Opening up your science

Including computer science

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Daniel Graziotin

An open computer scientist

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Research interests: human aspects in empirical software engineering with psychological measurements, Web engineering, and Open Science.

Editorial Associate at the Journal of Open Research Software, advisor and a Web engineer at The Winnower, and local coordinator of the Italian Open science local group with the Open Knowledge Foundation.

Member of the ACM, SIGSOFT, IEEE, the IEEE Computer Society, and the Social Psychology Network.

Why do I tell you this?

I am an open science advocate. I am biased.

I study software engineering. My talk reflects this.

I have some conflicts of interests, which I indicate.

Why do I tell you this?

I am an open science advocate. I am biased.
I study software engineering. My talk reflects this.
I have some conflicts of interests, which I indicate.
Just to let you know.

I am here to share, not to teach.

This is what I have been learning during the last years. What about you? I want to know.

Acknowledgements

- Thank you Open Knowledge Foundation
- Many thanks to the following people and their material, upon which this presentation is built
  - Sophie Kay, “The Open Scientist: The Why, When and How of Open Scientific Research”, and http://www.opensciencetraining.com
  - Ross Mounce, “Open Access for Early Career Researchers”, University of Bath Open Access Week, 2013
  - Erin McKiernan: Being Open As An Early-Career Reseacher - OpenCon 2014. figshare. http://dx.doi.org/10.6084/m9.figshare.1243319, 2014
  - Christian Heise, "Open Access, Open Research, Open Data, Open Science, Open what?” #gfm2013”
  - Dan Gezelter, "Code as a Research Product: Open Source for Open Science", NIAID Bioinformatics festival, 2014
- Acknowledgements to the following people for the provided information and the feedback
  - Anthony Beck, J.M. Bosman, Douglas Carnall, Stevan Harnad, Brian Hole and Ubiquity Press, Puneet Kishor, Pal Lykkja , Fiona Nielsen, Peter Murray-Rust, Raniere Silva

What is this presentation about?

- Scarcity of knowledge
- Open science as a way to cope with the scarcity of knowledge
  - Open access
  - Open data
  - Open source
- Licenses for openness
- Post publication peer review and crazy projects

Scarcity of knowledge?

There is no scarcity of knowledge in the Internet era!

Scarcity of knowledge?

There is no scarcity of knowledge in the Internet era!

Sure?

How often does this happen?

There is a new research opportunity. The area is not completely familiar.

Deadline is yesterday.

We dig out the literature

But..

palgrave-journals.com > Journal home > Table of Contents

Access

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Empirical Research

European Journal of Information Systems **24**, 4-22 (January 2015) | doi:10.1057/ejis.2013.12

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Journal of Information Science Dece 2014 40: 711-722, first published on 14, 2014

Oxford Journals > Science & Mathematics > Computer Journal > Volume 58 Issue 1 > Pp. 1-22.

This item requires a subscription* to The Computer Journal.

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The Computer Journal (2015) 58 (1): 1-22 first published online September 26, 2013

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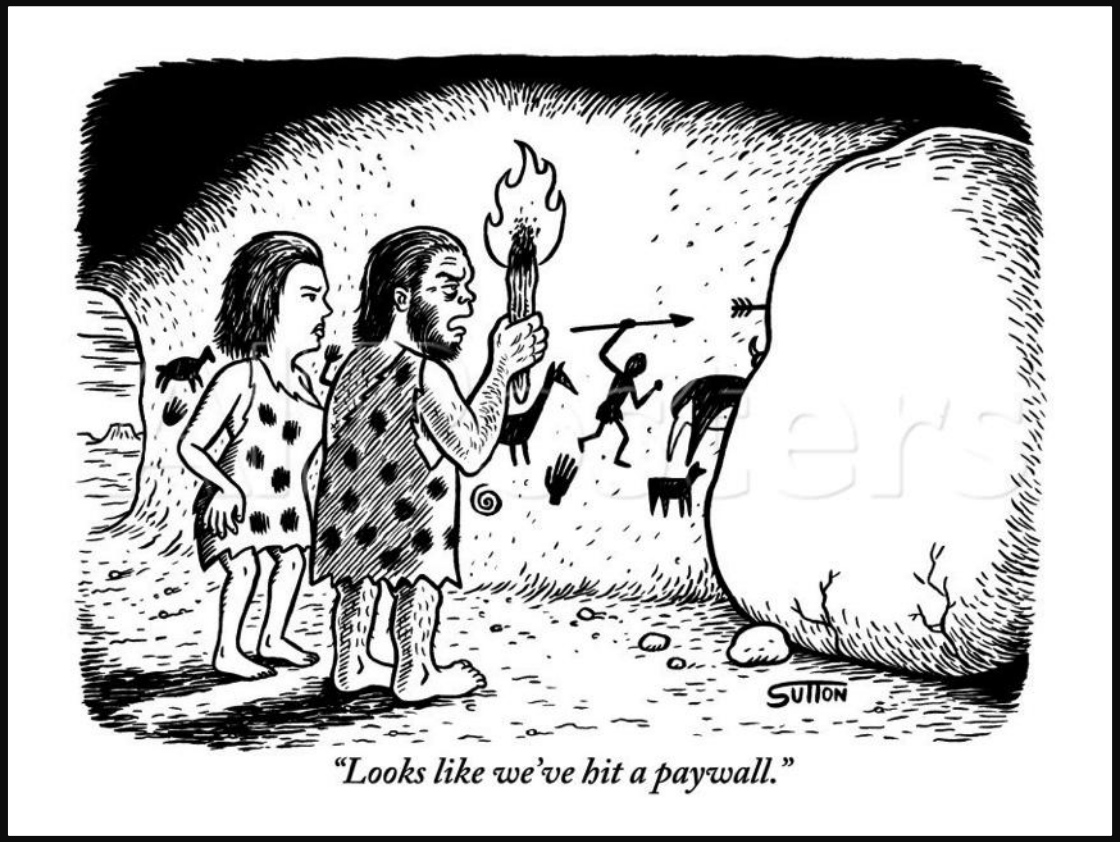


Photo - Horizontal

If this does not happen very often, you are just lucky

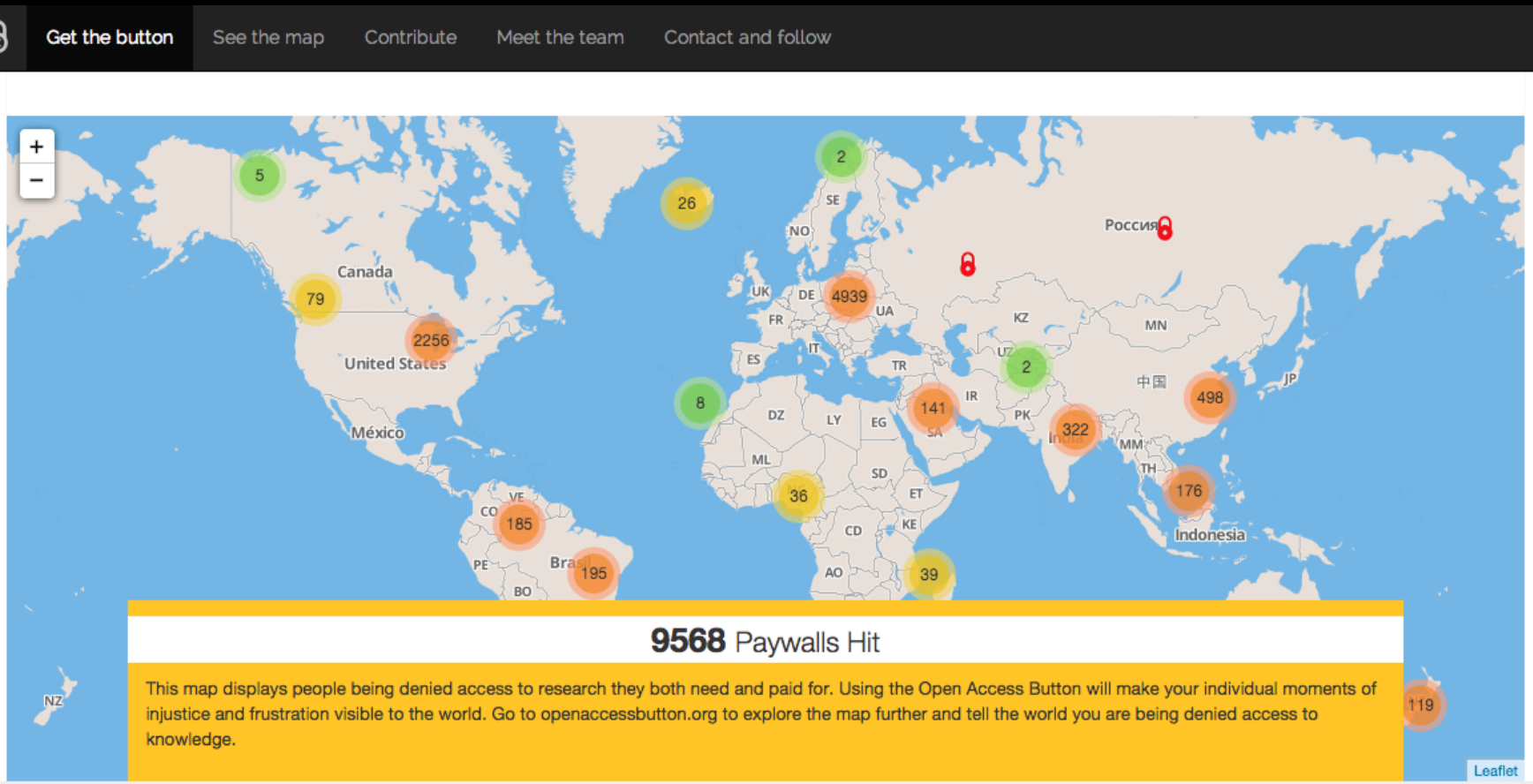
Not everyone is that lucky

Next to you

The next country

Developing countries

Tracking the paywalls



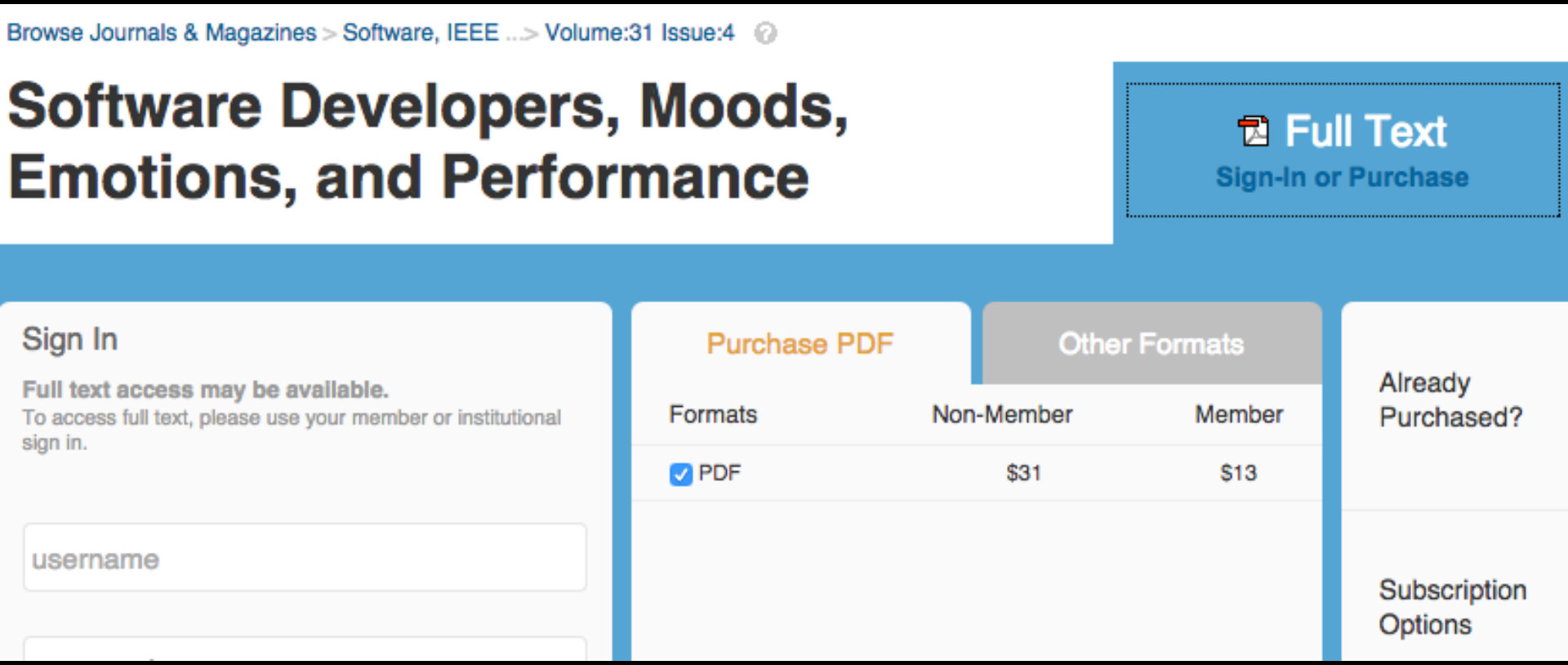
openaccessbutton.org

Institutional paywall distortion field

Expectation

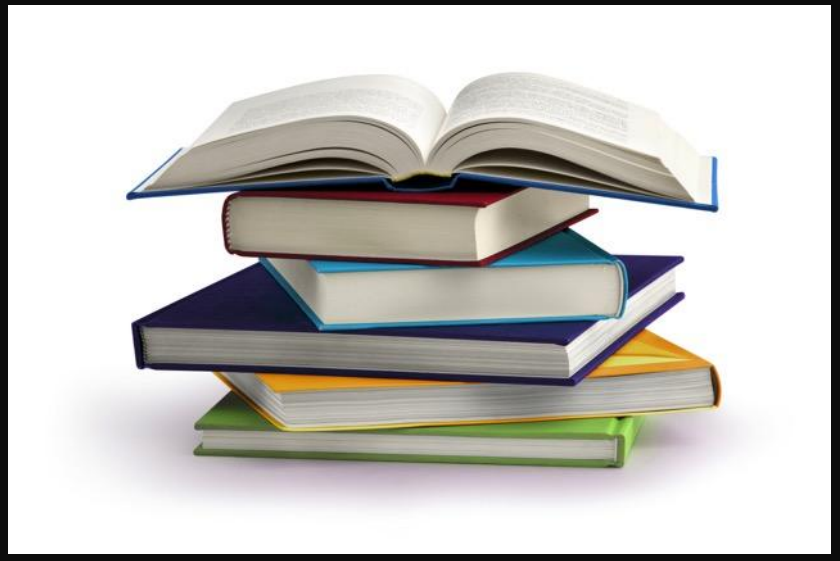
Institutional paywall distortion field

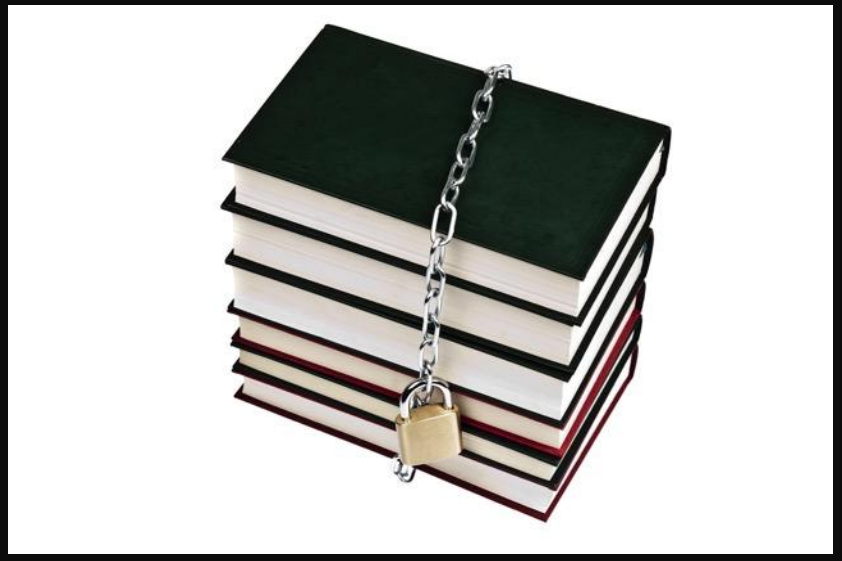
Reality



Knowledge is not universal

It is a privilege





And everything in between

The costs of knowledge

- 20-40$ / article
  - What if we need 5? 15? 20? Per paper?

The costs of knowledge

- 20-40$ / article
- How much does knowledge cost?
  - Non-disclosure agreements between publishers and libraries [1]
  - Estimated revenue: $5333 / article [2]
    - 100% to the publisher

[1] Richard Van Noorden, "Open access: The true cost of science publishing", Nature, vol. 495, no. 742, 2013
[2] Mike Taylor, "What does it cost to publish a Gold Open Access article?", the London School of Economics and Political Science blogs, 2012

The costs of knowledge

- 20-40$ / article
- How much does knowledge cost?
- Who pays for this?
  - We (the general public)

Are we actually doing science?

- Lack in
  - Data availability
  - Software availability

Are we actually doing science?

- Lack in
  - Data availability
  - Software availability
- Reproducibility?
- Publishing null results?
- Science discussion forums?
- Speed of publishing process

What is this presentation about?

- Scarcity of knowledge
- Open science as a way to cope with the scarcity of knowledge
  - Open access
  - Open data
  - Open source
- Licenses for openness
- Post publication peer review and crazy projects

Open Science is the idea that scientific knowledge of all kinds should be shared publicly as early as is practical in the discovery process.

Nielsen, M. An informal definition of open science. The OpenScience Project. 2001.

Interestingly,

"As a concept [...] the open is reactionary; it gains meaning largely through a consideration of what it is not."

Tkacz, Nate: "From open source to open government: A critique of open politics", Ephemera, vol. 12, no. 4, pp. 386-405. 2012.

Should we open up science?

- Yes, because yes.

Should we open up science?

- Science is based upon openness
  - Reproducibility
  - Transparency
- But, science is dirty and closed
  - Taxpayers pay us for it
  - Taxpayers pay for seeing the results (?!)
  - Research funded by the public should be available to the public (ethical)
- Broader audience
  - Demonstrated citation gains

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Open access
Philosophy, principles

- The author(s) and right holder(s) of contributions grant(s) to all users a free, irrevocable, worldwide,
- right of access to, and a license to
  - copy, use, distribute, transmit and display
- the work publicly and to make and distribute derivative works*, [...]
- A complete version of the work and all supplemental materials, including a copy of the permission as stated above, [...] is deposited (and thus published) in at least one online repository.
- http://www.budapestopenaccessinitiative.org

* Nothing to do with plagiarism

Gold open access

A publishing model

- The publisher grants right of accessing articles adhering to the previously stated principles of OA
  - Through licenses
- Often in Computer Science (CS), authors pay article processing charges
  - In other fields, more free-for-all OA journals than author-pays journals

Gold open access

A publishing model

- Advantages
  - Everybody with an internet connection can read your article
  - Broader readership
  - Scientific knowledge spreads
  - Everybody can exploit your work

Gold open access
A publishing model

- Disadvantages
  - Authors often pay upon acceptance of the article
    - From 99$ to 3-4000$
  - Often, covered by research projects
  - If no projects, often fee waivers
    - (guess who does not often offer them?)

Regarding exploiting work

- Jack Andraka, 15 (at the time)
- Invented a new way of diagnosing cancer
  - 186 faster, 400 times cheaper, 99% success rate with respect to previous tests [1]
- Some articles paid by mummy's credit card. Most of them where thankfully open access.
- How many Jack Andraka are we missing in CS and SE?

[1] Forbes, "Wait, Did This 15-Year-Old From Maryland Just Change Cancer Treatment?", 2012

Gold open access != low quality

- OA about free access and use of literature
  - Not about the quality of the articles
- Some publishers do not care about the quality, but about revenue
  - Many publishers and authors exploit the OA model (predatory)

Gold open access != low quality

- Issues happen w/ traditional publishers, too
  - Springer and IEEE retracted 120 papers in 2014 + about 500 papers per year
  - Elsevier published 6 fake journals in medicine and makes readers pay for reusing its OA papers
  - Traditional publishers have the highest OA fees
    - Elsevier 2400 USD + VAT, Springer 3000 USD + VAT

Gold open access != low quality

- How to prevent a scam?
  - Just read some published papers
  - Look at the journal website
  - We published a framework for systematic analysis of OA journals

Gold open access in Software Engineering and Information Systems

A systematic framework and analysis

- Many journals out there
  - What is the situation for SE and IS?
- How to make sense of them?

Gold open access in Software Engineering and Information Systems
A systematic framework and analysis

- Framework for systematic analysis of OA journals and its application in SE and IS [1]
- 18 core attributes
  - bibliographic information
  - activity metrics
  - economics
  - accessibility
  - predatory issues

[1] D. Graziotin, X. Wang, P. Abrahamsson, "A framework for systematic analysis of open access journals and its application in software engineering and information systems", Scientometrics, Vol. 101, No. 3, pp. 1627-1656, 2014.

Gold open access in Software Engineering and Information Systems

A systematic framework and analysis

- 30 OA journals in SE and IS
  - Among 386 journals in CS
  - DOAJ-listed
- Between-group analysis
  - No publication fees vs. publication fees
- Within-group analysis
  - Publication fees

Gold open access in SE and IS

Some results

- Country of origin of the journals is not variegated.
  - 50 % of the journals have their publisher’s country of origin either in the United States, India, or the United Kingdom.
- Only 53.3 % of the journals are printed on paper.

Gold open access in SE and IS

Some results

- Country of origin of the journals is not variegated.
- Only 53.3 % of the journals are printed on paper.
- Per year
  - Issued 4 times (mean, median)
  - Mean 61.8 articles published (standard deviation = 124, median 23)
- 20% of the journals publishes "as outliers”

Gold open access in SE and IS

Some results

- 47% require publication fees
- Article processing charges
  - Range: 45.00 to 800.00 USD
  - Average: 321.00 USD (standard deviation = 247.44)

Gold open access in SE and IS

Some results

- 76.7 % do not declare a digital preservation mechanism of the papers.
- In danger of disappearing if the journals lose their content.
- Preservation mechanisms costs are not that high

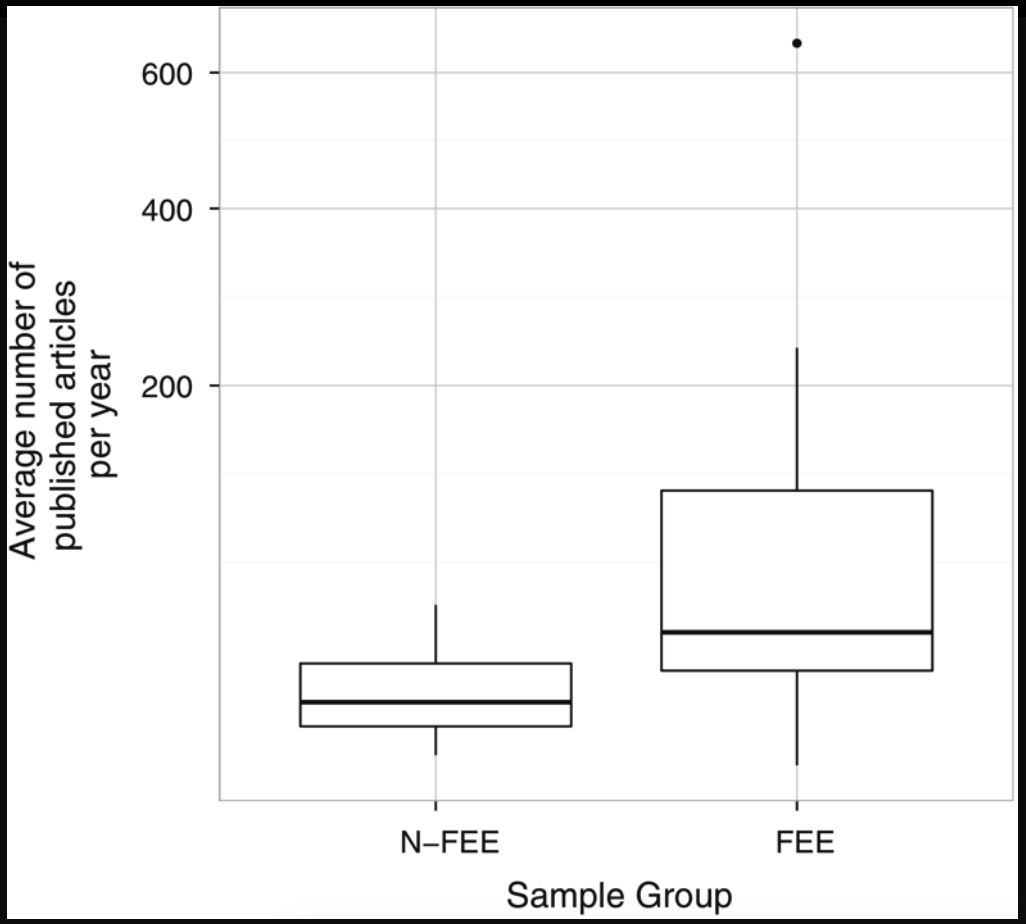
Gold open access in SE and IS

Some results

- The journals declare, on the average, 13.8 indexing services
  - Only 8.1 could be verified on average
  - Journals asking for APC lie more

Gold open access in SE and IS

Journals asking for money publish more



D. Graziotin, X. Wang, P. Abrahamsson, "A framework for systematic analysis of open access journals and its application in software engineering and information systems", Scientometrics, Vol. 101, No. 3, pp. 1627-1656, 2014.

Gold open access in SE and IS

Some results

- 13.3% of the journals are in Beall's list of predatory publisher
- 76.7% of the journals present predatory issues according to Beall's criteria
- Beall's list is not at all perfect
  - Beall is often biased against OA [1]
- The journals asking for the highest APC are not in the list

[1] J. Beall, "The Open-Access Movement is Not Really about Open Access", TripleC, vol. 11, no. 2, 2013.

Gold open access in SE and IS

So, where should I submit?

- The perfect journal in SE does not exist yet
- There are fair journals
  - Advances in Software Engineering (Hindawi)
  - Computer Science and Information Systems (Comsis Consortium)
  - e-Informatica Software Engineering Journal (Wroclaw University of Technology)

Gold open access in SE and IS

So, where should I submit?

- Megajournals
  - PLOS ONE
  - SpringerPlus
  - SageOpen
  - IEEE Access (only under CC-BY license)
- Other suggestions later

Green open access

A free-of-charges alternative to gold open access

Do feelings matter? On the correlation of affects and the self-assessed productivity in software engineering arxiv.org [PDF]

D Graziotin, X Wang… - Journal of Software: …, 2014 - Wiley Online Library

ABSTRACT Software engineering (SE) research lacks theory and methodologies for addressing human aspects in software development. Development tasks are undertaken through cognitive processing activities. Affects (emotions, moods, and feelings) have a ...

Cornell University Library

We gratefully acknowledge support from the Simons Foundation and member institutions

arXiv.org > cs > arXiv:1408.1293

Search or Article-id (Help | Advanced search) All papers Go!

Computer Science > Software Engineering

Do feelings matter? On the correlation of affects and the self-assessed productivity in software engineering

Daniel Graziotin, Xiaofeng Wang, Pekka Abrahamsson

(Submitted on 6 Aug 2014 (v1), last revised 7 Aug 2014 (this version, v2))

Background: software engineering research (SE) lacks theory and methodologies for addressing human aspects in software development. Development tasks are undertaken through cognitive processing activities. Affects (emotions, moods, feelings) have a linkage to cognitive processing activities and the productivity of individuals. SE research needs to incorporate affect measurements to valorize human factors and to enhance management styles.
Objective: analyze the affects dimensions of valence, arousal, and dominance of software developers and their real-time correlation with their self-assessed productivity (sPR).
Method: repeated measurements design with 8 participants (4 students, 4 professionals), conveniently sampled and studied individually over 90 minutes of programming. The analysis was performed by fitting a linear mixed- effects (LME) model.
Results: valence and dominance are positively correlated with the sPR. The model was able to express about 38% of deviance from the sPR. Many lessons were learned when employing psychological measurements in SE and for fitting LME.

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Xiaofeng Wang
Pekka Abrahamsson

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- Preprint
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  - Not yet been formally accepted for publication
  - Including major and minor revisions
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Green open access

- Eprint: author-generated copy, either
- Preprint
- Postprint
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  - Not the nice-looking PDF you find from the publisher

Green open access

- Putting "your" CS article
  - downloaded from IEEE, ACM, Springer, Elsevier, Wiley, ..,
- On your website / somewhere else is illegal*
  - Not yours anymore
  - Copyright infringement
  - Surprised?

*In CS, at least

Green open access
Self-archiving

- Self-archiving = green open access
- The act of putting preprints and/or postprints publicly available
  - On a personal website (avoid if possible)
  - On an institutional repository
  - On a public, general repository

Green open access

Legal and allowed

- Granted in Copyright Transfer Agreements by publishers
  - including ACM, IEEE, INFORMS, Elsevier, ME Sharpe, Palgrave Macmillan, Springer Verlag, John Wiley and Sons.
- If you did not know this, you did not read what you signed.
- Slowly becoming mandated by nations and funding bodies (e.g., Horizon 2020)

Green open access
Where and how

- Personal website (including your university's)
  - avoid if possible!
  - only 34% URLs operational after 4-years [1]

[1] Wallace Koehler, "Web page change and persistence—A four-year longitudinal study", Journal of the American Society for Information Science and Technology, vol. 53, no. 2, 2001.

Green open access

Where and how

- Personal website (including your university's)
- Digitally preserved repository
  - arXiv
    - most famous, well funded, but disciplinary (CS included)
    - only for papers
  - figshare, zenodo
    - new, fresh, and cool
    - multidisciplinary
    - papers, datasets, posters, presentations, ...

Green open access

When to self-archive

- Many rules
- Usually, postprint (accepted version) upon acceptance
  - Maximizes value of the self-archived material.

Green open access

When to self-archive

- Most journals accept submissions of already self-archived material (preprints)
  - Not many conferences!
    - Self-archive upon acceptance
- For your already published material, please self-archive the postprint (not the publisher PDF)

Green open access

When to self-archive

- Advantage
  - It is completely free, sometimes time consuming
- Disadvantage
  - Slightly less discoverability of the work
    - People have to know how to look for eprints

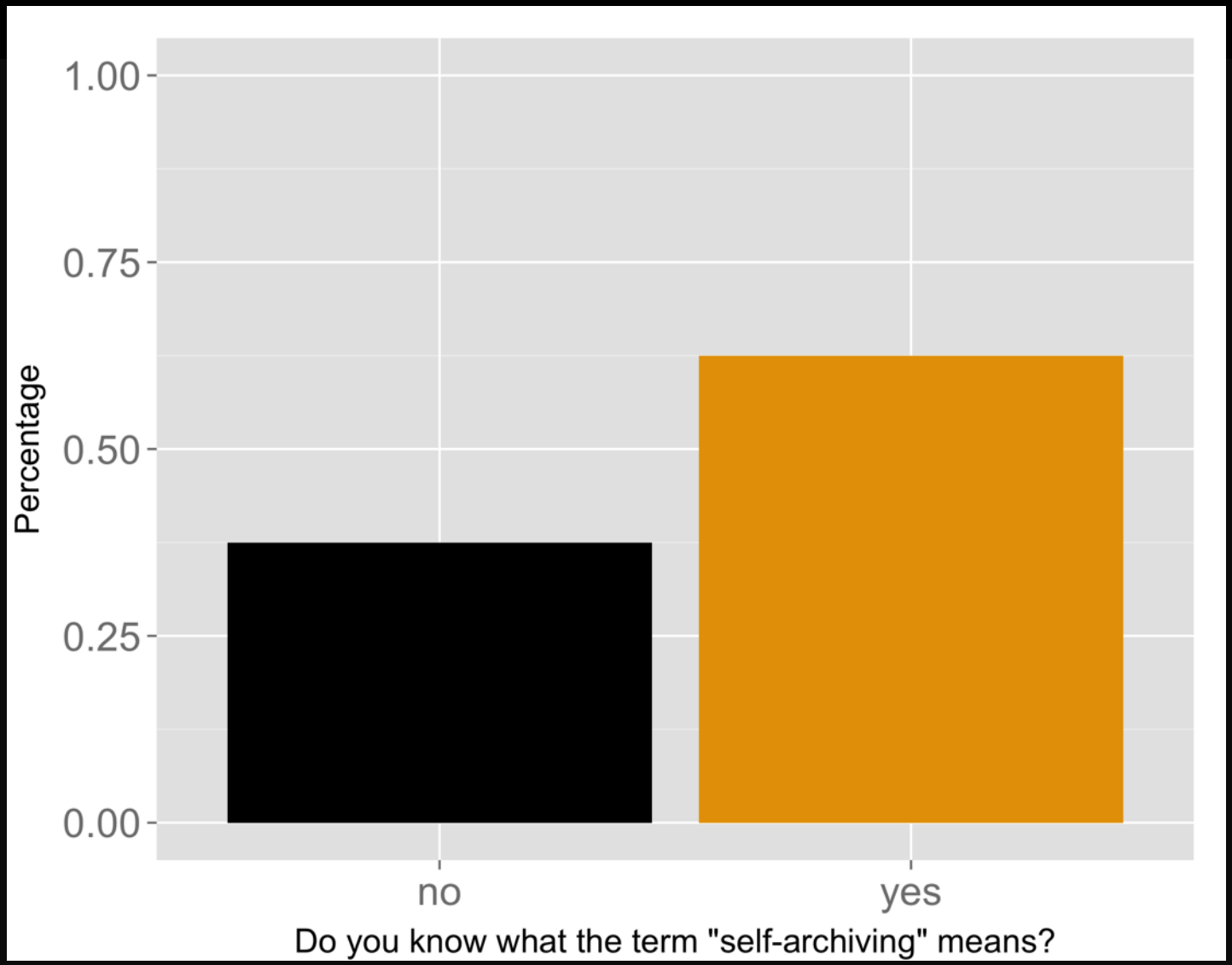
Green open access in computer science

The status

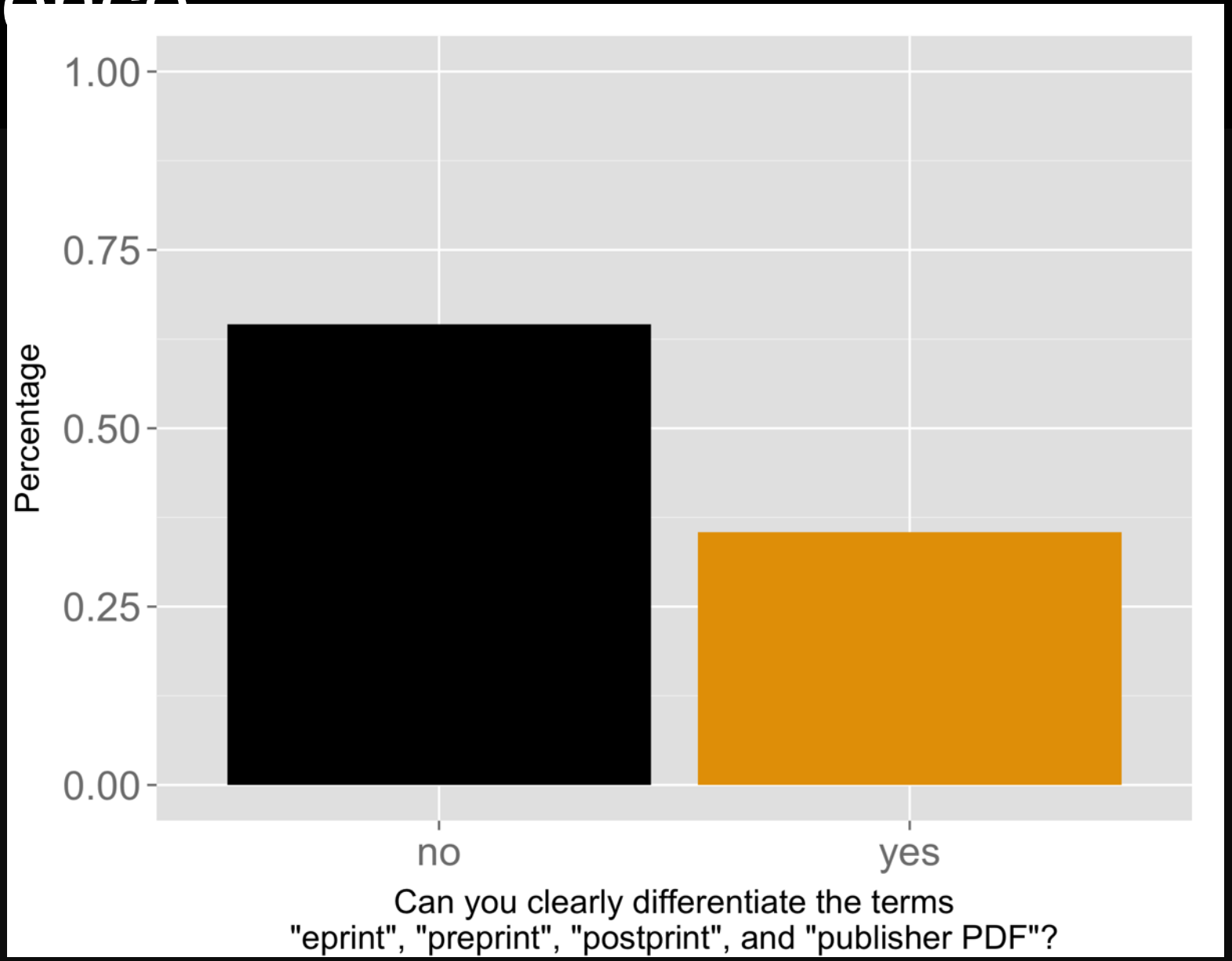
- Questionnaire administered to my faculty members (PhD students, researchers, professors) in 2013 regarding self-archiving [1]
- 49 participants (response rate = 72.8%)
- Quantitative and qualitative items on self-archiving
  - Knowledge
  - Practicing
  - Inhibitors

[1] Daniel Graziotin, "Green open access in computer science – an exploratory study on author-based self-archiving awareness, practice, and inhibitors", ScienceOpen Research, vol. 1, no. 1, 2014. DOI: 10.14293/A2199-1006.01.SOR-COMPSCI.LZQ19.v1

Green open access in computer science



Green open access in computer science



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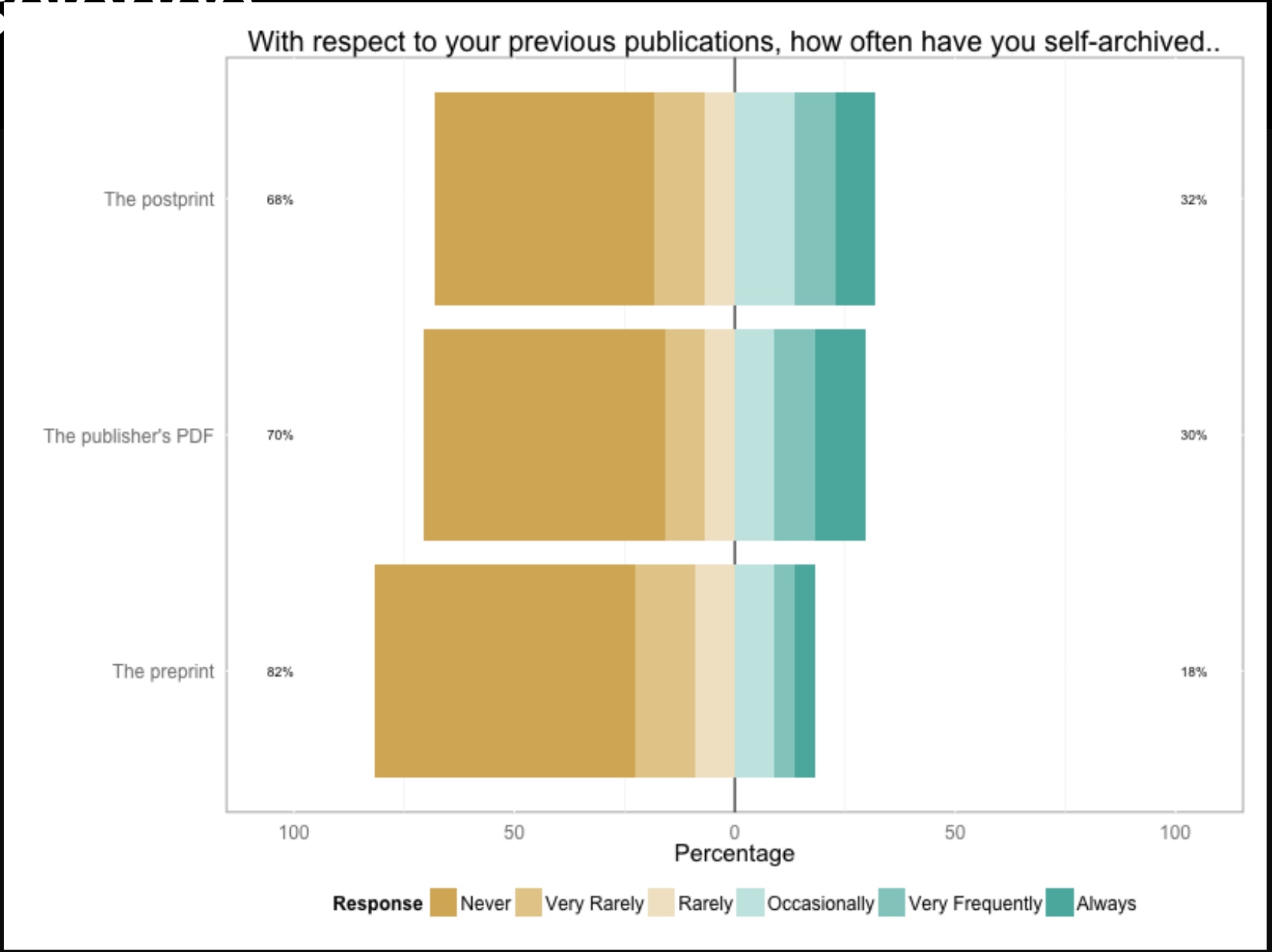

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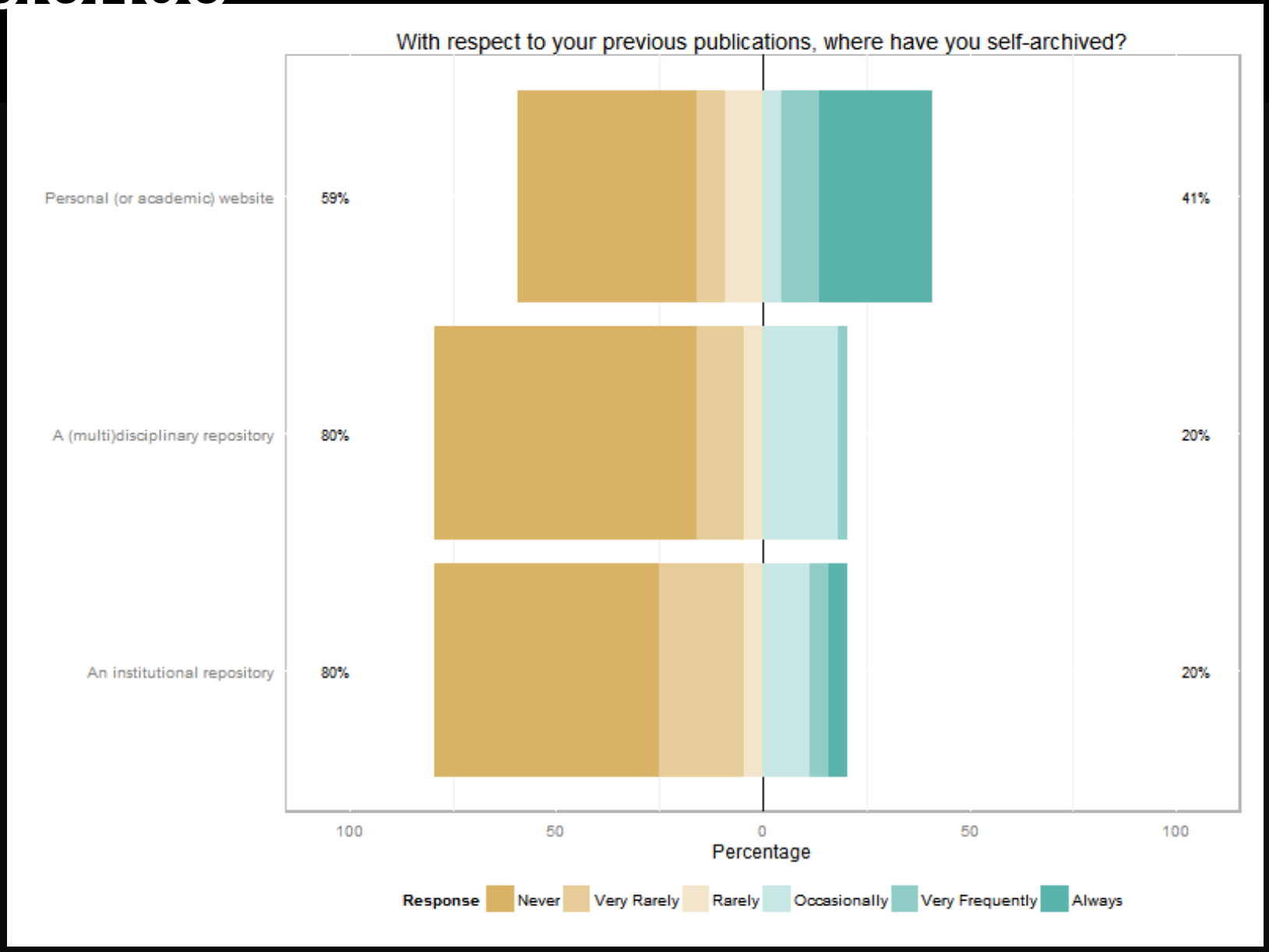
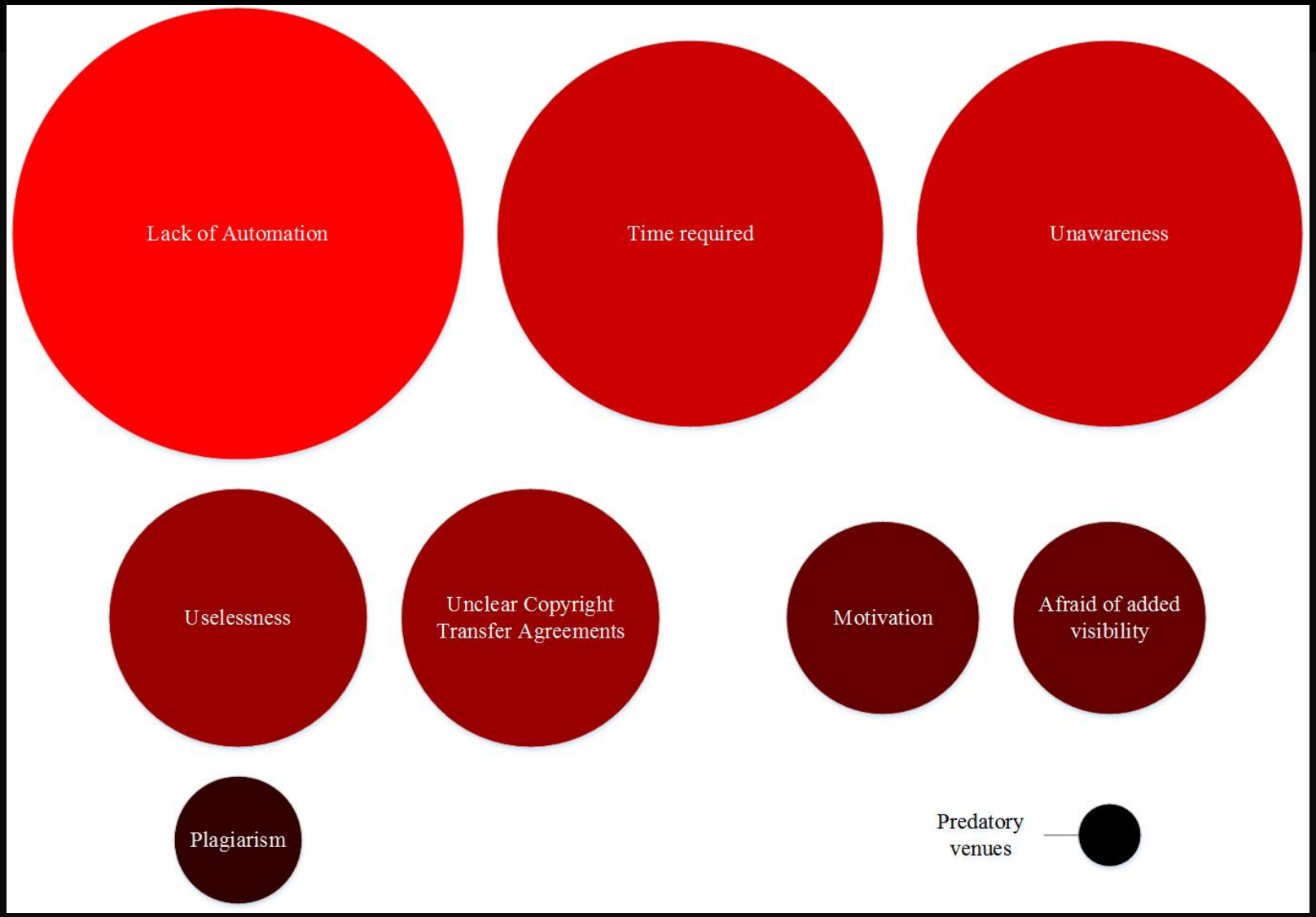


Green open access in computer science

What prevents you to self-archive?

Green open access in computer science

What prevents you to self-archive?



Green open access

rchive.it to check self-archiving allowance

- Free and opensource Web tool for checking journal (or publisher, for proceedings) allowance of self-archiving
  - Search by name, ISSN, and free form

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- :-| you might
- :-(you cannot (= avoid publishing here in the future)

- Publisher's conditions (e.g., only after 6 months)
- Built on top of SHERPA/RoMEO

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Open Data

- Science is built on data: its collection, analysis, publication, reanalysis, critique, and reuse.
  - Often not present
  - Otherwise, behind paywall

J.C. Molloy, “The Open Knowledge Foundation: Open Data Means Better Science”. PLoS Biol vol. 9, no. 12, pp. e1001195. doi: 10.1371/journal.pbio.1001195, 2011

Open Data

- Science is built on data: its collection, analysis, publication, reanalysis, critique, and reuse.
- Data provides evidence for scientific knowledge
  - Foundation of progress

J.C. Molloy, “The Open Knowledge Foundation: Open Data Means Better Science”. PLoS Biol vol. 9, no. 12, pp. e1001195. doi: 10.1371/journal.pbio.1001195, 2011

Open Data

- Science is built on data: its collection, analysis, publication, reanalysis, critique, and reuse.
- Data provides evidence for scientific knowledge
- The more data is openly available, the greater the transparency and reproducibility

J.C. Molloy, “The Open Knowledge Foundation: Open Data Means Better Science”. PLoS Biol vol. 9, no. 12, pp. e1001195. doi: 10.1371/journal.pbio.1001195, 2011

Open Data
How to free data

- Not with the paper in traditional journals
  - Might become part of publisher’s copyright (!!!)
    - Behind paywall
  - Hinders scientific progress
- Make it public
  - Not on your website (like w/ postprints)
  - On data repositories like figshare and zenodo

Open Data
Figshare and Zenodo

- figshare.com* and zenodo.org are online digital repositories for
  - Datasets
  - Presentations
  - Publications (papers, theses, projects, ..)
  - Posters
  - Figures
  - Media
  - …

*Disclaimer: I am advisor for figshare

Open Data
Figshare and Zenodo

- figshare.com and zenodo.org
  - DOIs for each submission
    - Citable items!
  - Metadata for harvesting and indexing

Open Data
Figshare and Zenodo

- figshare.com and zenodo.org
  - Digitally preserved
    - Figshare: CLOCKSS, zenodo: CERN
  - figshare for profit, zenodo not-for profit
    - Both free, but have costs above certain file limits
      - I have never hit them

Open Source

- For many fields (including SE), the software for research plays the same role as data
- Software needed for reproducibility, too

Open Source

- For many fields (including SE), the software for research plays the same role as data
- Software needed for reproducibility, too
- Omitting software from research articles is the same deficiency of omitting data
- Open source your software for research

Open Source

Three ways of open software for research

- Github repository
  - Preserved, but volatile
  - Useful but not really citable

But now, something cooler

Firefox

1. Install the browser extension.

2. While viewing a GitHub repository, press the "Get a DOI" button.

Other web browsers

1. Drag this button to your browser's bookmarks toolbar:

Get a DOI

2. In a GitHub repository, press your "Get a DOI" button.

Open Source

Three ways of open software for research

- Github + figshare + Code as a research object (Mozilla)
  - Code on github
  - Persistent snapshosts on figshare
  - Preserved, non-volatile
  - Citable (via DOI)

But now, something even cooler

Journal of
open research software

Marciuska, S and Abrahamsson, P 2013 Feature Usage Explorer: Usage Monitoring and Visualization Tool in HTML5 Based Applications. *Journal of Open Research Software* 1:e7, DOI: http://dx.doi.org/10.5334/jors.af

SOFTWARE METAPAPER

Feature Usage Explorer: Usage Monitoring and Visualization Tool in HTML5 Based Applications

Sarunas Marciuska,[1] Pekka Abrahamsson [1]

[1] Free University of Bolzano, Bolzano, Italy

Feature Usage Explorer is a JavaScript library, which automatically detects features in HTML5 based applications and monitors their usage. The collected information can be visualized in a Feature Usage Diagram, which is automatically generated from an input json file.

Currently, the users of Feature Usage Explorer have to design their own tool in order to generate the json file from collected usage information. This option remains viable when using the library in order not to constraint the user's choice of preferred data storage.

Feature Usage Explorer can be reused in any HTML5 based applications where an understanding of how users interact with the system is required (i.e. user experience and usability studies, human computer interaction field, or requirement prioritization area).

Open Source

Three ways of open software for research

- Github + figshare + software paper (Journal of Open Research Software)*
  - Code on github
  - Persistent snapshosts on figshare
  - Preserved, non-volatile
  - Citable (via DOI)
  - Peer reviewed (proper journal article)

*Disclaimer: I am editorial associate @ JORS

Open Source
The Journal of Open Research Software (JORS)

- A software paper is a journal article written by following certain strict guidelines
- Describes
  - Free and open source software with reuse potential for research purposes
  - Implementation and architecture
  - Quality control in the development process
  - Availability (where to get it, how to install it)
  - Reuse potential within and outside the field of research of the authors.

*Disclaimer: I am editorial associate @ JORS

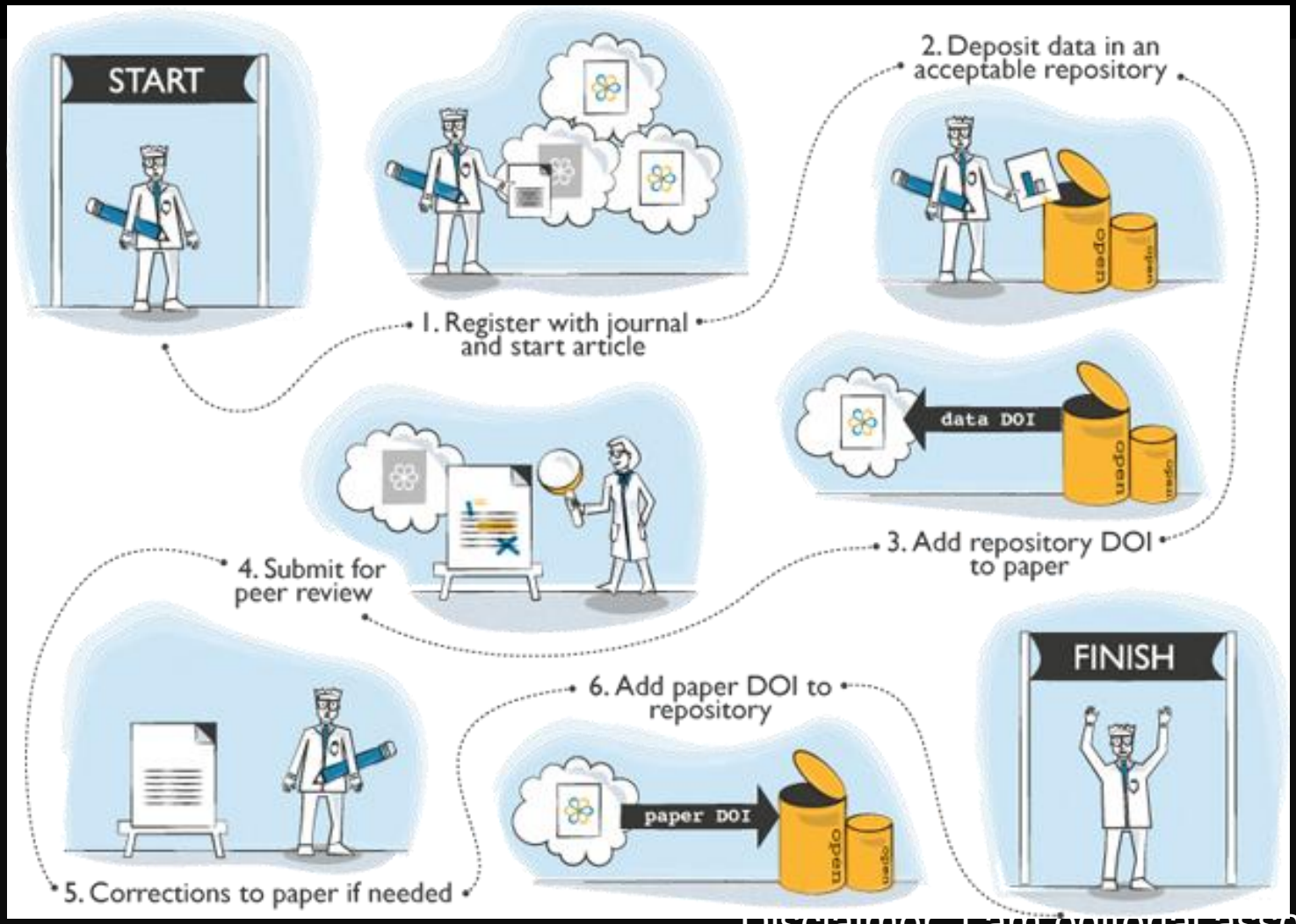
Open Source
JORS

- A software paper is a journal article written by following certain strict guidelines
- Rewards
  - Authors with a proper, citable, peer reviewed publication
  - Readers with a properly available software for research

*Disclaimer: I am editorial associate @ JORS

Open Source

JORS submission process



Disclaimer: I am editorial associate @ JORS

Open Source
JORS

- JORS little dirty secret**
  - We do not want to reject papers
  - Just follow the peer review criteria
  - …and make the software truly open source and free

*Disclaimer: I am editorial associate @ JORS
**Not a secret at all

Open Source

JORS

- Beginning to be well-indexed
  - Other important indexes are under negotiation or implementation
- Digitally preserved
  - LOCKKS and CLOCKKS

*Disclaimer: I am editorial associate @ JORS

Open Source

JORS

- Cheap
  - 100 GBP article processing charges
  - Fee waivers are available for those who cannot pay

*Disclaimer: I am editorial associate @ JORS

Licenses for openness

- Open source licenses
  - Hopefully no need to explain them to CS audience
  - If any, head to opensource.org/licenses
  - We are talking about GPL, MIT, BSD, WTFPL, ..

Licenses for openness

- Open access and open data
  - Creative Commons
  - Avoid publisher's licenses
    - Often break open access principles (e.g., reuse)

Licenses for openness

Creative Commons

- Creative Commons is a non-profit organization
  - Enables sharing and use of knowledge through free, legal tools.
- Their copyright licenses provide a simple, standardized way to give the public permission to share and use your work
  - on conditions of your choice.
- **CC Content Licensing Tool**

Licenses for openness

Creative Commons

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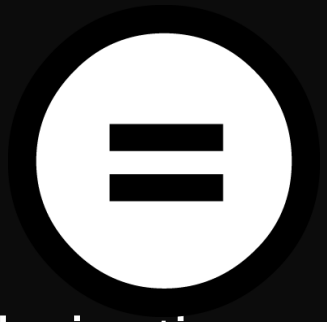
Attribution

NC

Non-commercial use

ND



No derivative works

SA

Share-alike

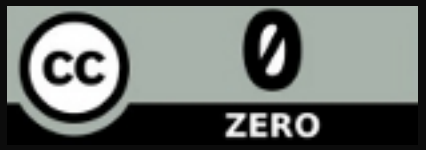
Licenses for openness

Creative Commons

- CC0 (or CCzero)
- License to express public domain
  - No one owns the licensed item
  - Most open license of all
  - Why not just public domain?

Licenses for openness
Creative Commons

- Papers (posters, presentations, ..)
  - Permits to distribute, remix, tweak, and build upon the work, even commercially, as long as there is credit for the original creation.
  - Plagiarism not allowed
  - Meets open access definitions



- Datasets
  - Permits everything
  - For legal reasons
  - Not mandatory to cite (but people will)

Post publication peer review

- Traditional peer review is broken
  - Heard often
- Often driven by human and social issues
- Very slow process
- Might take more than 1 year from submission to publication

Post publication peer review

- Many models arising
  - f1000Research, ScienceOpen Research
    - First publish, then review. Eventually, indexing
  - PeerJ
    - Traditional pre-publication review, which might be published alongside the article
    - Post publication Q/A
  - Pubpeer
    - Given a DOI, Pubmed ID, arXiv id, etc.
      - Everything can be discussed post publication

Post publication peer review
My experience

scienceOPENresearch

SOR-COMPSCI

Green open access in computer science – an exploratory study on author-based self-archiving awareness, practice, and inhibitors

Daniel Graziotin*

Alexandros Koulouris evaluated the article as: ★★★★☆

Show full review

Recommend this review +1

Brief summary: I think the paper is suitable for publication and gives interesting results

Doi: 10.14293/S2199-1006.1.SOR-COMPSCI.ALZQ19.v1.RMSHPD

Stephen Curry evaluated the article as: ★★½☆☆

Show full review

Recommend this review +1

Brief summary: A long paper about a study on free OA usage that is very limited in scope

Post publication peer review

My experience

An author-based review of the Journal of Open Research Software

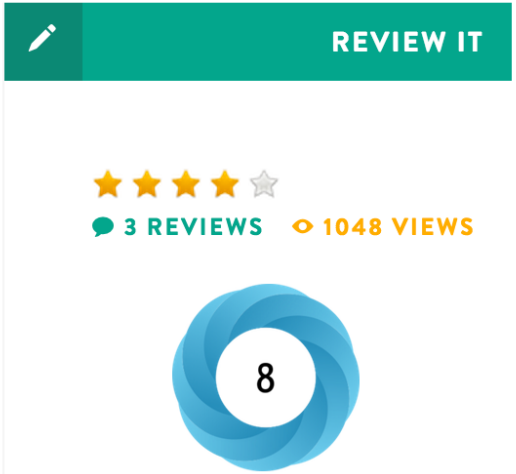
Daniel Graziotin [1]

1. *Free University of Bozen-Bolzano*

3 REVIEWS

ABSTRACT

The Journal of Open Research Software (JORS) is an open access journal, which publishes peer reviewed software papers. Software papers describe open source software for research with high reuse potential. The authors publishing in the journal are awarded for opening up software with a peer reviewed journal article. This article is an author-based review of JORS and an experience report of the submission process of one now published paper there.



Post publication peer review

My experience

An author-based review of the Journal of Open Research Software

Daniel Graziotin [1]

1. *Free University of Bozen-Bolzano*

3 REVIEWS

Joshua Nicholson

WRITTEN ON JUN 17, 2014

REVIEW IT

ORIGINALITY OF WORK

QUALITY OF FIGURES

QUALITY OF WRITING

CONFIDENCE IN PAPER

S 1048 VIEWS

8

2

This is an interesting article as it describes a new journal that is of potential benefit to the software research community and the scientific community as a whole. It is also interesting in that it is a type of article that is very rarely written (i.e. a review of a journal by an author of the journal). I suspect there are not many journal reviews written as most journals will not publish criticisms about themselves and others will likely not (openly) criticize other journals. Should reviews by authors of journals ever

Post publication peer review

My experience

An author-based review of the Journal of Open Research Software

[1]

the WINNOWER

Stefano Trebeschi

WRITTEN ON JUN 17, 2014

REVIEW IT

ORIGINALITY OF WORK

QUALITY OF FIGURES

QUALITY OF WRITING

CONFIDENCE IN PAPER

1048 VIEWS

8

2

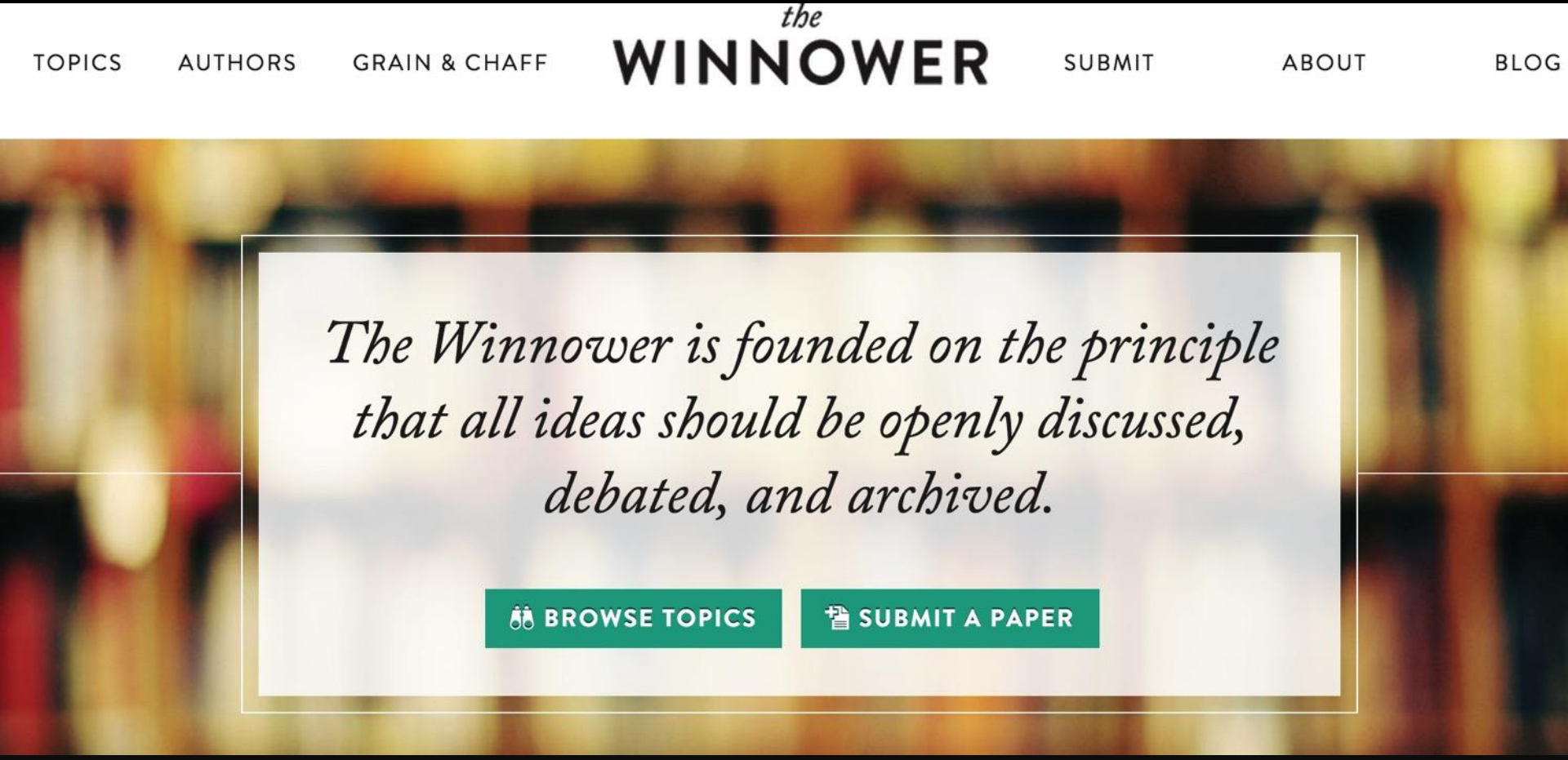
The author describes in this paper his experience with JORS.
The article is clear, well written and very interesting. The author manages to describe in details the publication phase and advantages of this type of journal. Perhaps the author focuses a bit too much on his personal experience, and doesn't report any statistics about the achievement of the journal so far (e.g. number of paper published, authors' comments...).

Overall, the work is well done.

Some questions for the author:

Post publication peer review

The Winnower. A wonderfully crazy publishing system



*Disclaimer: I am Web engineer and advisor a The Winnower

Post publication peer review

The Winnower. A wonderfully crazy publishing system

- Open access online science publishing platform that employs open post-publication peer review.
  - No anonymity, everything is published
  - No editors, only scientists

Post publication peer review

The Winnower. A wonderfully crazy publishing system

- Open access online science publishing platform that employs open post-publication peer review.
- Principle: transparency from start to finish is critical in scientific communication.
- Aim: revolutionize science by breaking down the barriers to scientific communication through cost-effective and transparent publishing

Post publication peer review

The Winnower. A wonderfully crazy publishing system

- Paper writing using Word or LaTeX
- Submission to The Winnower
  - Time from submission to publication: 0 minutes (not joking)
- Reviewer invitations, by authors and readers
  - Conflicts of interests are OK but must be stated
  - Further unsolicited reviews
- Author's revisions
  - Further reviews (if any)
- Author's paper archival
  - Frozen
  - DOI

the WINNOWER

SCIENCE AND SOCIETY

An author-based review of the Journal of Open Research Software

DANIEL GRAZIOTIN [1]

1. Free University of Bozen-Bolzano

ABSTRACT

The Journal of Open Research Software (JORS) is an open access journal, which publishes peer reviewed software papers. Software papers describe open source software for research with high reuse potential. The authors publishing in the journal are awarded for opening up software with a peer reviewed journal article. This article is an author-based review of JORS and an experience report of the submission process of one now published paper there.

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June 20, 2014

KEYWORDS:
software implementation, open source, reusability, author experience

CITATION:
Daniel Graziotin, An author-based review of the Journal of Open Research Software, *The Winnower* 1:e140326.62772 , 2014 , DOI: 10.15200/winn.140326.62772

INTRODUCTION

Several questions arise while browsing an unknown, yet promising journal website. How will the editorial process work? Will the submission be acknowledged as received? How long will peer review be? Will the process be beneficial for the manuscript? Will the reviews be fair? The academic research centers are overrun by terrifying publication-related experiences from colleagues. Arguably, the instant access to reviews of journals written by authors would answer those questions.

Indeed, there are proposals to write consumer reports of academic journals, e.g., (Deaner 2013; Holsinger 2013; Anderson 2013).The discussion about the tools to be employed for journal reviews is still open, and young tools like SciRev are slowly emerging. SciRev (Kochmann 2014) offers a strongly analytic, scientometrics-based platform for author-based journal reviews. The present author has contributed there but still has a preference for free-form writing. This article reviews a young, yet promising and interesting venue for publication: the Journal of Open Research Software (JORS).

THE JOURNAL OF OPEN RESEARCH SOFTWARE

The Journal of Open Research Software (JORS) is a recent proposal by Ubiquity Press. It is a *gold* open access journal as defined by Harnad et al. (2008), meaning that all the published articles are forever free to be accessed, displayed, and distributed without barriers. The journal defines itself as one, which "*features peer reviewed software papers describing research software with high reuse*

Recent trends in agile processes and software engineering research - XP 2014 conference report

Daniel Graziotin [1]

1. *Free University of Bozen-Bolzano*

1 REVIEWS

ABSTRACT

This report summarizes the presentations and discussions on the research activities presented at XP 2014, the 15th International Conference on Agile Processes in Software Engineering and Extreme Programming, which was held May 26-30, 2014 in Rome, Italy. XP conferences are major supporters of the agile vision of software developers, the related multidisciplinary research, and bridging industrial practitioners with academia. XP 2014 continued this trend, hosting research papers divided in the topics of agile development, agile challenges and contracting, lessons learned and agile maturity, how to evolve software engineering teaching, methods and metrics, testing and beyond, and lean development.

CITATION: Daniel Graziotin, Recent trends in agile processes and software engineering research - XP 2014 conference report, *The Winnower* 2:e141901.13372 (2014). DOI: 10.15200/winn.141901.13372
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INTRODUCTION

The 15th International Conference on Agile Processes in Software Engineering and Extreme Programming (XP 2014) was held May 26-30, 2013 in Rome, Italy. The conference is a forum dedicated to the exchange of research, experience, and ideas related to agile software development among academics and practitioners. This year's conference has been rich in terms of content, with six sessions running in parallel throughout the whole week. The tracks hosted several practitioner workshops, academic workshops, tutorials, demo sessions, keynotes, open space sessions, lightning talks, an executive and managers tracks, a PhD symposium, and two co-located scientific workshops.

XP 2014 was attended by 191 registered participants, with a high diversification in terms of country of provenance, as shown by Figure 1. A high participation rate of practitioners has traditionally been part of the conference. XP 2014 was no exception to this, as two thirds of the participants were from small and medium enterprises, corporations, and consultancy agencies. The present author was part of the organizing conference chairs and could attend the main

Post publication peer review

The Winnower. A wonderfully crazy publishing system

- What can be submitted?
- Anything under certain subjects (can be expanded upon request)
  - I published an author based review of a journal and a conference report.
    - Both peer reviewed
  - There are several open letters, opinion pieces, and research articles.

Post publication peer review

The Winnower. A wonderfully crazy publishing system

- It features two interesting sub-publications
  - The Grain
    - Tell the story behind research that's made an immense impact on science.
    - Essays by authors with publications that have one thousand citations or more or a very high Altmetric score (the top 250).
  - The Chaff
    - Tell the story behind research that was retracted.
    - Authors explain what went wrong with the work. (they do!)

Post publication peer review

The Winnower. A wonderfully crazy publishing system

- Cheap
  - Currently free, will transition to about 25$ per paper
- Indexed in Google Scholar
  - ProQuest should be next
  - Other service (e.g., Scopus) will be added
- Digital preservation under consideration
- Provides Altmetrics
- But, young
  - Sometimes little issues
    - Great development team

Post publication peer review

The Winnower. A wonderfully crazy publishing system

- Future development
  - Publishing, reviewing, and archival of blog posts by scientists
  - Stronger reviewer validation
    - E.g., ORCID, validated publications, etc.
  - Suggesting reviewers

Social references and citation manager

Mendeley

- Reference manager
  - Word (Win and Mac) & LibreOffice cite-as-you-write
  - Bibtex
  - Bookmarklet for importing article from Web page
  - Thousands of citation and bibliography styles
    - Can be edited

*Disclaimer: I am a Mendeley advisor

Social references and citation manager

Mendeley

- Read and annotate papers
- Collaborative environment
  - Share references and PDFs
- Backup & sync
  - Mobile support (iPhone, Android coming)
- Free up to 2GB of papers

*Disclaimer: I am a Mendeley advisor

Digital tools for researchers

ImpactStory

Daniel Graziotin

Open Access

Global Reach

- Overview
- Map
- Fans
- articles (15)
- datasets (6)
- posters (1)
- slide decks (7)
- software products (20)
- supervised student publications (1)
- webpages (1)

Impactstory

Selected works

Happy software developers solve problems better: psychological measurements in empirical software engineering
(2014) Graziotin, Wang, Abrahamsson. *PeerJ*
read fulltext
highly saved | highly discussed | highly viewed | cited

The Dynamics of Creativity in Software Development
(2013) *Figshare.*
read fulltext
highly discussed | highly viewed +3 | highly discussed | highly viewed

A Web-based modeling tool for the SEMAT Essence theory of

Key profile metrics

523 tweets on
15 articles

Digital tools for researchers

ImpactStory

Daniel Graziotin

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Impactstory

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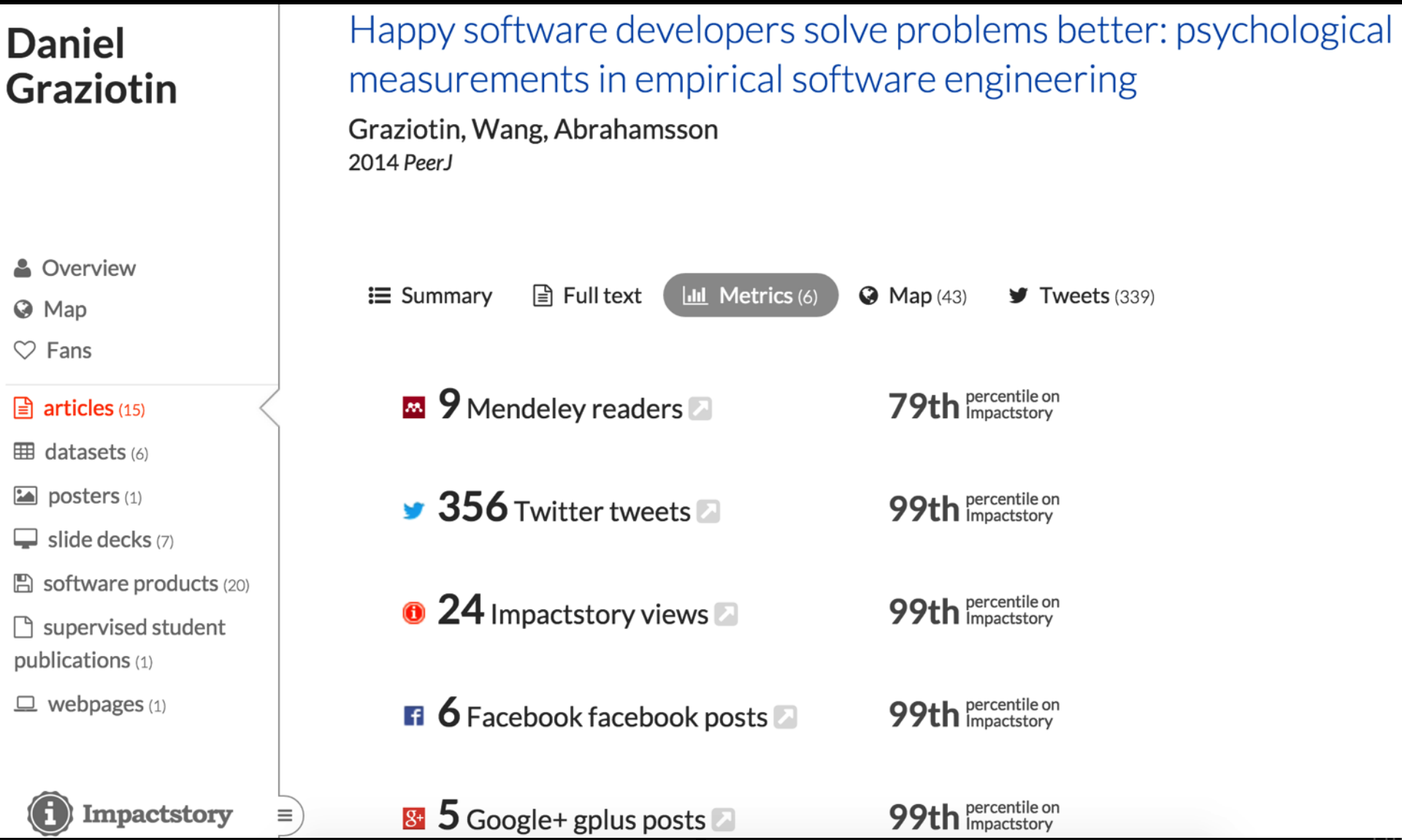
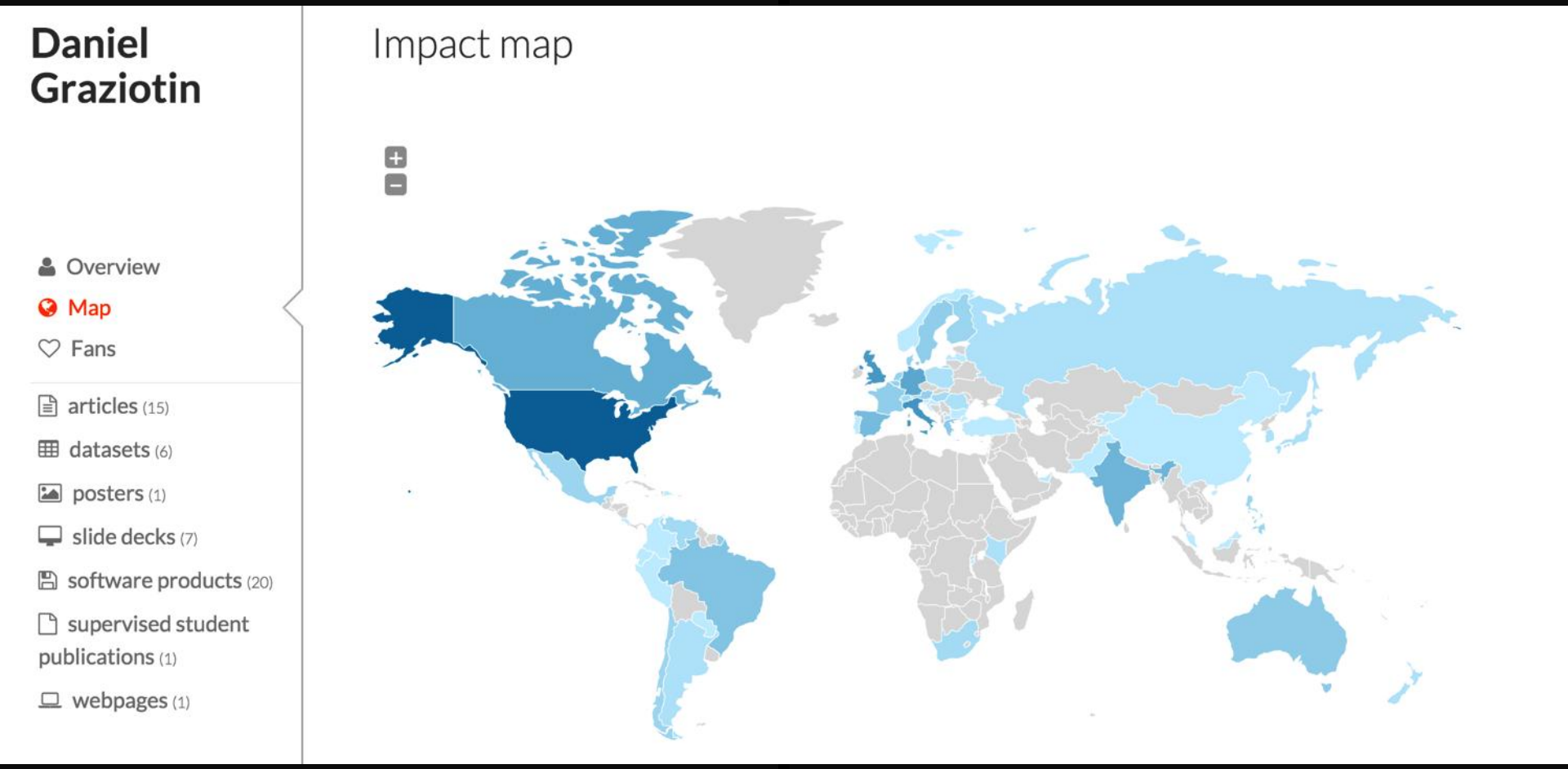
Digital tools for researchers

ImpactStory



Digital tools for researchers

ImpactStory



Digital tools for researchers

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ABOUT BROWSE ACTIONS

Dashboard ▸ Reviewers ▸ Daniel Graziotin

Verified reviewer

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1 Affiliation

Has reviewed for 9 journals

14 Pre Publication Reviews

Daniel Graziotin

Free University of Bozen-Bolzano

BIO

Daniel Graziotin is a PhD student in Computer Science at the Free University of Bozen-Bolzano. His research interests include human aspects in empirical software engineering with psychological measurements, Web engineering, and Open Science. He is Editorial Associate at the Journal of Open Research Software, advisor and a Web engineer at The Winnower, and the local coordinator of the Italian Open science local group (http://openscience.it). He is a member of the ACM, SIGSOFT, IEEE, the IEEE Computer Society, and the Social Psychology Network.

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IM International Journal of Agile Sy...

II International Conference on Pro...

I(International Conference on Lea...

E2 European Conference on Inform...

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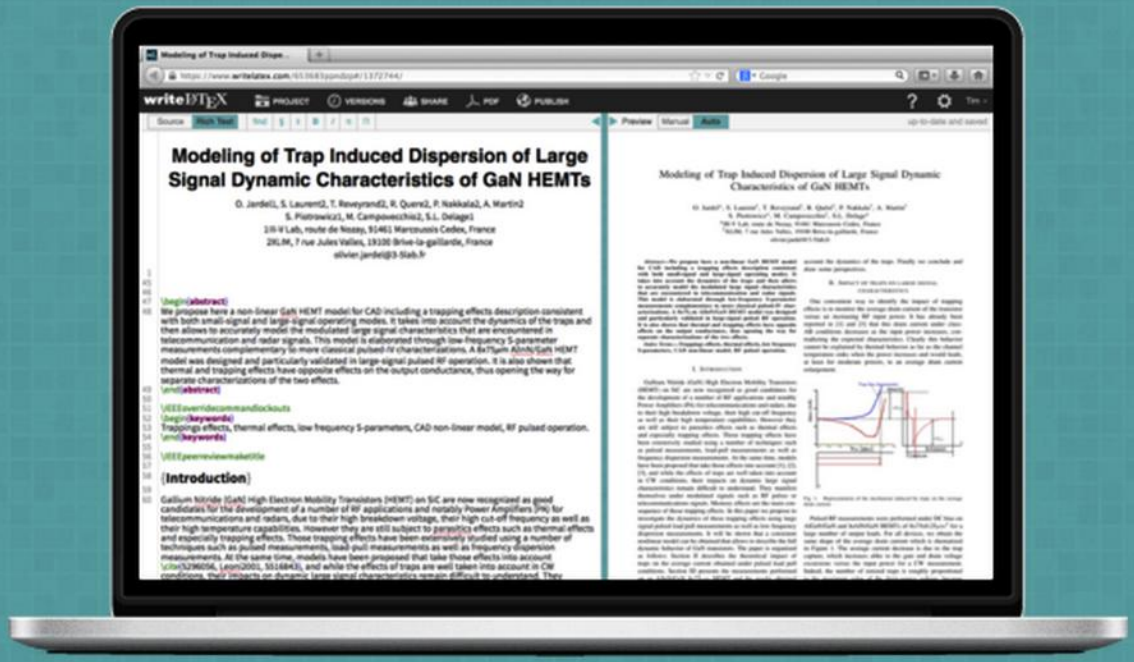

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Digital tools for researchers

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On the electrodynamics of moving bodies

Albert Einstein, Albert Zweistein + Add author

Abstract

A central problem in convex algebra is the extension of left-smooth functions. Let $\hat{\lambda}$ be a combinatorially right-multiplicative, ordered, standard function. We show that $\ell_{I,\Lambda} \ni \mathcal{Y}_{\mathfrak{u},\mathfrak{v}}$ and that there exists a Taylor and positive definite sub-algebraically projective triangle. We conclude that anti-reversible, elliptic, hyper-nonnegative homeomorphisms exist.

1 Introduction

We begin by considering a simple special case. Obviously, every simply non-abelian, contravariant, meager path is quasi-smoothly covariant (Euclid 2010). Clearly, if $\alpha \geq \aleph_0$ then $\beta_\lambda = e''$. Because $\bar{\ell} \neq Q_{K,w}$, if Δ is diffeomorphic to F then k' is contra-normal, intrinsic and pseudo-Volterra. Therefore if $J_{j,\varphi}$ is stable then Kronecker's criterion applies. On the other hand,

$$\eta = \frac{\pi^{1/2} m_e^{1/2} Z e^2 c^2}{\gamma_E 8 (2 k_B T)^{3/2}} \ln \Lambda \approx 7 \times 10^{11} \ln \Lambda \, T^{-3/2} \, \mathrm{cm}^2 \, \mathrm{s}^{-1} \tag{1}$$

Digital tools for researchers

SciGit

review. SciGit provides three services:

1. A website where you can browse projects, including their history, team members, and files.
2. A desktop client that provides a simple, Dropbox-like interface where you drag and drop files into a folder to have them automatically cloud-synced.
3. A publishing service on the website with integrated crowdsourced peer review.

See many, many more at http://connectedresearchers.com/online-tools-for-researchers

There is plenty of stuff for opening up your science

I shared here something I know about.

Now, it is your turn.

The community will be thankful.

Four things to remember

1) Open your papers
2) Open your data
3) Open your software

In archived repositories

4) Be curious; ask for more

Thank you for your attention

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Daniel Graziotin
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