

Trends in scholarly publishing

ETH Zurich information event organised by ETH-Bibliothek and VMI, 5 February 2013

Presentation**Author(s):**

Piguet, Arlette; [Hirschmann, Barbara](#) 

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2013

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computer science



Computer science

Advanced Search

Home Resources Resources sorted by subject Computer science

Compilation of new acquisitions and electronic resources on the subject of computer science

New acquisitions [List of titles](#) on the subject (last and current month)

Journals [List of titles](#) on the subject

Digital textbooks [List of titles](#) on the subject

Databases A selection of the main databases

- [IEEE/IEE Electronic Library](#) – Access to technical literature in the fields of computer science and information technology, electrical engineering, electronics and microelectronics
- [INSPEC](#) – Abstracts giving access to the content of publications in the fields of computer science and information technology, engineering sciences and physics – [Further information](#)
- [Compendex](#) – Technical literature database: articles from over 2,600 journals from 1987 onwards, conference proceedings, technical reports, monographs – [Further information](#)
- [Web of Science](#) – Comprehensive interdisciplinary and subject-based searches of scientific publications, includes the Science Citation Index Expanded – [Further information](#)
- [SciVerse Scopus](#) – Interdisciplinary, the most comprehensive bibliographic database with respect to number of journals covered, particular focus on non-anglophone literature, enables citation analyses and includes unique author-ID's – [Further information](#)

Digital collections

Resources sorted by subject

- Agricultural, food sciences
- General, interdisciplinary
- Architecture, urban planning
- Civil engineering
- Biology
- Chemistry
- Electrical engineering, energy technology
- Humanities, social sciences
- Geosciences
- **Computer science**
- Mechanical engineering
- Materials science
- Mathematics
- Medicine, pharmacy
- Physics, astronomy
- Environment, transport, geography
- Business, law, politics

Journals, newspapers

Databases

E-books, books

Dissertations, reports

Geodata, maps

25,100 Results

Books, Journals, Images, ...

Comp

[19..]-

Check h

31.01.2013

Aerial photography online

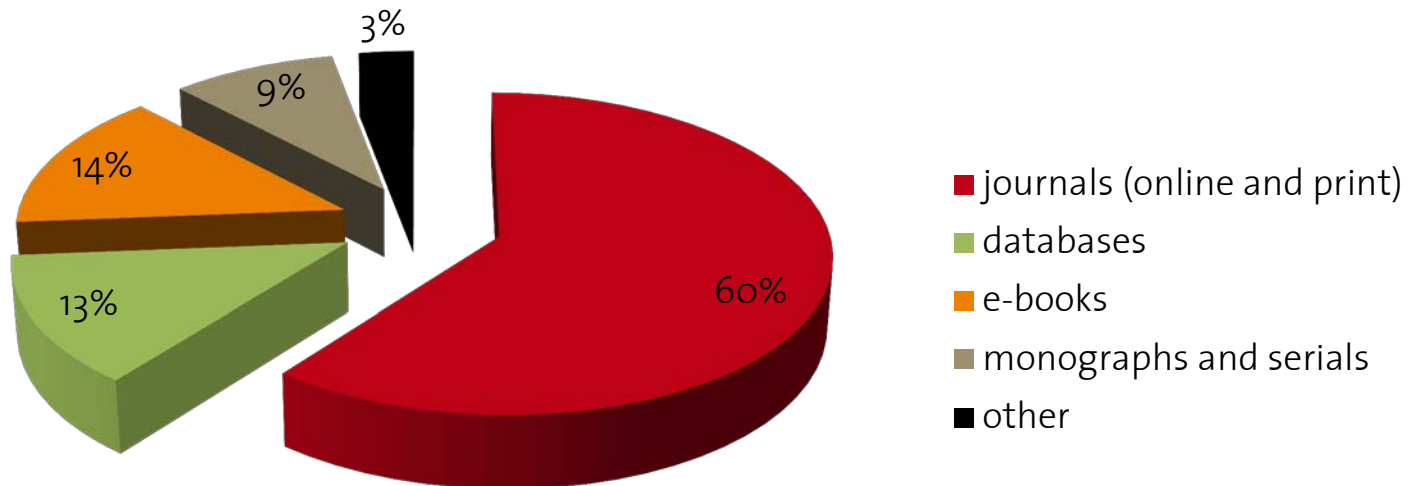
Services

RESOURCES AND DOCUMENTS HELD BY THE ETH-BIBLIOTHEK

Collections: Architecture, Civil Engineering, Engineering Sciences, Natural Sciences and Mathematics, System-oriented Natural Sciences, Management and Social Sciences

Journals	electronic format	13 900
	current, printed format	5 330
Databases		149
Books, reference works	e-Books	86 000
	printed papers (monographs and bound volumes)	2 838 000
Dissertations, reports	documents ETH E-Collection	25 800
	reports und microfiches	2 213 000
Maps	incl. plans	402 000
...

ACQUISITIONS BUDGET OF THE ETH-BIBLIOTHEK



JOURNAL PRICES



\$

Journal of applied polymer science

=



\$

Impact Factor:
1.3



\$

Science

=



\$

Impact Factor:
31,2



\$

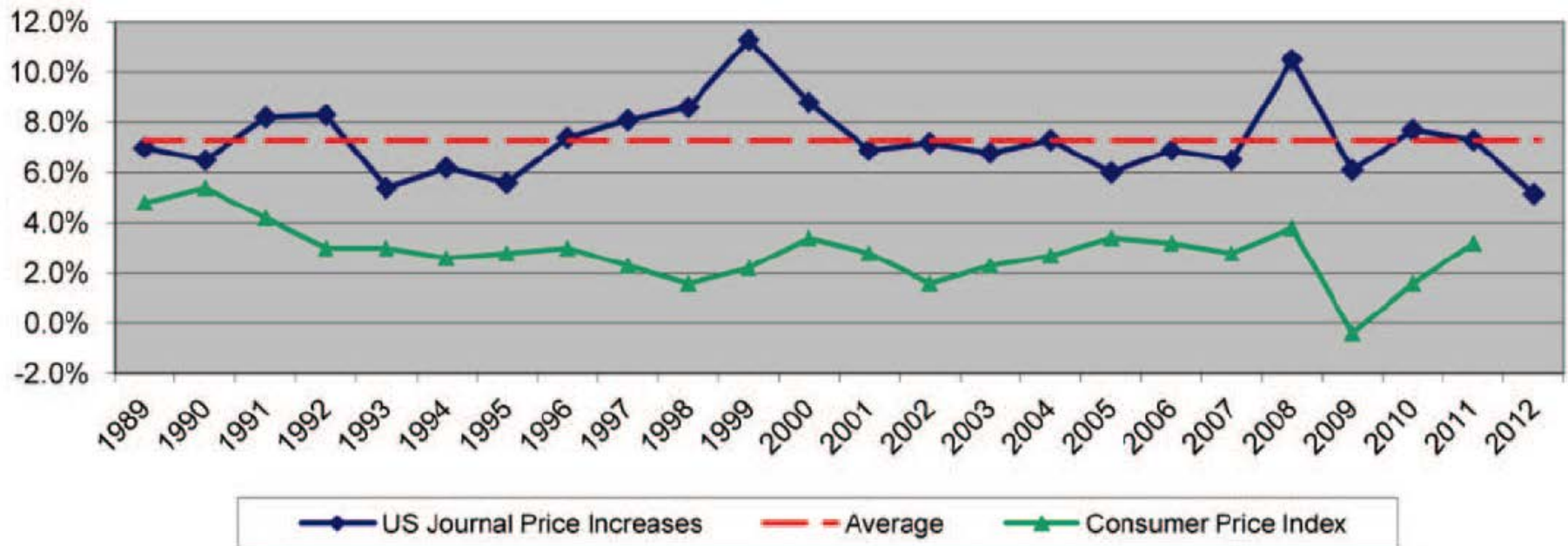
Journal of non-crystalline solids



\$

Impact Factor:
1.54

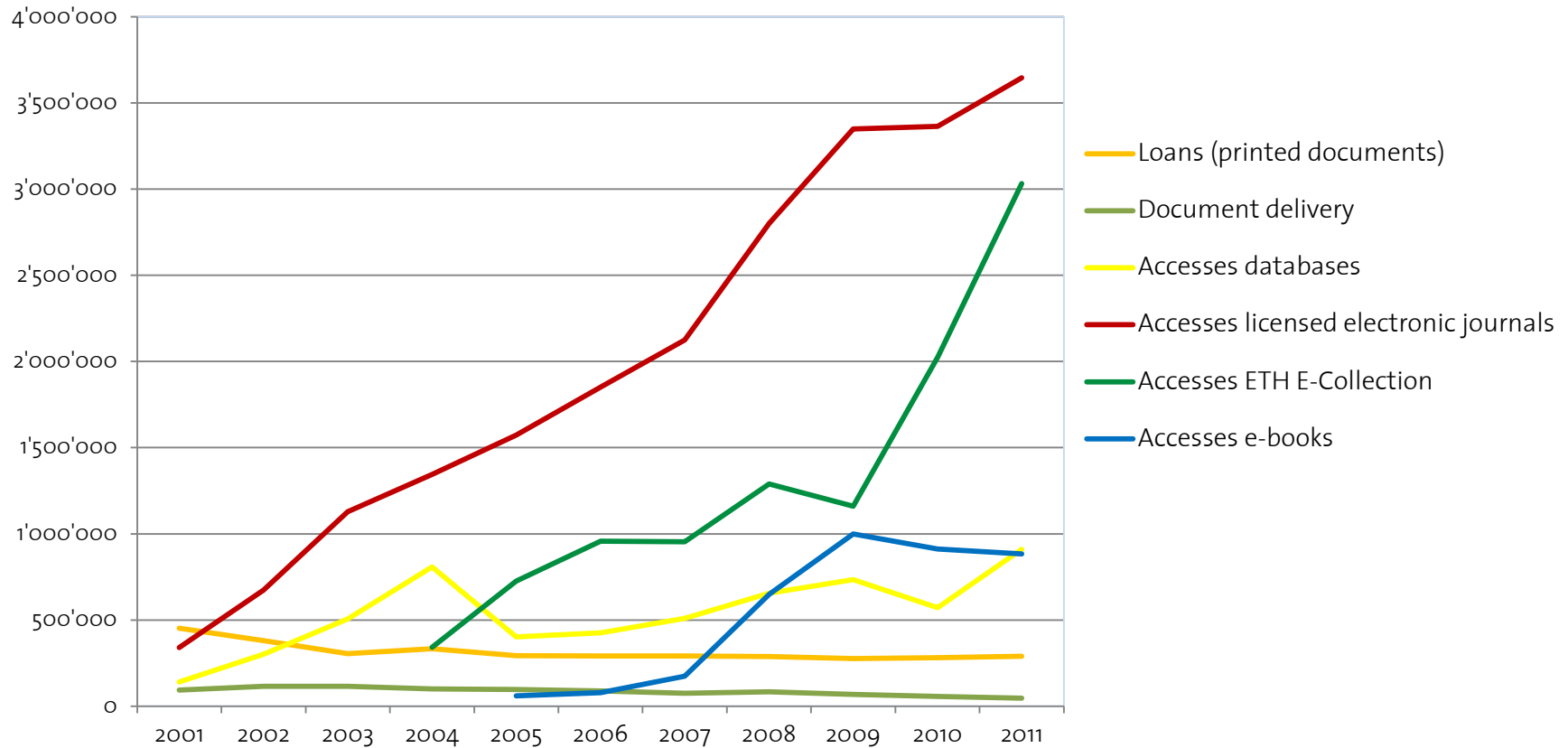
THE SERIALS CRISIS



Annual US journal price increases compared to Consumer Price Index (CPI).

Source: http://allenpress.com/system/files/pdfs/library/2012_AP_JPS.pdf

USAGE OF PRODUCTS OF THE ETH-BIBLIOTHEK



THE COST OF KNOWLEDGE

The Cost of Knowledge

13215 Researchers Taking a Stand. [See the list](#)

Academics have protested against Elsevier's business practices for years with little effect. These are some of their objections:

1. They charge exorbitantly high prices for subscriptions to individual journals.
2. In the light of these high prices, the only realistic option for many libraries is to agree to buy very large "bundles", which will include many journals that those libraries do not actually want. Elsevier thus makes huge profits by exploiting the fact that some of their journals are essential.
3. They support measures such as SOPA, PIPA and the ~~Research Works Act~~ [Research Works Act](#), that aim to restrict the free exchange of information.

The key to all these issues is the right of authors to achieve easily-accessible distribution of their work. If you would like to declare publicly that you will not support any Elsevier journal unless they radically change how they operate, then you can do so by filling in your details on this page.

More information:

- [Statement of Purpose](#)
- [PolyMath journal publishing reform page](#)

[Read our blog](#), and follow the boycott on Twitter [here](#).

Source: <http://thecostofknowledge.com/>

Add your name to the list.

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Subject

Comments
(optional)

Link
(optional)
such as a link to a blog post of yours explaining your position

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OPEN ACCESS: STATEMENTS, QUESTIONS AND FIERS

«We are in the hands of the publishers.»
(Umfrage ETH-Bibliothek, 2012)

Why should I publish open access?

How works peer review with open access?

With open access copyright is in danger.

Who pays for an open access publication?

Who is responsible for quality control for open access publications?

How can an open access publications reach a suitable reputation?

«Es darf nicht zum Zwang werden, man sollte die Wahl haben.»

(Umfrage ETH-Bibliothek, 2012)

«Ein Artikel muss im Web of Science zitiert werden, sonst ist es verlorene Literatur.»
(Umfrage ETH-Bibliothek, 2012)

ETH-Bibliothek

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

OPEN ACCESS

What is Open Access?

accessible

without costs for the reader

«Open access [...] literature is digital, online, free of charge, and free of most copyright and licensing restrictions.»

(Peter Suber, 2012)

possibility to reuse

 creative commons

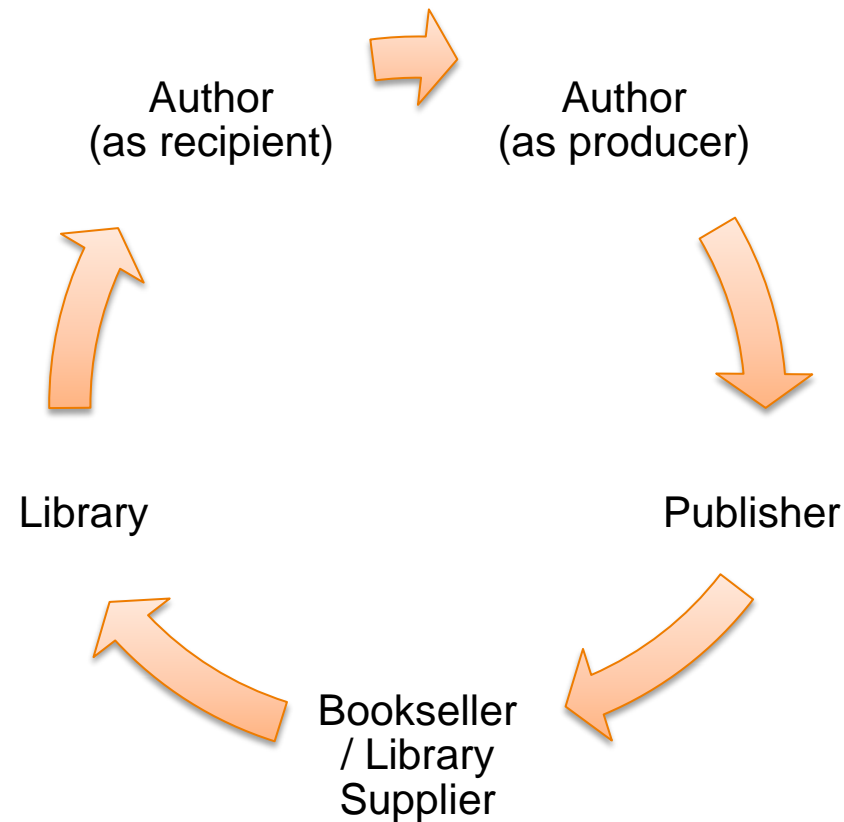
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Der freie Zugang zu wissenschaftlicher Information

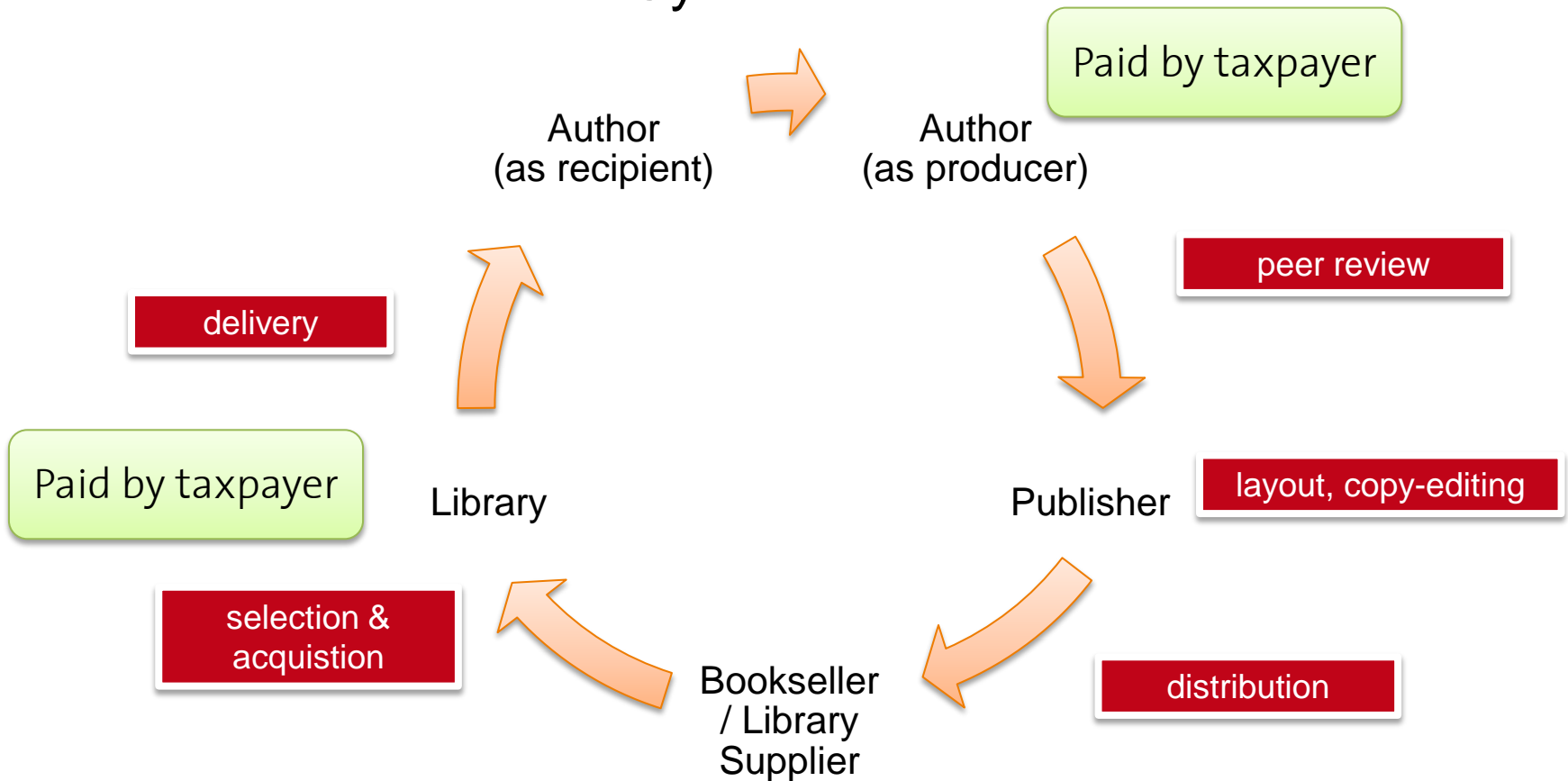
OPEN ACCESS

Traditional Publication Cycle



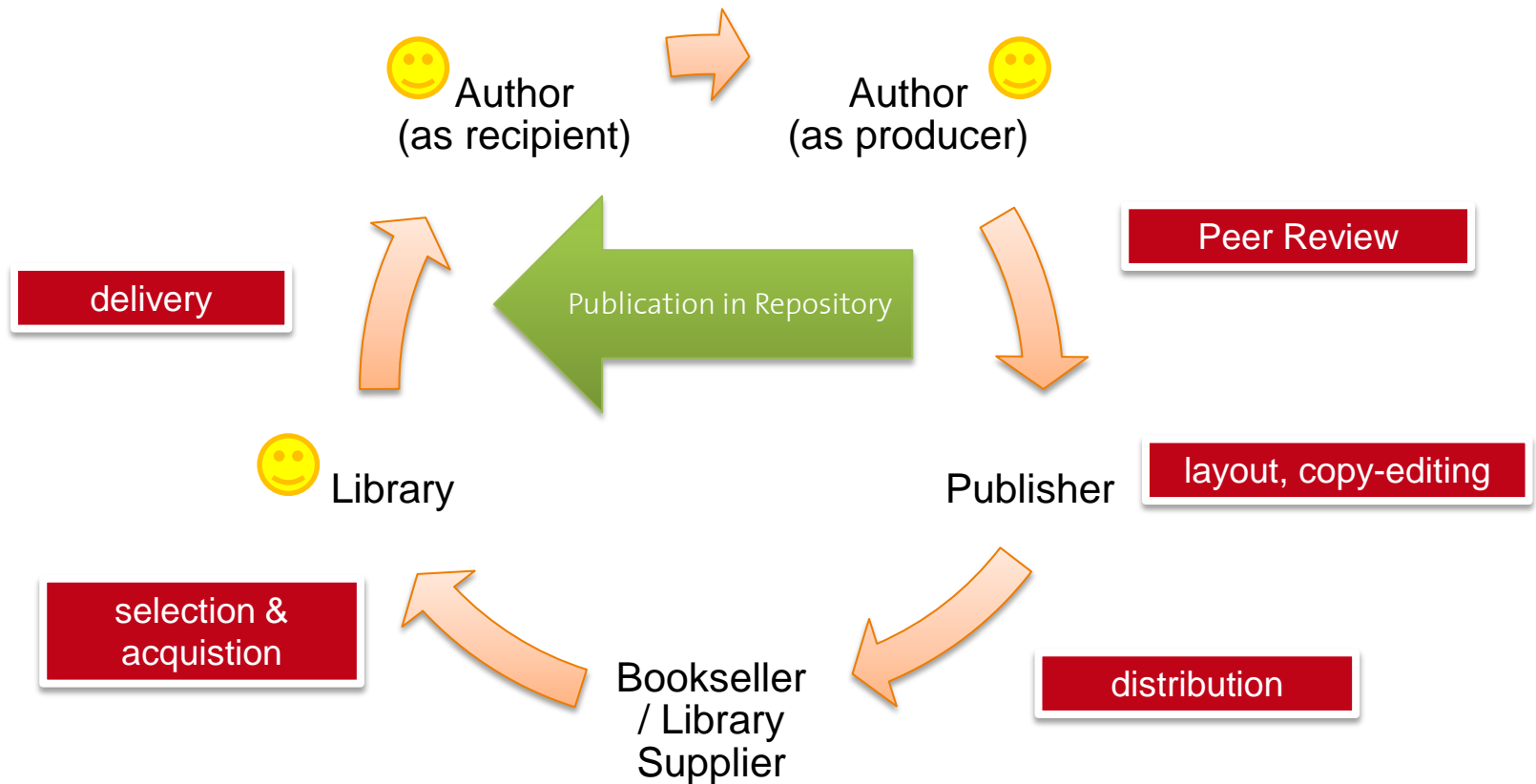
OPEN ACCESS

Traditional Publication Cycle



OPEN ACCESS – THE GREEN ROAD

Open Access – The Green Road



OPEN ACCESS – THE GREEN ROAD

Self-Archiving in Open Access repositories

Institutional
Repository



Disciplinary
Repository



- Physics
- Mathematics
- Computer Science
- Quantitative Biology
- Quantitative Finance
- Statistics

OpenDOAR (Directory of Open Access Repositories)

OPEN ACCESS – THE GREEN ROAD

Firefox | Lab for Software Technology -- Publicati |

www.lst.inf.ethz.ch/research/publications/

[LST Home] [People] [Research] [Teaching]

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Publications

CSI | **ETH**

Lab Manager

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Papers published in the Lecture Notes in Computer Science (LNCS) are Copyright (c) by Springer-Verlag.

Adrian Nistor, Qingzhou Luo, Michael Pradel, Thomas R. Gross, Darko Marinov, [Ballerina: Automatic Generation and Clustering of Efficient Random Unit Tests for Multithreaded Code](#), International Conference on Software Engineering (ICSE) 2012. [[ICSE-ballerina 2012.pdf](#)]

Michael Pradel, Severin Heiniger, Thomas R. Gross, [Static Detection of Brittle Parameter Typing](#), International Symposium on Software Testing and Analysis (ISSTA) 2012. [[ISSTA_2012.pdf](#)]

Zoltan Majo, Thomas R. Gross, [A Template Library to Integrate Thread Scheduling and Locality Management for NUMA Multiprocessors](#), HotPar '12: 4th USENIX Workshop on Hot Topics in Parallelism, June 2012. [[HotPar_2012.pdf](#)]

Mathias Payer, Thomas R. Gross, [Protecting Applications Against TOCTTOU Races by User-Space Caching of File Metadata](#), Proceedings of the VEE'12, March 2012. [[VEE_2012.pdf](#)]

Zoltan Majo, Thomas R. Gross, [Matching Memory Access Patterns and Data Placement for NUMA Systems](#), Proceedings of CGO '12, ACM, March 2012. [[CGO_2012.pdf](#)]

Michael Pradel, Ciera Jaspan, Jonathan Aldrich, Thomas R. Gross, [Statically Checking API Protocol Conformance with Mined Multi-Object Specifications - Companion Report](#), ETH Zurich, March 2012. [[TR752_2012.pdf](#)]

OPEN ACCESS – THE GREEN ROAD

The screenshot shows the arXiv page for the paper "Locating Disruptions on Internet Paths through End-to-End Measurements" by Atef Abdelkefi, Yaser Eftekhari, and Yuming Jiang. The page is from Cornell University Library. The paper title and authors are highlighted. The abstract is visible. The subjects are "Networking and Internet Architecture (cs.NI); Performance (cs.PF)". The citation information is "arXiv:1209.5074 [cs.NI] (or arXiv:1209.5074v1 [cs.NI] for this version)". The submission history shows it was submitted on Sep 23, 2012. The right sidebar contains download options (PDF, PostScript, Other formats), current browse context (cs.NI), change to browse by (cs, cs.PF), references & citations (NASA ADS), DBLP - CS Bibliography, and a bookmark section. Three red boxes with white text are overlaid on the right side: "Persistent Identifier" pointing to the arXiv ID, "Version control" pointing to the version information, and "Free of charge" pointing to the download options.

Cornell University Library

We gratefully acknowledge support from the Simons Foundation and ETH Zurich

arXiv.org > cs > arXiv:1209.5074

Search or Article-id (Help | Advanced search)

All papers Go!

Computer Science > Networking and Internet Architecture

Locating Disruptions on Internet Paths through End-to-End Measurements

Atef Abdelkefi, Yaser Eftekhari, Yuming Jiang

(Submitted on 23 Sep 2012)

In backbone networks carrying heavy traffic loads, unwanted and unusual end-to-end delay changes can happen, though possibly rarely. In order to understand and manage the network to potentially avoid such abrupt changes, it is crucial and challenging to locate where in the network lies the cause of such delays so that some corresponding actions may be taken. To tackle this challenge, the present paper proposes a simple and novel approach. The proposed approach relies only on end-to-end measurements, unlike literature approaches that often require a distributed and possibly complicated monitoring / measurement infrastructure. Here, the key idea of the proposed approach is to make use of compressed sensing theory to estimate delays on each hop between the two nodes where end-to-end delay measurement is conducted, and infer critical hops that contribute to the abrupt delay increases. To demonstrate its effectiveness, the proposed approach is applied to a real network. The results are encouraging, showing that the proposed approach is able to locate the hops that have the most significant impact on or contribute the most to abrupt increases on the end-to-end delay.

Subjects: **Networking and Internet Architecture (cs.NI)**; Performance (cs.PF)

Cite as: arXiv:1209.5074 [cs.NI] (or arXiv:1209.5074v1 [cs.NI] for this version)

Submission history

From: Atef Abdelkefi aa [view email]

[v1] Sun, 23 Sep 2012 15:13:38 GMT (387kb)

[Which authors of this paper are endorsers?](#)

Link back to: arXiv, form interface, contact.

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Persistent Identifier

Current browse context:

cs.NI

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new | recent | 1209

Version control

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References & Citations

- NASA ADS

DBLP - CS Bibliography

listing | bibtex

Atef Abdelkefi

Yaser Eftekhari

Yuming Jiang

Bookmark (what is this?)

POWER WISE

OPEN ACCESS – THE GREEN ROAD

e-collection
ETH Institutional Repository

Home Suche Browse Publizieren Über E-Collection Kontakt

Bemerkenswerte Spinnenfunde in Wiesen und Getreidefeldern bei Zürich

Autor(en): [Nyffeler, Martin, Benz, Georg](#)
Verlag: ETH, Eidgenössische Technische Hochschule Zürich, Entomologisches Institut der ETH
Zitierweise: Nyffeler, Martin and Benz, Georg. Bemerkenswerte Spinnenfunde in Wiesen und Getreidefeldern bei Zürich. ETH, Eidgenössische Technische Hochschule Zürich, Entomologisches Institut der ETH (1982). <http://dx.doi.org/10.3929/ethz-a-005796834>
Dokumententyp: [Zeitschriftenbeiträge](#)
Dokumente: [Text](#) (242.18KB)

Detailansicht

Metadaten Dokumente Links Statistik

Metadaten	Beschreibung
Title	Bemerkenswerte Spinnenfunde in Wiesen und Getreidefeldern bei Zürich
Author(s)	Nyffeler, Martin Benz, Georg
Publication Place	Zürich
Publisher	ETH, Eidgenössische Technische Hochschule Zürich, Entomologisches Institut der ETH

Subject(s) [Zoologie und Ethnologie](#)

Persistent Identifier (DOI)

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OPEN ACCESS – THE GOLDEN ROAD

Publishing in Open Access Journals

- Quality Control (Peer Review)
- Different funding mechanisms
 - Article Processing Charges
- Author retains Copyright (standard licence: [CC-BY](#))

OPEN ACCESS – THE GOLDEN ROAD

Open Access – The Golden Road

1. Choose a Journal



2. Avoid publishing with predatory OA Publishers:

- Beall's List: <http://scholarlyoa.com/publishers/>
- [OASPA](#): Open Access Scholarly Publishers Association

OPEN ACCESS – THE GOLDEN ROAD

Funding

\$ 500,-

Forum of Mathematics, Pi

\$ 800,-

Journal of Cloud Computing
a SpringerOpen Journal

\$ 1760,-

New Journal of Physics
The open access journal for physics

- Research Funds
- ETH Zurich **memberships**

SpringerOpen

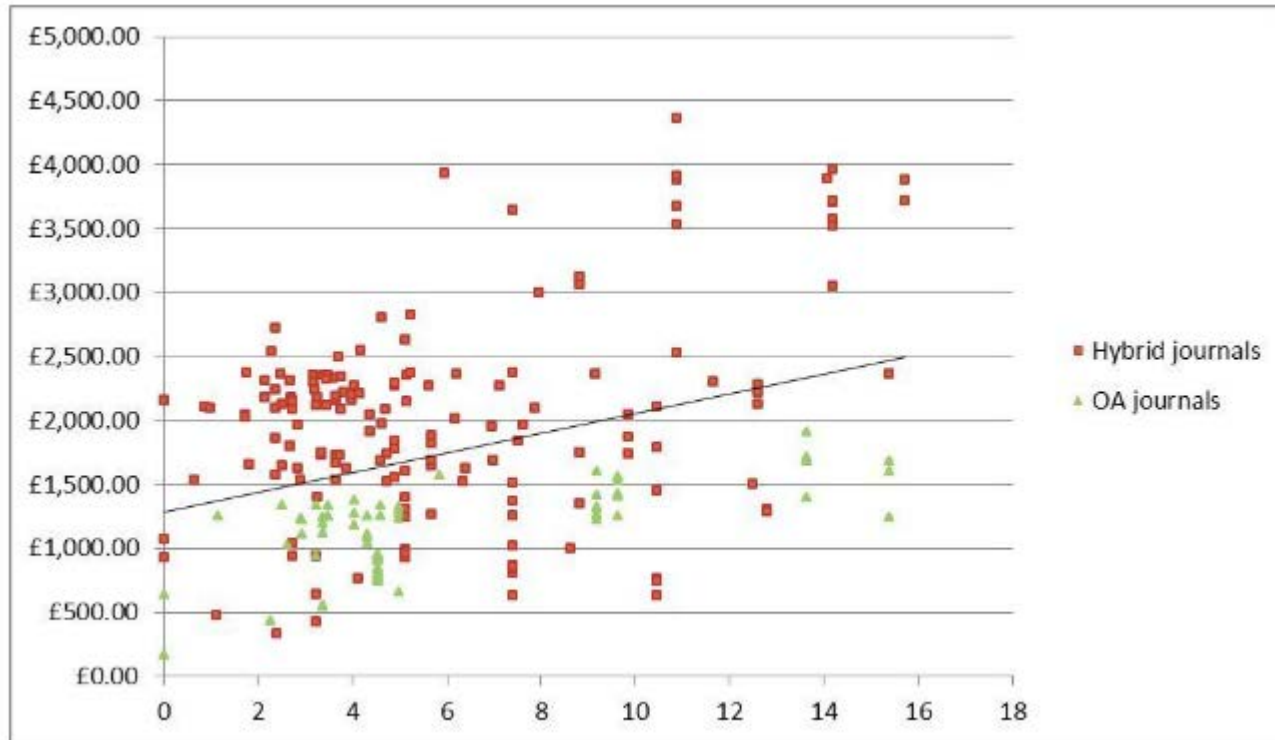
BioMed Central
The Open Access Publisher

PLOS

- Open Access Option («**Hybrid Journals**»): Not financed by ETH Zurich!

e.g. Springer Open Choice, Elsevier Sponsored Articles, Wiley Online Open,

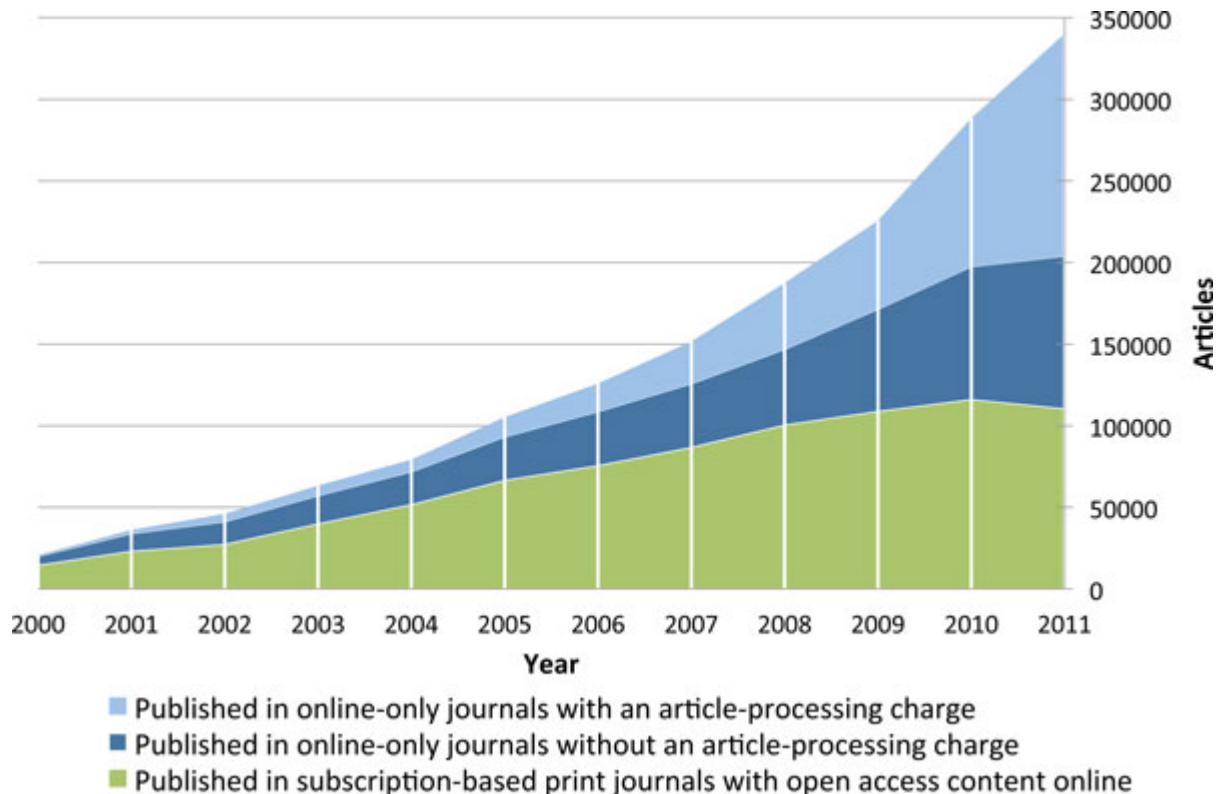
OPEN ACCESS – THE GOLDEN ROAD



Correlation of APCs with Journal's Impact Factor

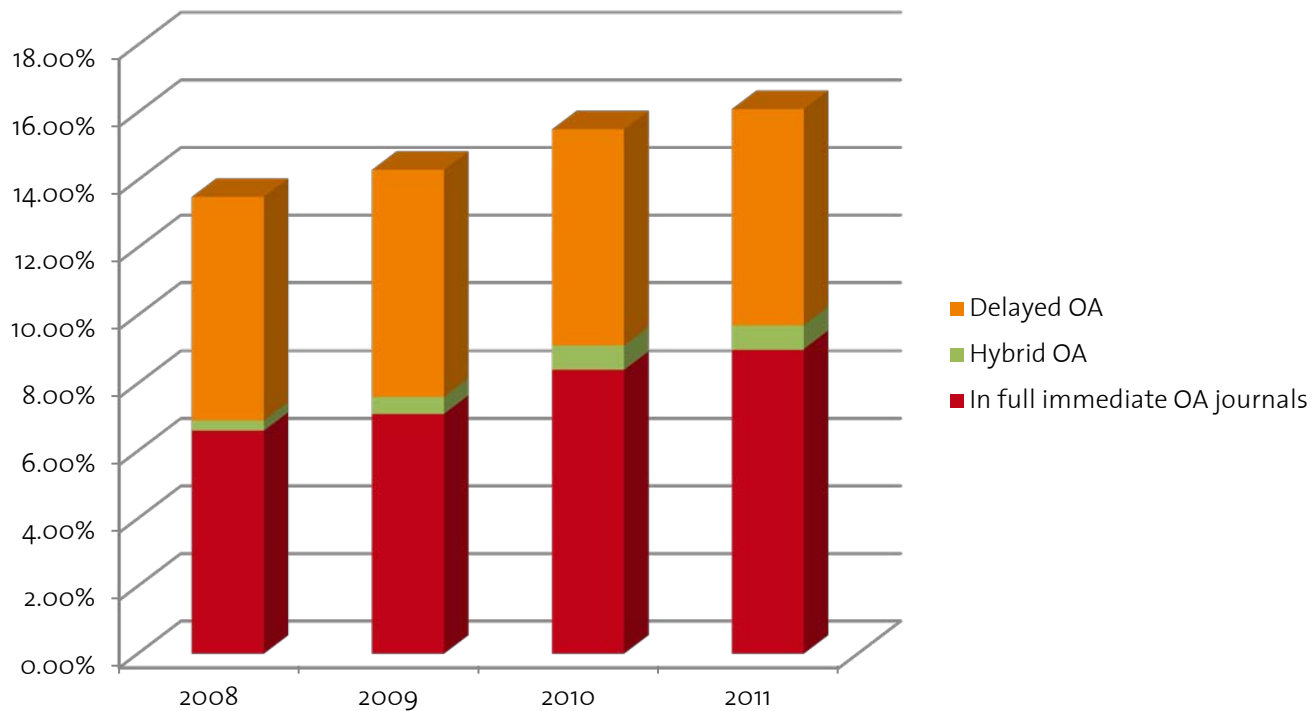
Source: Theo Andrew (2012): Gold Open Access: Counting the Costs, <http://www.ariadne.ac.uk/issue70/andrew>.

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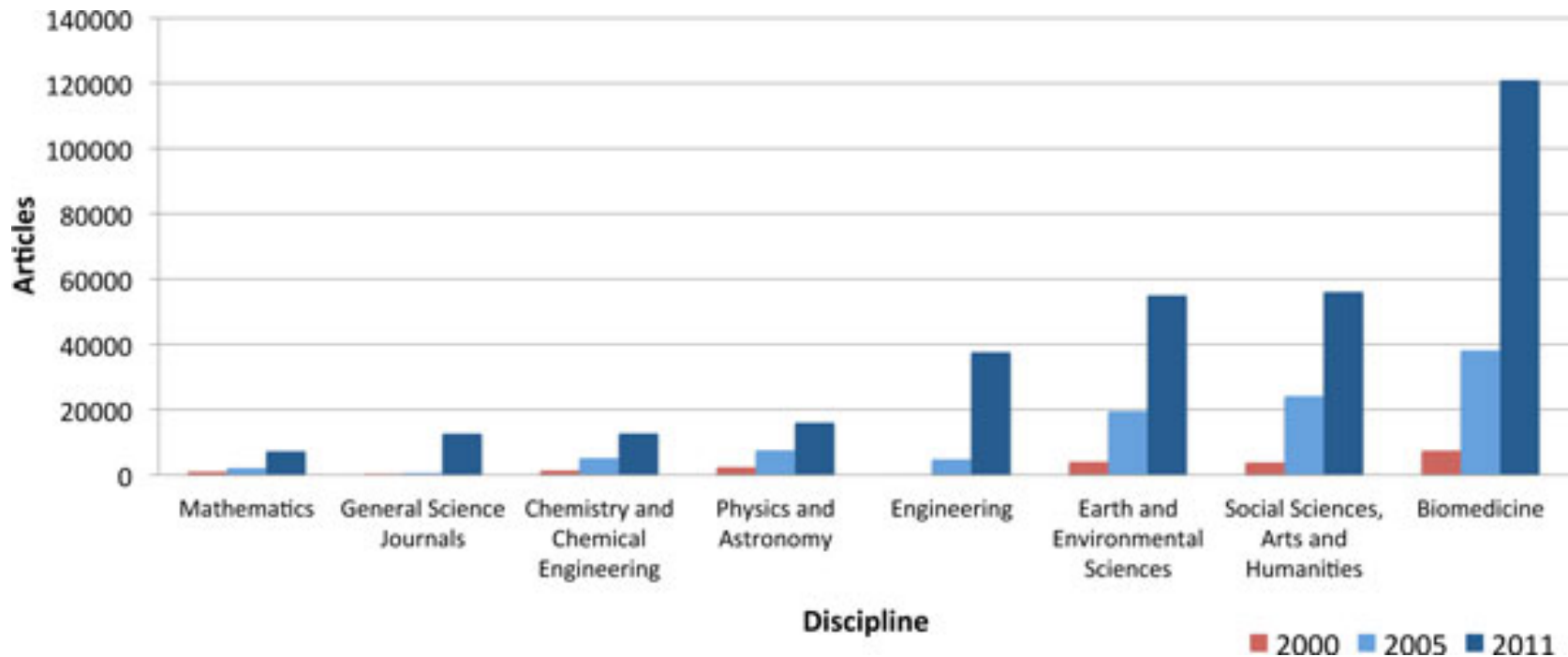
Source: Laakso and Björk *BMC Medicine* 2012, 10:124 doi:10.1186/1741-7015-10-124

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Source: based on Laakso and Björk *BMC Medicine* 2012, 10:124 doi:10.1186/1741-7015-10-124

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Source: Laakso and Björk *BMC Medicine* 2012, 10:124 doi:10.1186/1741-7015-10-124

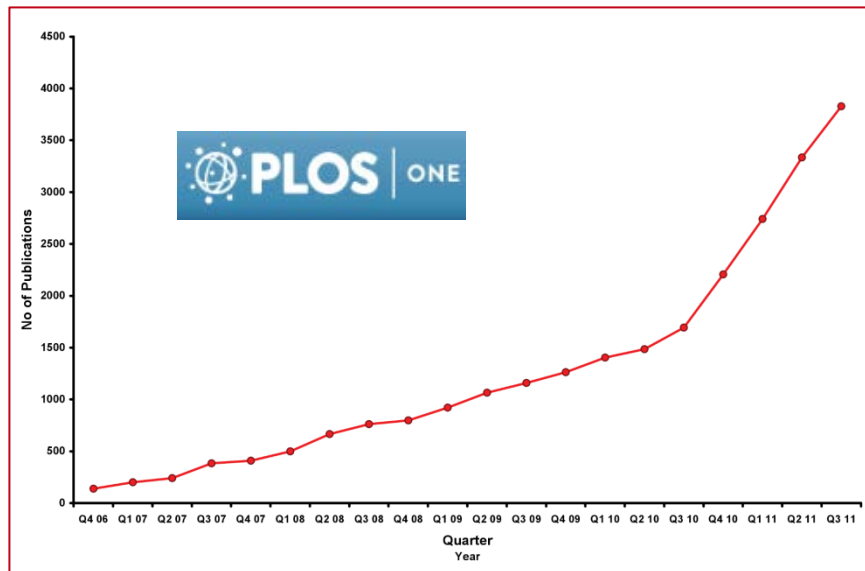
OPEN ACCESS – THE GOLDEN ROAD

Current Developments

- Great Britain
 - Research Councils UK: direct funding to Universities for financing APCs from 2013
- European Union
 - Horizon 2020: Possibility for funding of Article Processing Charges after project ends

OPEN ACCESS – THE GOLDEN ROAD

New Publishing Models: Megajournals



Source: MacCallum CJ (2011) Why *ONE* Is More Than 5. PLoS Biol 9(12): e1001235. doi:10.1371/journal.pbio.1001235

IEEE Access
practical innovations | open solutions

SCIENTIFIC REPORTS

SpringerPlus
a SpringerOpen Journal

SAGE open

OPEN ACCESS – THE GOLDEN ROAD

New Publishing Models

PeerJ

Open Access & Peer-Reviewed. Starting at \$99 - for life.



F1000Research
IMMEDIATE PUBLICATION • OPEN PEER REVIEW

PUBLISH WITHIN A WEEK

ALL GOOD SCIENCE, including:

- » Negative/null findings
- » Small findings
- » Replication or refutation articles
- » Case reports
- » Data articles
- » Study protocols

OPEN ACCESS MANDATES

The Open Access Movement & ETH

- 2002 Budapest Open Access Initiative
- 2003 Berlin Declaration on Open Access to Scientific Knowledge
- 2006 ETH Zurich signs Berlin Declaration
- 2008 ETH Zurich adopts Open Access Policy

OPEN ACCESS MANDATES

ETH Zurich Open Access Policy (2008)

*“The ETH Zurich requires of staff and postgraduate students to post **electronic copies of any research papers** that have been accepted for publication in a peer-reviewed journal (post-prints), theses and other scientific research output (monographs, reports, proceedings, videos etc.), **to be made freely available as soon as possible into the institutional repository ETH E-Collection, if there are no legal objections.** The ETH Zurich expects authors where possible, to **retain their copyright.** For detailed information see the rules of the ETH E-Collection.”*

*“The ETH Zurich **encourages their researchers to publish in a suitable Open Access journal** where one exists and will cover a part of the publication costs.”*

www.open-access.ethz.ch

OPEN ACCESS MANDATES

Open Access in EU-funded projects

- FP7: Open-Access pilot
- Grant agreements in seven areas contain special clause 39 «Open Access»
- Articles originating from these projects must be deposited to an online repository latest 6 / 12 months after publication (sciences / social sciences & humanities)
- Article Processing Charges are eligible (limited to duration of project)

OPEN ACCESS MANDATES

Open Access Mandates – Current Developments

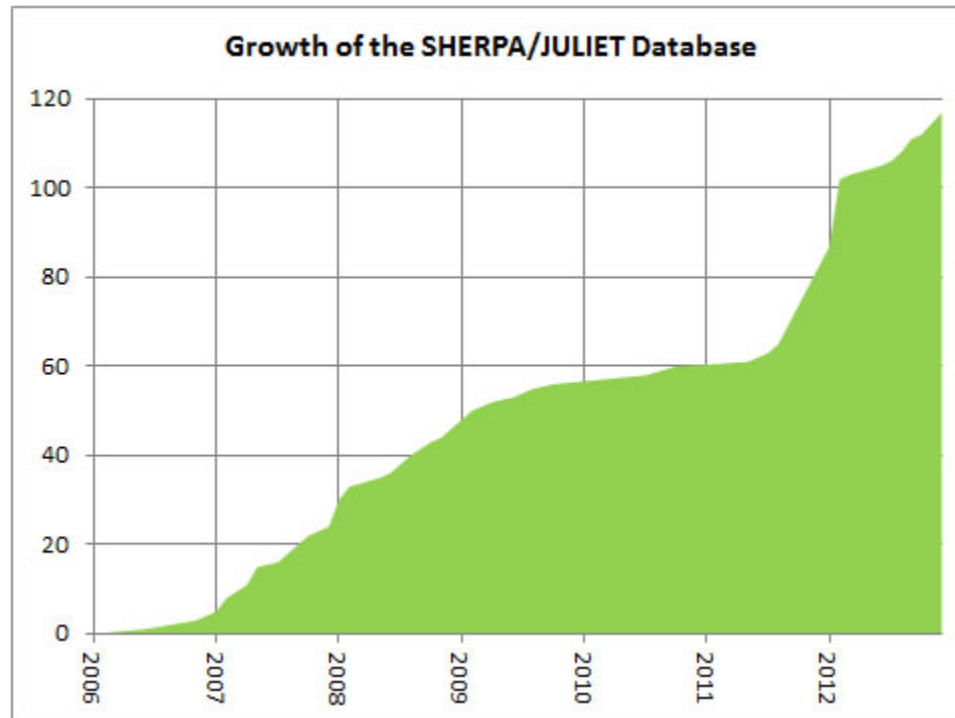
European Union:

- from OA pilot in FP7 to OA mandate in Horizon 2020

United States:

- NIH to withhold grant money to enforce OA policy

OPEN ACCESS MANDATES



Quelle: <http://www.sherpa.ac.uk/news/2012-12-12-JULIET-Upgrade.html> [17.12.2012]

- Self-Archiving
 - What is allowed?
 - How do I retain my rights?

COPYRIGHT

“ETH Zurich requires of staff and postgraduate students to post electronic copies of any research papers [...] into the institutional repository ETH E-Collection, if there are no legal objections.”

- Publishers usually allow some sort of self-archiving
- Where to look it up?
 - Copyright Transfer Agreement
 - [SHERPA/RoMEO Database](#)

Publisher copyright policies & self-archiving

One journal found when searched for: **1019-7168**

Journal:	Advances in Computational Mathematics (ISSN: 1019-7168)
RoMEO:	This is a RoMEO green journal
Paid OA:	A paid open access option is available for this journal.

Author's Pre-print:	✓ author can archive pre-print (ie pre-refereeing)
Author's Post-print:	✓ author can archive post-print (ie final draft post-refereeing)
Publisher's Version/PDF:	✗ author cannot archive publisher's version/PDF

General Conditions:	<ul style="list-style-type: none"> • Authors own final version only can be archived • Publisher's version/PDF cannot be used • On author's website or institutional repository • On funders designated website/repository after 12 months of the funders request or as a result of legal obligation • Published source must be acknowledged • Must link to publisher version • Set phrase to accompany link to published version (The copyright remains with the publisher) • Articles in some journals can be made Open Access on request
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Mandated OA:	Compliance data is available for 51 funders
Paid Open Access:	Open Choice
Copyright:	example copyright transfer statement - NIH Policy - Self-archiving Policy
Updated:	25-Nov-2010 - Suggest an update for this record
Link to this page:	http://www.sherpa.ac.uk/romeo/issn/1019-7168/

Published by:	Springer Verlag (Germany) - Green Policies in RoMEO
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Which format?

- Usually Postprint (= author's manuscript after peer review)

When?

- Possible embargos between 2 and 24 months

Where?

- Author's website
- Institutional repository
- Disciplinary repository

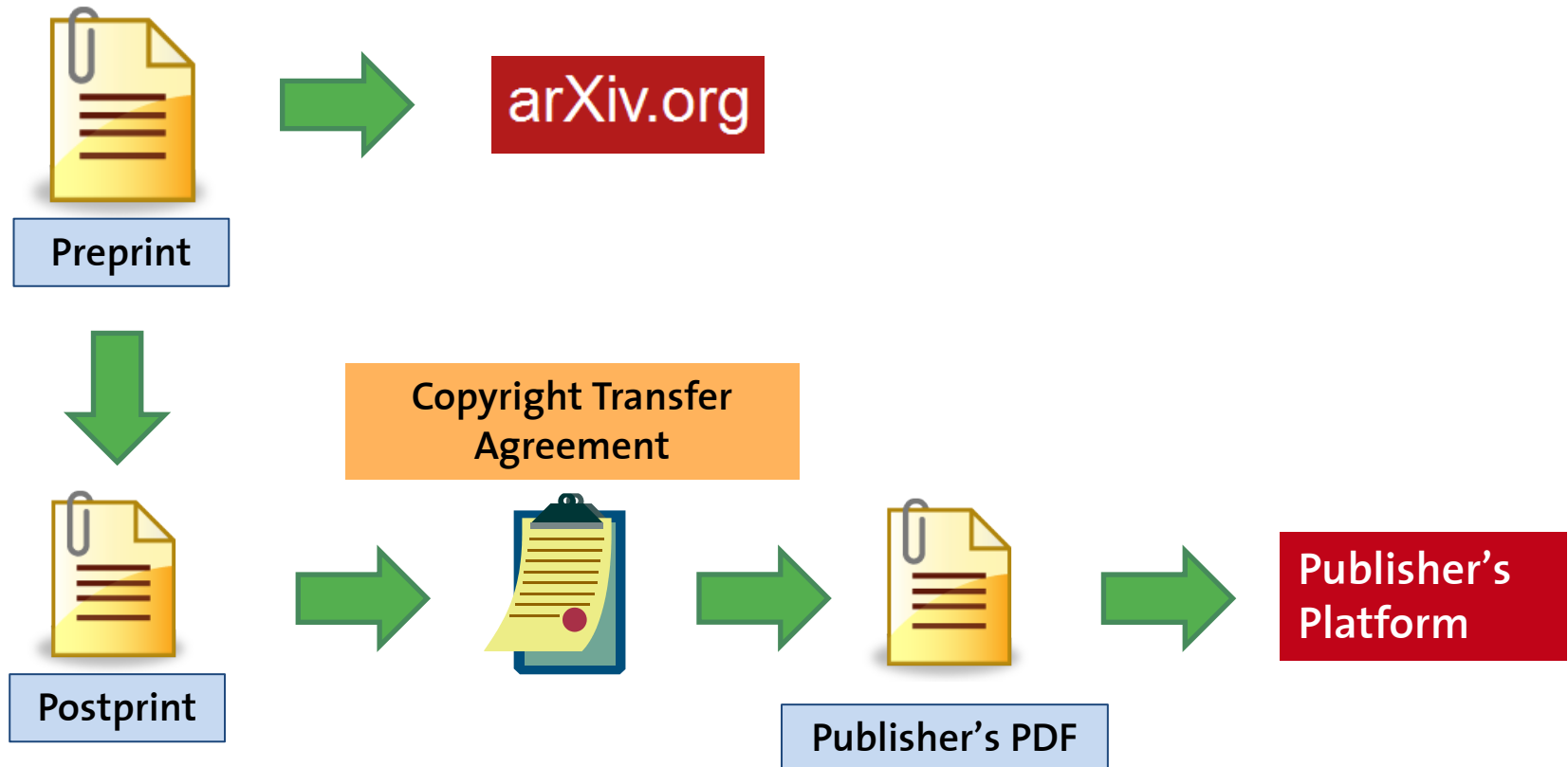
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“The ETH Zurich expects authors where possible, to retain their copyright.”

What does this mean?

- Read the publication agreement with great care
- Transferring copyright doesn't have to be all or nothing
- Publishing agreements are negotiable
- Use the [SPARC author addendum](#)

What does it mean for Preprints?



THE FUTURE OF PUBLISHING

A Vision for the future?

Björn Brembs,
Professor of Neurobiology,
University of Regensburg



Is a publishing system
without journals feasible?

- Peer Review?
- Prestige?
- Impact Factor?

My Digital Utopia:

Technically feasible today (almost)

- No more corporate publishers – libraries archive everything and make it publicly accessible according to a world-wide standard
- Single semantic, decentralized database of literature, data and software

Source:

<http://de.slideshare.net/brembs/some-technical-hurdles-towards-open-science>

THE FUTURE OF PUBLISHING

Overlay Journals



The «Episciences Project» (ArXiv Overlay Journals)

“It’s a global vision of how the research community should work: we want to offer an alternative to traditional mathematics journals.”
Jean-Pierre Demailly,
Université de Grenoble

CHALLENGES REMAIN...

- Open Access publishing is developing steadily, but slowly
- The financial aspects of Gold Open Access are not solved
 - Can financial savings be achieved?
 - Who will finance additional costs during the “transition period”
 - Can the power of the big publishers be cut down?
- Green Open Access probably not to become a standard if it does not come with strong enforcement mechanisms

CONTACTS

www.open-access.ethz.ch

<http://e-collection.library.ethz.ch>

e-publishing@library.ethz.ch