3) constroem e mantêm repositórios acrescidos de incentivos e exigência para auto-arquivar;

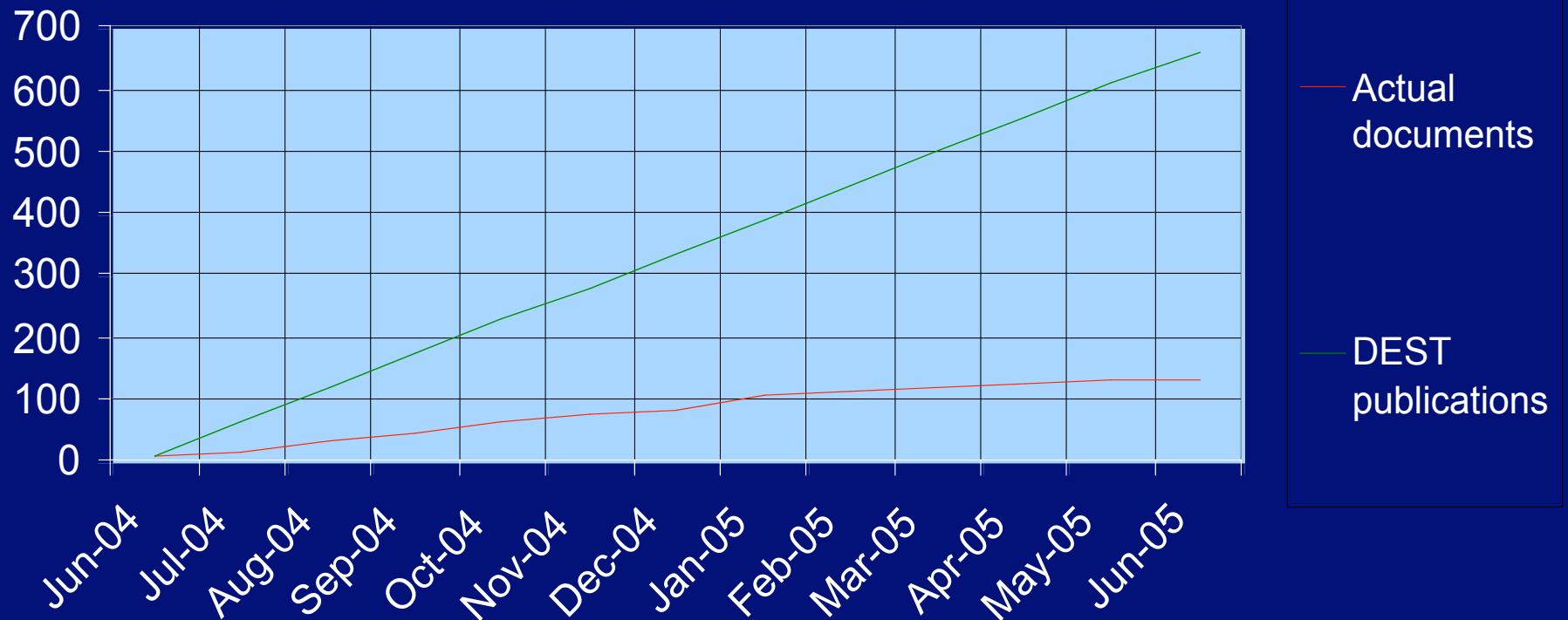
mostram que somente as instituições que adoraram a modalidade (3) são bem sucedidas em alcançar 100% de auto-arquivamento dos produtos anuais das pesquisas.

University of Tasmania

-mandato, -incentivo

Linha verde: saída anual total

Linha vermelha: proporção auto-arquivada



Data courtesy of Arthur Sale

University of Queensland

-mandato, +incentivo

Linha verde: saída anual total

Linha vermelha: proporção auto-arquivada



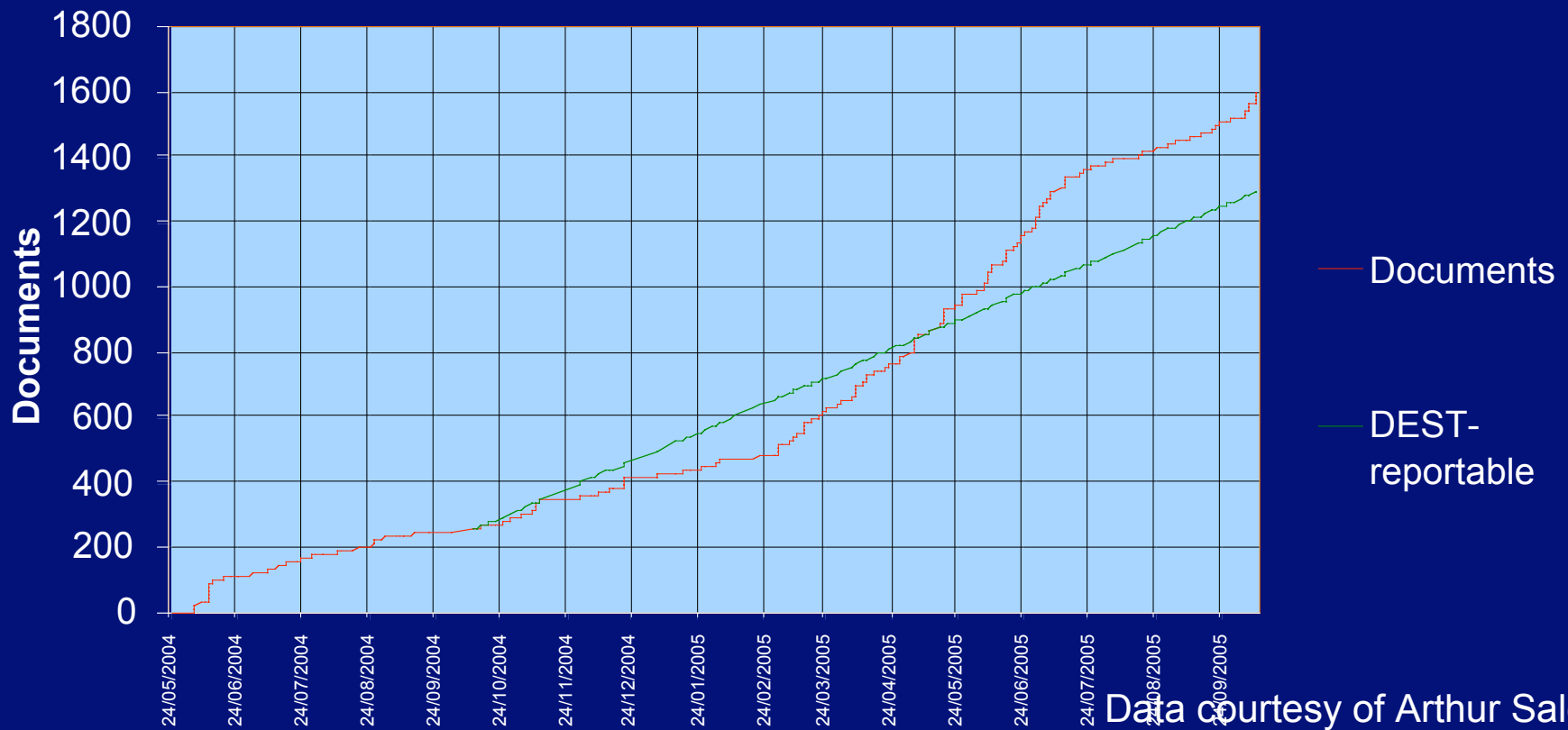
Data courtesy of Arthur Sale

Queensland University of Technology

+mandato, +incentivo

Linha verde: saída anual total

Linha vermelha: proporção auto-arquivada



Data courtesy of Arthur Sale

29. About 14 universities and departments and about 14 funders of research have already required self-archiving.

29. Aproximadamente 14 universidades e departamentos e aproximadamente 14 agências de fomento à pesquisa adotaram a exigência de auto-arquivamento. Consultar: [ROARMAP](#)

ROARMAP (Registry of Open Access Repository Material Archiving Policies)

as recommended by the [Berlin Declaration](#)

Register your Institutional Policy in [ROARMAP](#):

[English](#) – [Arabic](#) [Chinese](#) [French](#) [German](#) [Hebrew](#) [Italian](#) [Japanese](#) [Russian](#) [Spanish](#)

Register your Institutional Archive in [ROAR](#)

Country	Institution	OA Archive(s)	OA Policy
AUSTRALIA * departmental-mandate	University of Tasmania School of Computing	[growth data] http://eprints.comp.utas.edu.au/	Policy details
AUSTRALIA * funder-mandate	Australian Research Council	http://leven.comp.utas.edu.au/AuseAccess/pmwiki.php?n=General.UniPolicies	Policy details
AUSTRALIA * funder-mandate	National Health and Medical Research Council	http://leven.comp.utas.edu.au/AuseAccess/pmwiki.php?n=General.UniPolicies	Policy details
AUSTRALIA * institutional-mandate	Queensland University of Technology	[growth data] http://eprints.qut.edu.au/	Policy details
AUSTRALIA * institutional-mandate	University of Tasmania	[growth data] http://eprints.utas.edu.au/	Policy details
AUSTRIA	Foerderung der wissenschaftlichen Forschung	http://www.fwf.ac.at/de/public_relations/oai/index.html	Policy details
BELGIUM* funder-mandate	Research Foundation Flanders	http://roar.eprints.org/	Policy details
BELGIUM* institutional-mandate	Université de Liège	http://roar.eprints.org/	Policy details
BRAZIL * proposed multi-institutional-mandate	Brazil, House of Representatives	http://roar.eprints.org/	Policy details
CANADA	Athabasca University	[growth data] http://auspace.athabascau.ca/	Policy details

30. Several other important proposals to require self-archiving are under consideration in the USA, Europe, and elsewhere (including Brazil's Projeto de Lei 1120/2007).

30. Diversas outras propostas importantes para exigir o auto-arquivamento estão sendo consideradas nos Estados Unidos, Europa, e em outras partes do mundo (incluindo o Projeto de Lei 1120/2007 do Brasil).

31. It is crucial that both funders and universities require self-archiving, as not all research is funded.

31. É crucial que tanto os órgãos governamentais de fomento à pesquisa quanto as universidades exijam o acesso livre verde, porque nem toda a pesquisa é financiada.

Acesso livre: Como?

- As universidades e os financiadores da pesquisa necessitam exigir que todos seus investigadores devam auto-arquivar todo o seu produto da pesquisa
- no Repositório Institucional, imediatamente, na data em que são aceitos para a publicação

32. Researchers are already rewarded not just in proportion to how many articles they publish, but how many times each articles is cited.

32. Os pesquisadores já são recompensados não apenas em proporção a quantos artigos publicam, mas em quantas vezes cada artigo é citado.

33. It is a good idea to link the self-archiving requirement to research performance assessment.

33. É uma boa idéia boa relacionar a exigência de auto-arquivamento à avaliação do desempenho da pesquisa.

34. Research performance metrics can provide incentives for motivating and for rewarding self-archiving.

34. As medidas de desempenho dos resultados de pesquisa publicados podem fornecer os incentivos para motivar e recompensar os pesquisadores pelo auto-arquivamento.

35. Open Access will generate many potential metrics that can be used to assess research impact: publication counts, citations (for articles, books, authors, institutions), co-citations, downloads, journal impact factor, hirsch-index, chronometrics (time-series growth/decay parameters for citations, co-citations and downloads), semiometrics (text and content similarity measures), research funding, completed doctoral theses, etc.

35. O acesso livre gerará muitas medidas potenciais que podem ser usadas para avaliar o impacto da pesquisa, tais como:

- **quantidade das publicações,**
- **Citações**
(para artigos, livros, autores, instituições),
- **co-citações,**
- **downloads,**
- **fatores de impacto dos periódicos,**
- **hirsch-índice,**
- **chrono-métricas**
(parâmetros temporal do crescimento e da deterioração para citações, co-citações e *downloads*),
- **semio-métricas**
(medidas da similaridade entre textos e entre seus índices),
- quantidade de pesquisas financiadas,
- número de teses de doutorado concluídas,
- entre outras.

Metrics

- Citations (C)
- CiteRank
- Co-citations
- Downloads (D)
- C/D Correlations
- Hub/Authority index
- Chronometrics:
 - Latency/Longevity
- Endogamy/Exogamy
- Book citation index
- Research funding
- Students
- Prizes
- h-index
- Co-authorships
- Number of articles
- Number of publishing years
- Semiotics (latent semantic indexing, text overlap, etc.)

36. These metrics are being validated in the British "Exercise of the Research Assessment", discipline by discipline, through the multiple regression analysis: The measures are each weighted by their ability to predict the rankings given by the evaluation by human peer panels.

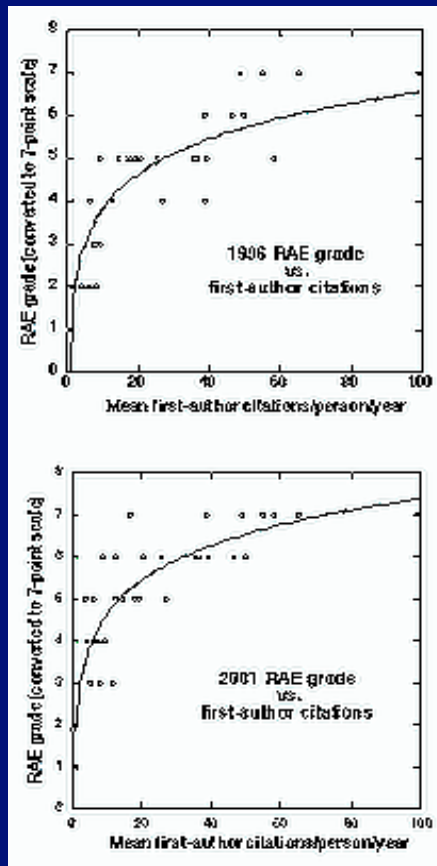
36. Estas métricas estão sendo validadas no "exercício britânico da avaliação da pesquisa" (Research Assessment Exercise, RAE), disciplina por disciplina, com a análise de regressão múltipla: a cada medida é atribuída um peso em proporção a sua habilidade de prever a posição ordinal acordada por painéis de pares humanos.

RAE 2001

Rankings for Psychology

	2001 Rating	Proportion of Staff Selected	Category A and A* Research Active Staff (FTE)
Birkbeck College	5	B	18.7
University of Birmingham	5*	C	28.7
Bolton Institute of Higher Education	3b	D	12.0
University of Bristol	5*	A	28.3
Brunel University	4	B	15.0
University of Cambridge	5*	A	27.5
University of Central Lancashire	3a	E	9.2
City University	4	A	16.0
Coventry University	2	D	11.0
University of Derby	3a	C	13.5
University of Durham	5	A	24.0
University of East London	3a	C	18.5
University of Essex	5	A	19.0
University of Exeter	5	B	18.5
Goldsmiths College	4	A	24.0
University of Greenwich	3b	C	11.0
University of Hertfordshire	4	B	17.8
University of Hull	3a	C	16.5
Keele University	4	B	15.0
University of Kent at Canterbury	4	B	16.0
King Alfred's College, Winchester	2	B	6.0
Lancaster University	5	A	23.0
University of Leeds	5	C	24.1
University of Leicester	4	B	27.0
University of Lincoln	2	D	10.0
University of Liverpool	4	C	21.0
Liverpool Hope	2	D	7.2
London Guildhall University	3b	D	12.0
Loughborough University	4	B	14.3
University of Luton	2	E	6.0
University of Manchester	5	B	20.0
Manchester Metropolitan University	3a	D	10.5
Middlesex University	3a	D	13.5
University of Newcastle	5*	C	15.0
University of Northumbria at Newcastle	4	D	9.1
University of Nottingham	5	A	25.0
Nottingham Trent University	3a	C	10.7
Open University	4	D	12.0
University of Oxford	5*	A	36.6
Oxford Brookes University	3a	C	10.0
University of Plymouth	5	C	17.4
University of Portsmouth	3a	D	13.4
University of Reading	5*	B	20.0
Royal Holloway, University of London	5	A	20.4
University of Sheffield	5	A	36.4
Sheffield Hallam University	3b	C	10.0
University of Southampton	5	A	29.0
Staffordshire University	3a	D	9.0
University of Sunderland	3b	D	13.0
University of Surrey	5	A	25.0
University of Surrey Roehampton	3a	E	7.0
University of Sussex	5	A	12.0
Thames Valley University	1	C	4.7
University College London	5*	B	50.0
University of Warwick	5	B	15.0
University of Westminster	3a	D	11.0
University of Wolverhampton	3b	D	11.0
University College Worcester	2	D	7.0
University of York	5*	A	21.0

Research Assessment, Research Funding, and Citation Impact



“Correlation between RAE ratings and mean departmental citations +0.91 (1996) +0.86 (2001) (Psychology)”

“RAE and citation counting measure broadly the same thing”

“Citation counting is both more cost-effective and more transparent”

(Eysenck & Smith 2002)

<http://psyserver.pc.rhbnc.ac.uk/citations.pdf>

Diamond, Jr. , A. M. (1986) What is a Citation Worth? *Journal of Human Resources* 21:200.

<http://www.garfield.library.upenn.edu/essays/v11p354y1988.pdf>

marginal dollar value of one citation in 1986: **\$50-\$1300** (US),
depending on field and number of citations.

(an increase from 0 to 1 citation is worth more than an increase from 30 to 31; most articles are in citation range 0-5.)

Updating by about 170% for inflation from 1986-2005: **\$85.65-\$2226.89**

Open Access Scientometrics and the UK Research Assessment Exercise (RAE)

- What is the RAE?
- What is the RAE for?
- UK's Dual Funding Mechanism
(competitive grants + top-slicing)
- “Peer Review Panels” vs Metrics
- Validating metrics through multiple
regression analysis

Bivariate regression (correlation):

$$rP = Q$$

Multiple Regression

$$b_1P_1 + b_2P_2 + b_3P_3 \dots + b_nP_n = Q$$

citebase Search

Citebase is currently only an experimental demonstration. Users are cautioned not to use it for academic evaluation yet. Citation coverage and analysis is [incomplete](#) and hit coverage and analysis is both [incomplete](#) and [noisy](#).

Metadata

Citation

Identifier

Authors' name(s)

Title or Abstract Keywords

Publication Title

Record Year

between

and

Rank matches by

Descending



Citations (Paper)



Search

Reset

35. O acesso livre gerará muitas medidas potenciais que podem ser usadas para avaliar o impacto da pesquisa, tais como:

- **quantidade das publicações,**
- **Citações**

(para artigos, livros, autores, instituições),

- **co-citações,**
- ***downloads*,**
- **fatores de impacto dos periódicos,**
- ***hirsch*-índice,**
- ***chrono*-métricas**

(parâmetros temporal do crescimento e da deterioração para citações, co-citações e *downloads*),

- ***chrono*-métricas**

(parâmetros temporal do crescimento e da deterioração para citações, co-citações e *downloads*),

- ***semio*-métricas**

(medidas da similaridade entre textos e entre seus índices),

- quantidade de pesquisas financiadas,
- número de teses de doutorado concluídas,
- entre outras.

Search Result Rank-Ordering

The ranking controls the order in which results are shown.

Citebase

Search Score

For author and keyword queries this is the relevance score returned by Xapian (the text-search tool).

Creation Date

The date the record first appeared. Based on the source archive's policy (archive dependent, can be a date given by the author or the date the record was added to the archive).

Last Update

The last time a change was made to the record (not necessarily the actual paper). Based on the source archive's policy.

Paper Citations - [Caution](#)

The total number of citations identified **by Citebase** to a paper.

Author Citations - [Caution](#)

The author impact of a paper is the mean author impact of that paper's named authors.

Author impact is the total number of citations identified by Citebase to papers that the author is named on, divided by the number of papers that same author is named on.

Paper Hits - [Caution](#)

The total number of web requests made for this paper. Web log usage data ("hits") (1) currently cover **only from August 1999 to the present** and (2) are based **only on the UK arXiv.org mirror-site usage** (the other 17 international mirror-sites, including the main one in the US are not currently covered).

Author Hits - [Caution](#)

The author hits of a paper is the mean author hits of that paper's named authors.

Author hits is calculated as the total number of hits to papers that the author is named on, divided by the number of papers that same author is named on.

Hub/Authority Scores

These are experimental metrics.

Co-citedness

The degree to which two articles are related according to the co-occurrence of citations.

Search Results

Metadata | Citation | Identifier

Authors' name(s)

Title or Abstract Keywords

Publication Title

Record Year between and

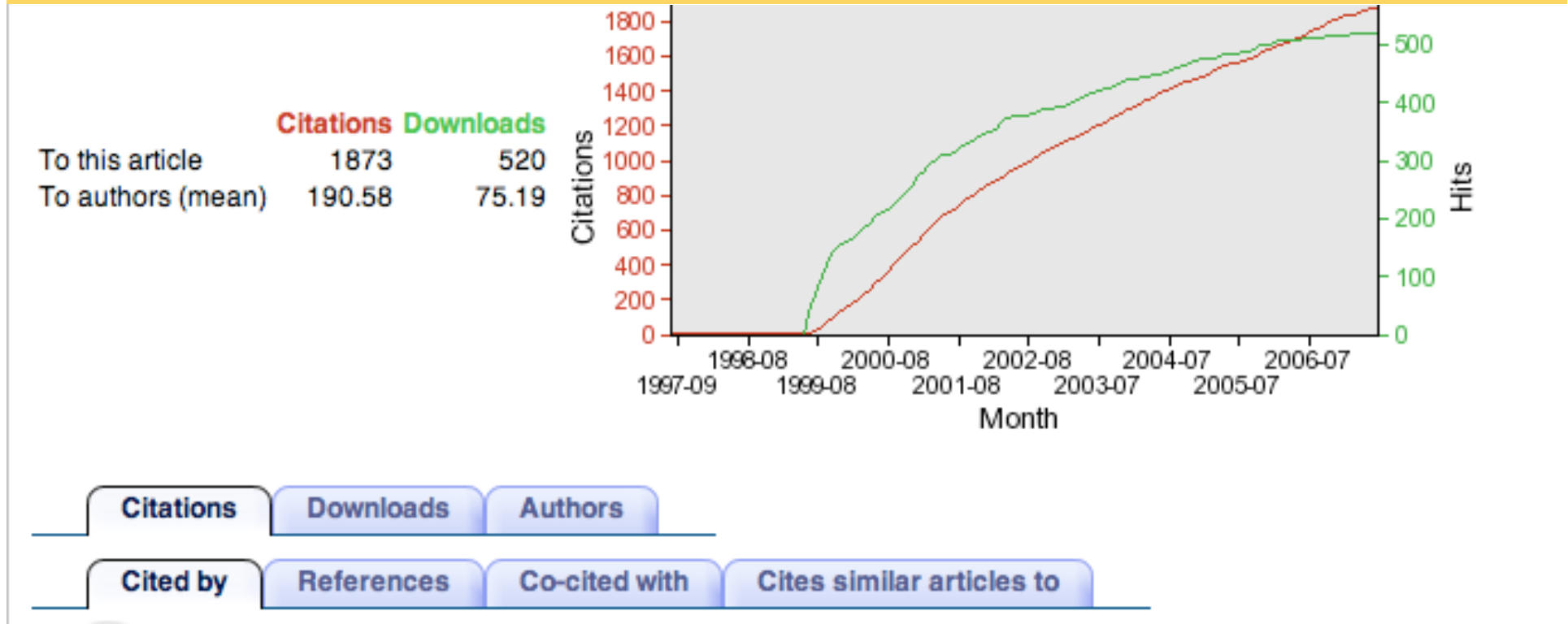
Rank matches by

Showing 1 - 25 of 203 found [1-25 in [BibTeX](#), [RSS](#), [Atom](#) | [10](#), [100](#) results per page] Query took 0.036 seconds

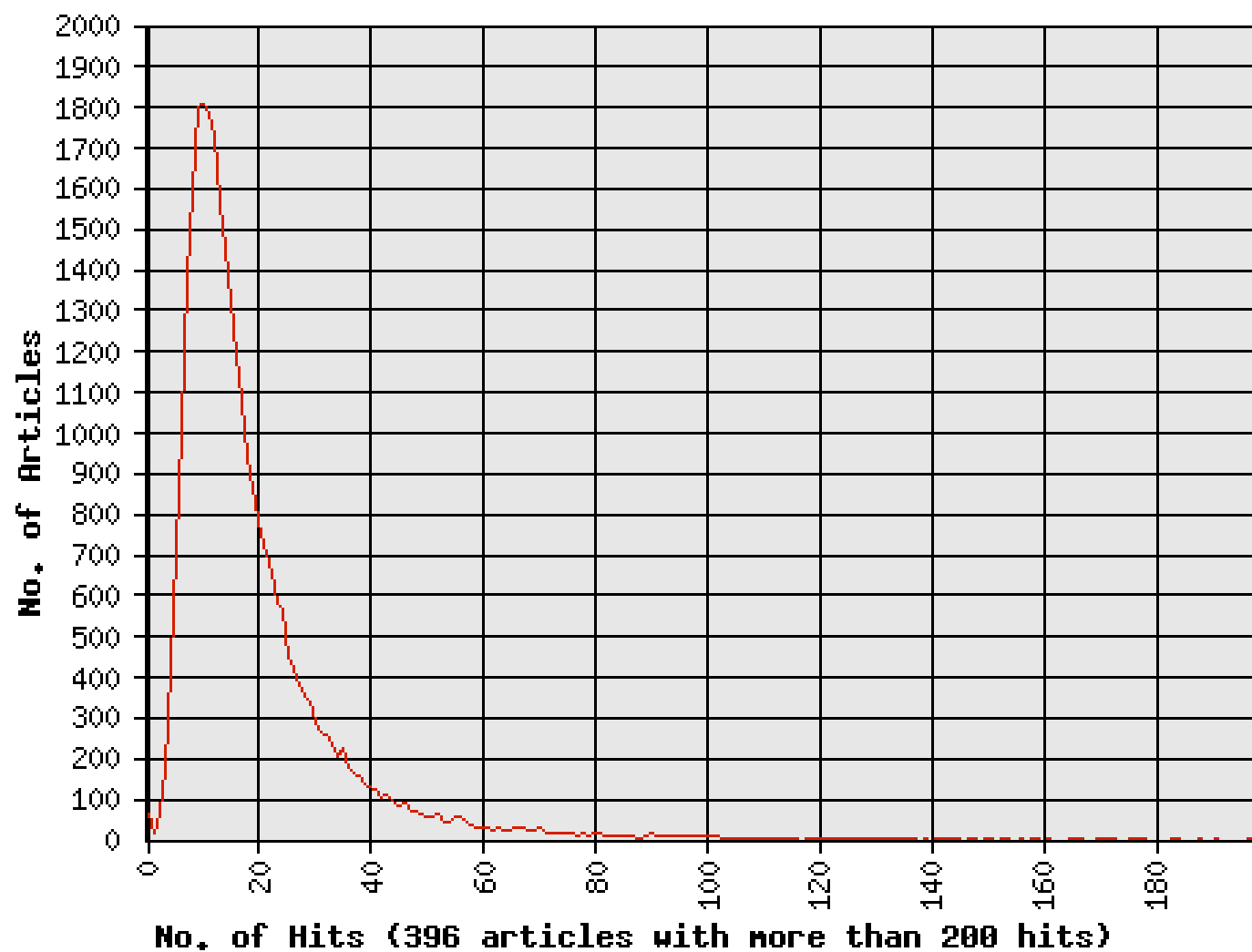
String Theory and Noncommutative Geometry [[Abstract](#), [1873 Cites](#), [Pre-print PDF](#)]

520 [Seiberg, Nathan](#); [Witten, Edward](#) (1999-08-20) In *JHEP* 9909 032 (1999)

Citebase is currently only an experimental demonstration. Users are cautioned not to use it for academic evaluation yet. Citation coverage and analysis is [incomplete](#) and hit coverage and analysis is both [incomplete](#) and [noisy](#).

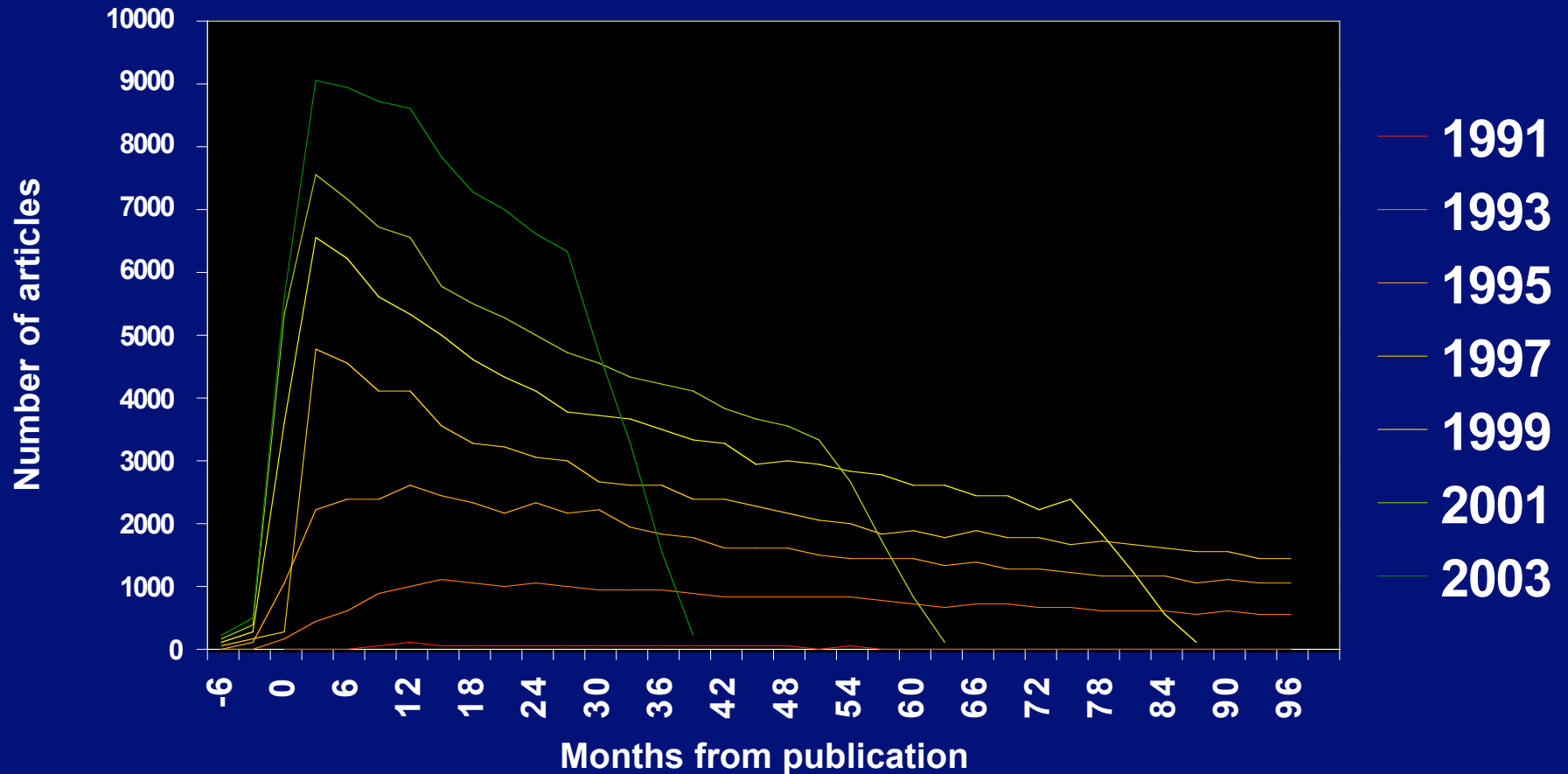


Hits Histogram (papers deposited in 2000 only)



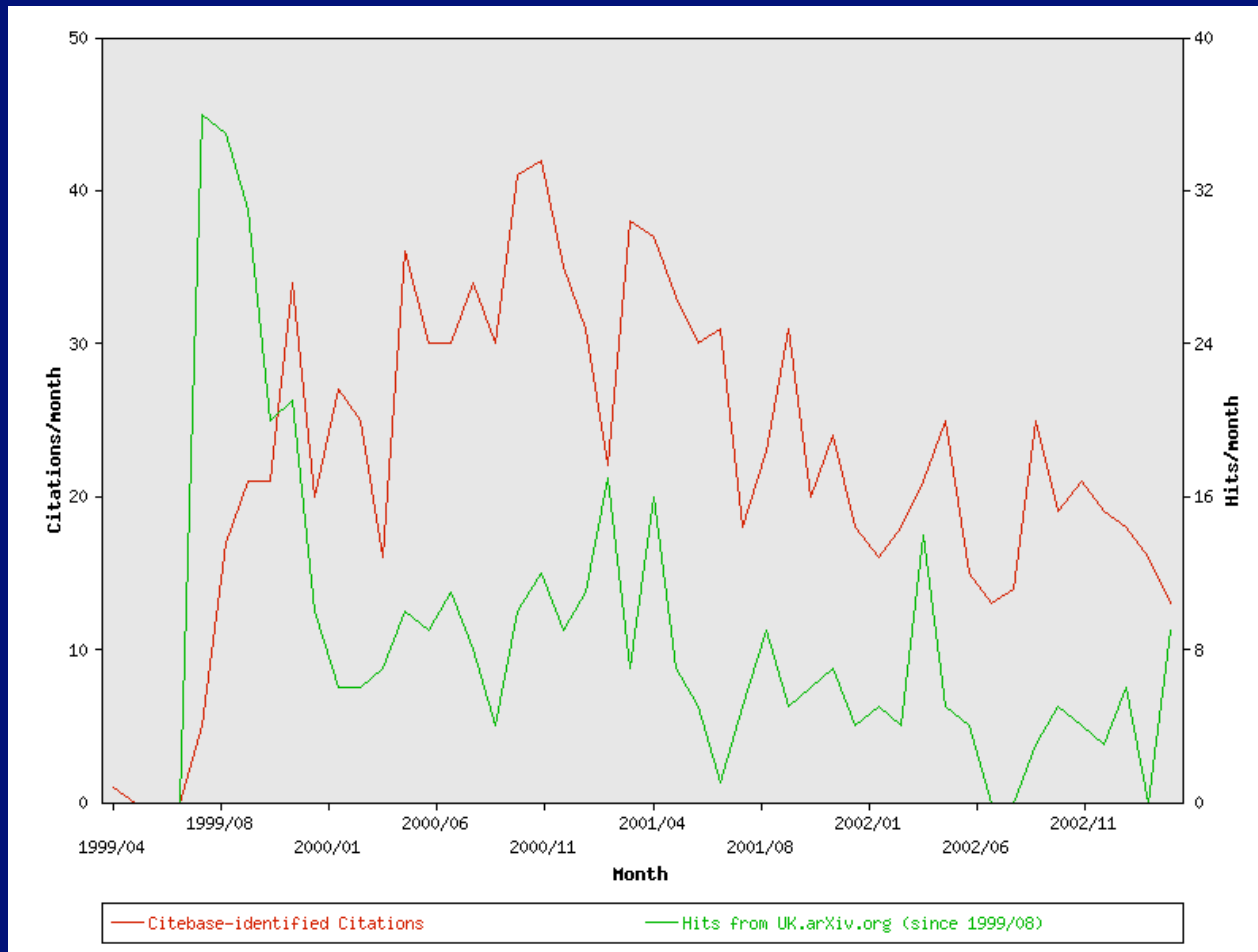
Science is faster, more efficient

Time taken to be cited for articles in the arXiv database



Time-Course and cycle of Citations (red) and Usage (hits, green)

Witten, Edward (1998) String Theory and Noncommutative Geometry *Adv. Theor. Math. Phys.* 2 : 253

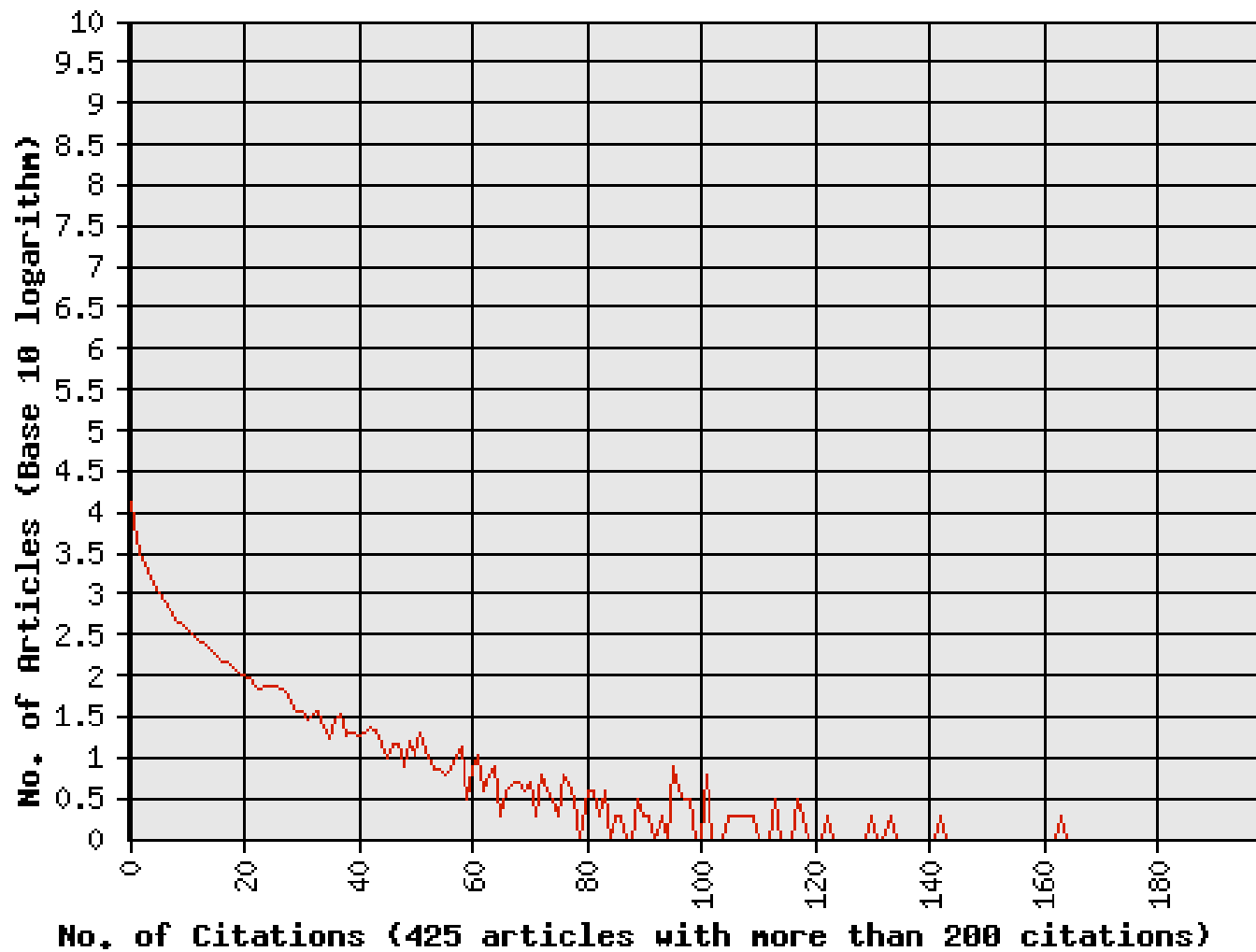


1. Preprint or Postprint appears.
2. It is downloaded (and sometimes read).
3. Next, citations may follow (for more important papers)...
4. This generates more downloads...
5. More citations...

Usage is correlated with impact

- Data from arXiv
- Downloads in the first 6 months
- Correlate with citations 2 years later
- Most articles are not cited at all
- The average number of downloads per article on the UK mirror site of arXiv is 18

Citation Histogram (papers deposited in 2000 only)



37. The requirement should be to deposit all articles in the Institutional Repository immediately upon acceptance for publication.

37. A exigência deve ser para depositar todos os artigos no Repositório Institucional, imediatamente, na data em que são aceitos para a publicação.

38. The optimal Green OA mandate is to require immediate deposit and immediate Open Access.

38. A obrigatoriedade ótima para o acesso livre, via verde, é exigir o depósito imediato , fornecendo, também, o acesso livre imediato.

39. But if there is any delay or opposition to an immediate-deposit/immediate-Open-Access mandate, then the compromise Immediate-Deposit/Delayed-Open-Access (ID/OA) mandate should be adopted.

39. Mas se houver algum atraso ou resistência a um mandato que requeira depósito imediato e acesso livre imediato, então deve ser adotado um tipo de mandato que exija o depósito imediato, permitindo que o acesso livre seja postergado (ID/OA).

40. The author's final, peer-reviewed draft must be deposited immediately upon acceptance for publication. But access to it can be set as either Open Access or Closed Access (for a limited period, preferably no more than 6 months).

40. A versão final do autor, revisto pelos pares, deve ser depositado imediatamente quando aceito para publicação. Mas o acesso a ele pode ser definido como acesso livre ou acesso restrito (por um período limitado, preferivelmente não mais de 6 meses).

41. The majority of journals (62%) already endorse immediate Green Open Access Self-Archiving.

41. A maioria dos periódicos (62%) já endossa o auto-archivamento imediato segundo o que estabelece o acesso livre pela via verde.

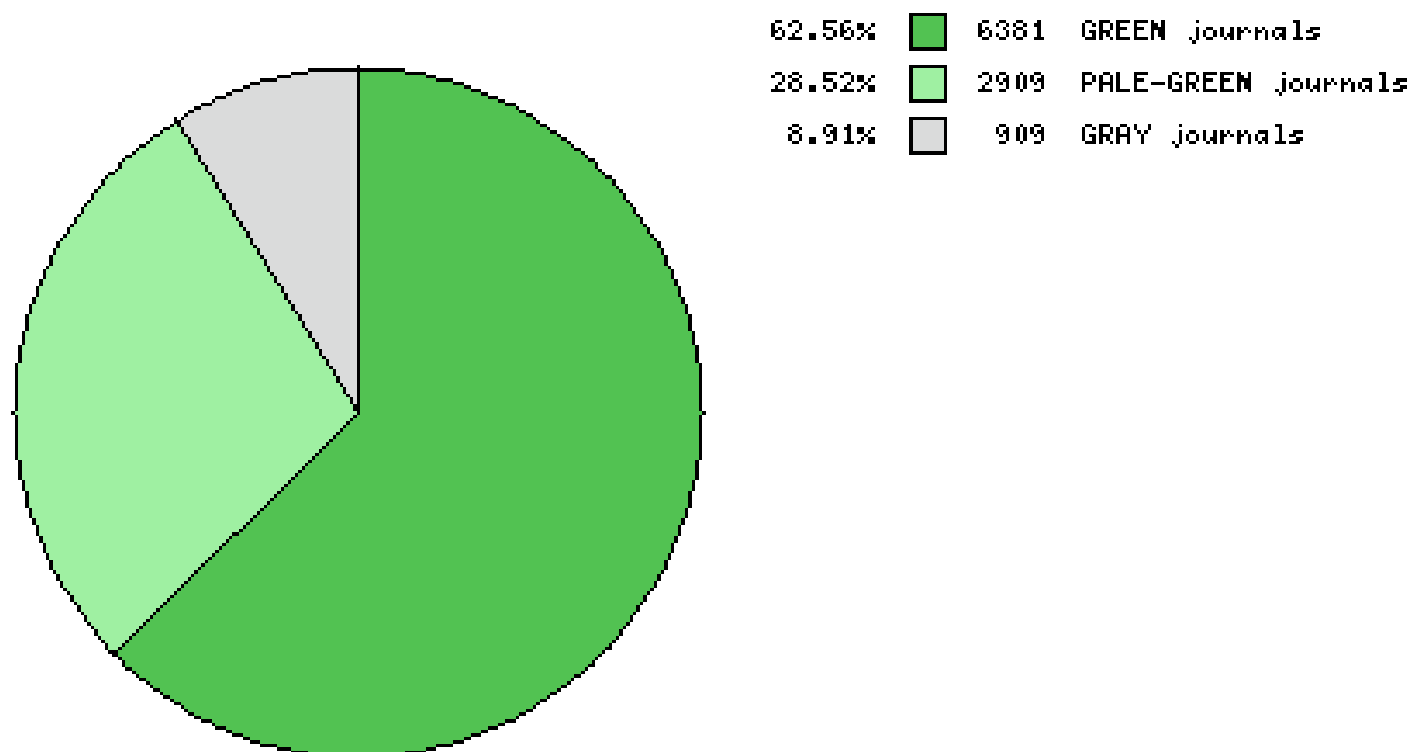
Journal Policies - Summary Statistics So Far

Current Journal Tally: 91% Green!

FULL-GREEN = Postprint, PALE-GREEN = Preprint, GRAY = neither yet

Total number of publishers registered at ROMEIO to date: 307

Journal Policy Chart



42. For the articles in the 38% of journals that have an embargo policy, the free EPrints institutional Repository-creating software has an "eprint request" Button: The user who reaches the metadata for a Closed Access article puts his email in a box and clicks; this sends an automatic email to the author, with a URL on which the author clicks to automatically email the eprint to the requester.

42. Para os artigos publicados naqueles 38% de periódicos que têm uma política para embargar o acesso, o software livre Eprints, para criar e manter repositórios institucionais, oferece a opção (um botão) "para pedir o eprint": O usuário, que obtêm os metadados para um artigo que seja depositado com acesso restrito, pode por seu email em uma caixa e pode clicar; isto emite um email automático ao autor, com uma URL em que o autor pode clicar para emitir automaticamente o eprint pelo email a quem fez o pedido.

As batidas do teclado são o único obstáculo entre nós e o acesso livre de 100%

ID/OA

IMMEDIATE DEPOSIT/OPTIONAL ACCESS

Self-Archiving Mandate

[Request eprint](#)

Acesso livre:

Dépositar que? quando? onde? como? por quê?

- Que? A versão final do autor, revisto pelos pares
- Quando? imediatamente, na data em que são aceitos para a publicação
- Onde? no repositório institucional do autor
- Como? por meio das exigências que são impostas pelas universidades e pelos financiadores da pesquisa do autor
- Por quê? ...

Acesso livre: Por quê?

A fim de maximizar:

a **visibilidade** da pesquisa,
o **uso** da pesquisa,
as **aplicações** da pesquisa,
o **impacto** da pesquisa,
a **produtividade** da pesquisa,
o **progresso** da pesquisa,
o **subvenção** da pesquisa

por meio de maximizar o acesso à pesquisa

Acesso livre: Como?

- **Métricas:** As medidas do uso e do impacto quantificarão, avaliarão, navegarão, propagarão e recompensarão os frutos do acesso livre pela via **verde**
- **Mandatos:** As exigências para auto-arquivar, adotadas por todas as universidades e agências de fomento à pesquisa , gerarão o acesso livre, pela via **verde** a 100% da produção científica.

Discussion

URLs:

<http://www.crsc.uqam.ca/>

<http://users.ecs.soton.ac.uk/harnad/>

EPrints:

<http://www.eprints.org/>

Self-Archiving FAQ:

<http://www.eprints.org/self-faq/>

Citebase (scientometric search/rank engine):

<http://citebase.eprints.org/>