

Beyond Open Access: SciPost

DRSTP Trends in Theory Meeting

Dalfsen, 17 May 2019

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You can find this talk at jscaux.org/talks/

Plan of the talk

- SciPost
- Our infrastructure
- Publishing
- Plan S
- Metrics
- Conclusion

What is it?

A complete publishing portal
(from preprint to metadata curation)

Who runs it?

Professional scientists
(is and will remain grassroots)

What does it offer?

- Journals
- Commenting
- Metadata services

Summary?

- Openness
- Quality

What does it aim to achieve?

A complete reform of publishing at all levels

- Implement Genuine Open Access
 - two-way: free for readers, free for authors*
- Implement a healthier business model
 - *strict editorial/financial decoupling*
 - *no profit-making on the back of scientists*
 - *consortial model; not based on APCs*
- Modernize the refereeing procedure
 - *open; more credit to referees*
 - *streamline post-publication feedback*
- Reform impact assessment

Genuine Open Access Principles

Genuine Open Access Principles

[CO]	Community Ownership	The Journal has a transparent community-anchored ownership structure, and is controlled by and responsive to the scholarly community.
[OI]	Open Infrastructure	The infrastructure for operating the Journal belongs to, and is open sourced to the community. The entire technological stack and all operating protocols are documented and made easily transferable between community owners.
[CA]	Copyright to authors	Authors of articles in the Journal retain copyright. The Journal assists authors in protecting their rights in case of infringement.
[OA]	Open Access	All articles are published open access and an explicit open access licence is used which is preferably Approved for Free Cultural Works .
[OC]	Open Citations	The Journal makes its citation metadata openly accessible by actively participating in the Initiative for Open Citations .
[FF]	Fee Free	Submission, peer evaluation and publication are not conditional in any way on the payment of a fee from authors or their employing institution, or on membership of an institution or society.
[NP]	Non Profit	The Journal publisher's operations are entirely non profit.
[OF]	Open Finances	The Journal's finances are openly published and available for public scrutiny.
[AE]	Academic Editing	The editorial processes of the Journal are run by the community, and all editorial decisions are taken by active professional scientists, using exclusively academic scholarship-based criteria.

Latest Publications

Condensed Matter Physics - Theory

Foliated fracton order from gauging subsystem symmetries

Wilbur Shirley, Kevin Slagle, Xie Chen

SciPost Phys. 6, 041 (2019) · published 2 April 2019

Condensed Matter Physics - Theory

Comparing many-body approaches against the helium atom exact solution

Jing Li, N. D. Drummond, Peter Schuck, Valerio Olevano

SciPost Phys. 6, 040 (2019) · published 1 April 2019

High-Energy Physics - Theory

Comments on one-form global symmetries and their gauging in 3d and 4d

Po-Shen Hsin, Ho Tat Lam, Nathan Seiberg

SciPost Phys. 6, 039 (2019) · published 29 March 2019

[View all Publications](#)

Latest Submissions

Quantum Physics

Reproducing topological properties with quasi-Majorana states

by A. Vuik, B. Nijholt, A. R. Akhmerov, M. Wimmer

Submitted 2019-03-31 to SciPost Physics

Mathematical Physics

Thermodynamic limit of the two-spinon form factors for the zero field XXX chain

by Nikolai Kitanine, Giridhar Kulkarni

Submitted 2019-03-28 to SciPost Physics

Atomic, Molecular and Optical Physics - Experiment

Sub-Doppler laser cooling of ^{39}K via the $4\text{S} \rightarrow 5\text{P}$ transition

by Govind Unnikrishnan, Michael Gröbner, Hanns-Christoph Nägerl

Submitted 2019-03-26 to SciPost Physics

[View all Submissions](#)

Our future: Plan SciPost

It is time for us to be bold and unleash the next steps in our implementation plans.

[Read more here](#)

Register

Professional scientists (PhD students and above) can become Contributors to SciPost by filling the [registration form](#).

News

SciPost top of the class at Crossref metadata

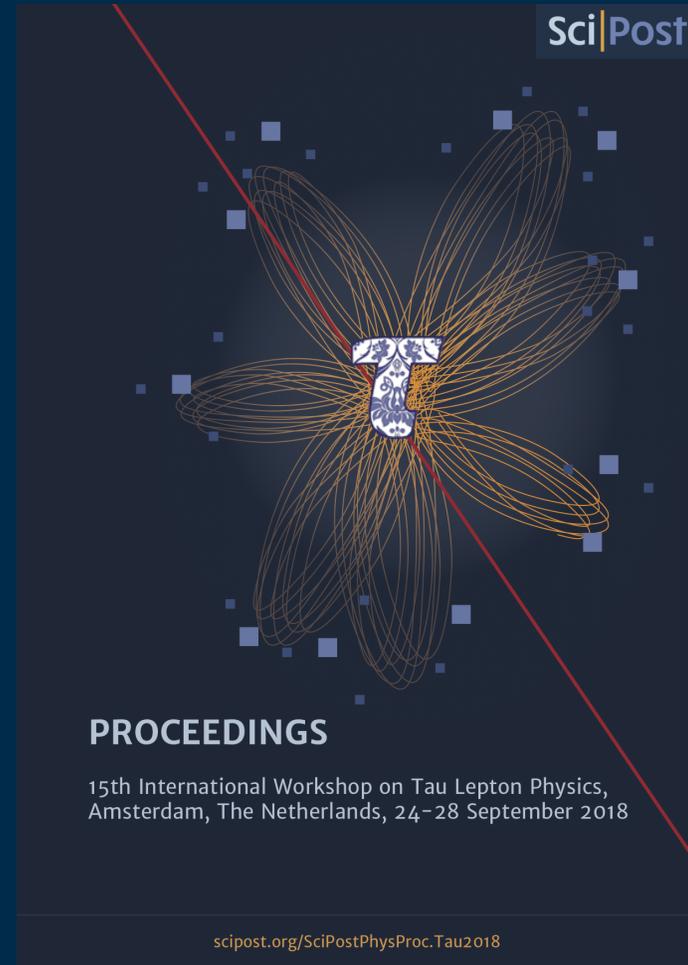
27 March 2019

An independent study of scientific metadata collections has recently highlighted the quality of our publishing services. According to Dr Habermann (Boulder, Colorado), SciPost has the most complete metadata of all 8670 CrossRef members with current collections of journal articles.

Journals

- SciPost Physics
- SP Lecture Notes
- SP Proceedings

**302 publications
as of now**



SciPost Physics

Recent Issues

All Issues

SciPost Physics Vol. 6 issue 5
May 2019

SciPost Physics Vol. 6 issue 4
April 2019

SciPost Physics Vol. 6 issue 3
March 2019

SciPost Physics Vol. 6 issue 2
February 2019

SciPost Physics Vol. 6 issue 1
January 2019

Subject area

Show all

Atomic, Molecular and Optical Physics –
Experiment

Atomic, Molecular and Optical Physics –
Theory

Biophysics

Condensed Matter Physics – Experiment

Condensed Matter Physics – Theory

Condensed Matter Physics –
Computational

Fluid Dynamics

Publications

Order by: [publication date](#) [number of citations](#)

Emergent Gravity and the Dark Universe

Erik P. Verlinde

72 citations

SciPost Phys. 2, 016 (2017) · published 16 May 2017 | [Toggle abstract](#) · [pdf](#)

Conformal field theory for inhomogeneous one-dimensional quantum systems: the example of non-interacting Fermi gases

Jérôme Dubail, Jean-Marie Stéphan, Jacopo Viti, Pasquale Calabrese

56 citations

SciPost Phys. 2, 002 (2017) · published 13 February 2017 | [Toggle abstract](#) · [pdf](#)

A note on generalized hydrodynamics: inhomogeneous fields and other concepts

Benjamin Doyon, Takato Yoshimura

45 citations

SciPost Phys. 2, 014 (2017) · published 22 April 2017 | [Toggle abstract](#) · [pdf](#)

Energy diffusion and the butterfly effect in inhomogeneous Sachdev-Ye-Kitaev chains

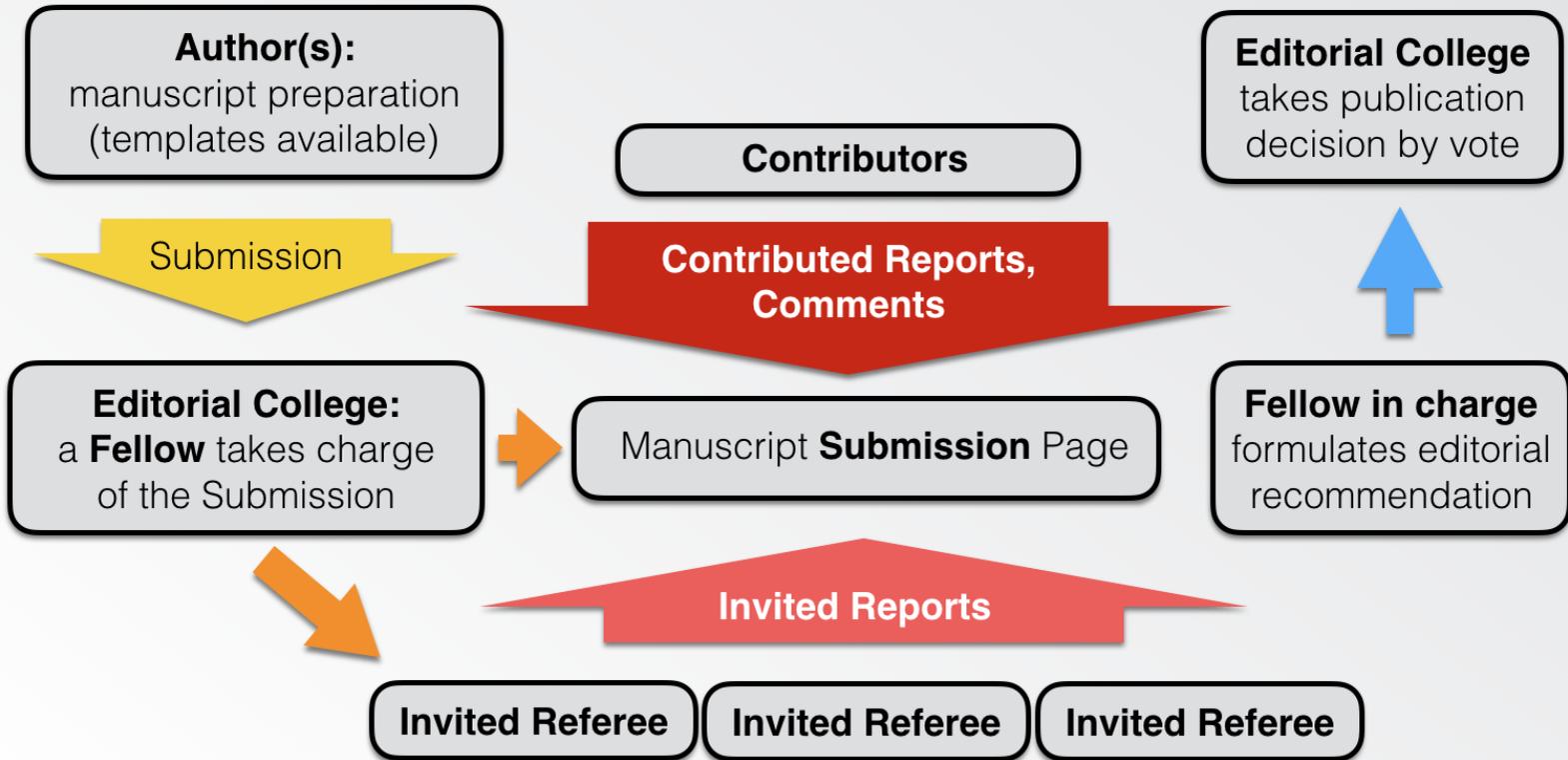
Yingfei Gu, Andrew Lucas, Xiao-Liang Qi

35 citations

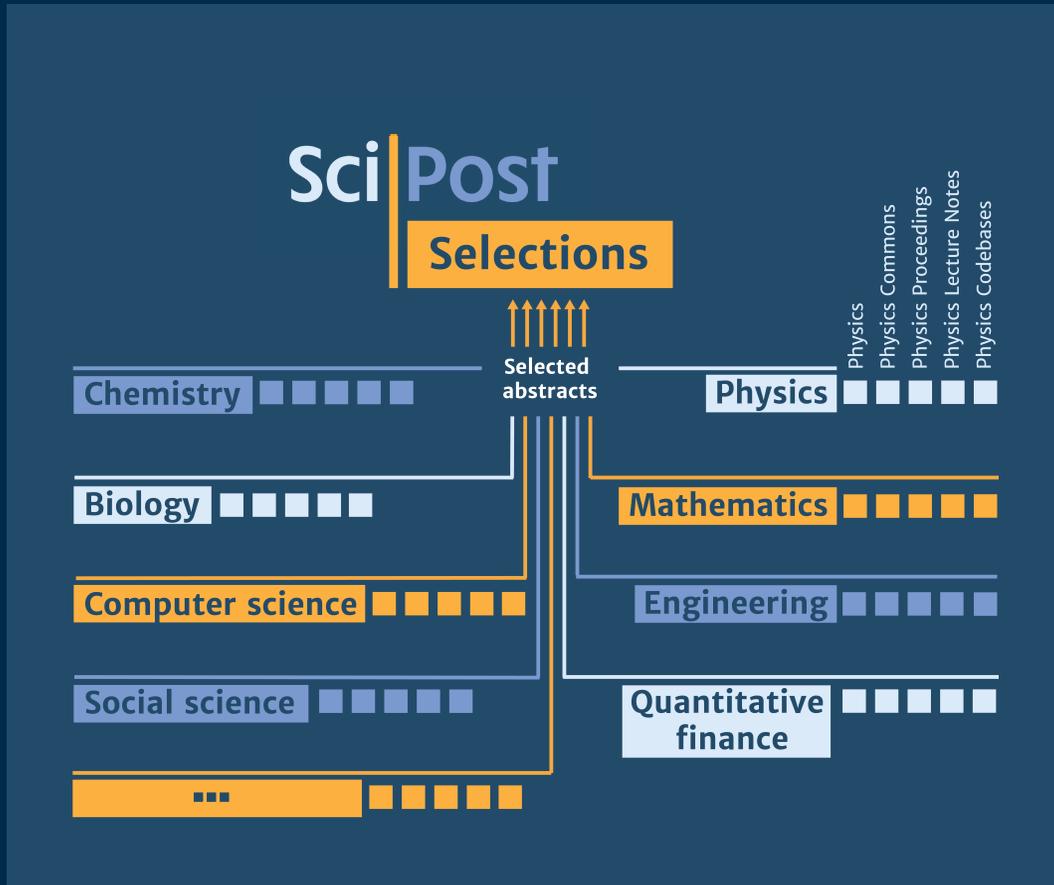
SciPost Phys. 2, 018 (2017) · published 28 May 2017 | [Toggle abstract](#) · [pdf](#)

Editorial flowchart: *peer-witnessed refereeing*

Inspirations: *F1000; ACP, PLOS...*



Roadmap



- Physics upscaling
- Selections
- Codebases
- Metrics
- Meta services
- Chemistry
- Maths
- Comp. Sci. ?
- [others?]

SciPost's infrastructure

Based exclusively on Free Software

Tech stack:

SciPost's main software systems are all built from scratch, in-house

- Django *[Python web framework]*
- PostgreSQL *[database engine]*
- Node.js *[server-side javascript]*
- Bootstrap *[frontend]*
- MathJax *[LaTeX javascript engine]*
- Gitea *[git repo hub]*
- Haystack, Celery, RabbitMQ, Flower...



Welcome to SciPost's code repositories

This site is the anchor for all the code repositories relevant to the operations of the [SciPost.org](https://www.scipost.org) scientific publication portal.

Interested in contributing?

Are you knowledgeable in modern web technology based on a Django + Postgresql stack?

Do you have working familiarity with academia in general, and scientific publishing in particular?

If you would like to join our core team of developers, please send an email to the project leader [Prof. J.-S. Caux](mailto:caux@scipost.org) with your CV, personal details and motivations.

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SciPost's codebase.

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🕒 4570 Commits 🌿 9 Branches

🌿 Branch: master ▾ New Pull Request New File Upload File HTTPS SSH https://code.scipost.org/scip 📄 📥

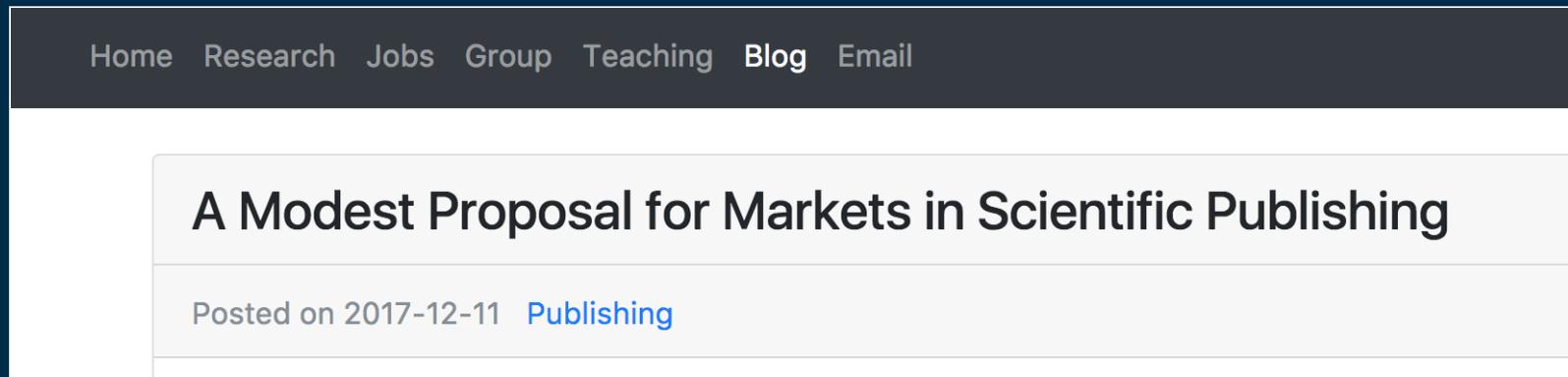
 J.-S. Caux cf3736c5d0 Merge branch 'dev_JSC_20190513_simplifiedReport'	1 day ago
 SciPost_v1 Remove unused django-simple-captcha app	3 days ago
 colleges Beautify Colleges page	1 day ago
 commentaries Replace lots more django.core.urlresolvers by django.urls	4 days ago
 comments Replace lots more django.core.urlresolvers by django.urls	4 days ago

Let's now talk
business...

I love markets!

(heck, I'm from Canada, I even trained as a stock broker)

Markets work well... *except when they don't*



**Publishing: prime example of capitalism
propped up by socialism**

Classifying publishing business models

Home Research Jobs Group Teaching Blog Email

Noble metals for a noble cause

Posted on 2017-09-20 [Publishing](#)

Gold [Au]

APC-based financing

Platinum [Pt]

publisher does not apply any charges to authors (APCs, submission charges or any other), and is funded through a consortial scheme or equivalent

Palladium [Pd]

publisher runs a purely not-for-profit public enterprise: none of its activities generate any profit, and all financial statements are publicly disclosed

Iron [Fe]

subscription-based financing, or pay-to-read

Lead [Pb]

editorial and financial aspects are not hermetically decoupled

Grade	Principle	Characteristics
10-karat	<i>generosity to readers: open access</i>	<ul style="list-style-type: none"> • make full text of publications freely available to readers (Creative Commons license)
14-karat	<i>generosity to authors: copyright, embargo</i>	<ul style="list-style-type: none"> • copyright is given to the authors without restrictions • publishing occurs without any embargo period
18-karat	<i>generosity to users: reuse, remix, crawl, citations</i>	<ul style="list-style-type: none"> • publication license allows reuse and remixing of content (CC BY, BY-SA or BY-NC licenses) • publisher allows text mining (software/spiders can automatically crawl journal content) • publisher makes its citation data publicly available (ideally via participation in I4OC)
22-karat	<i>generosity to reviewers: open reports</i>	<ul style="list-style-type: none"> • refereeing reports are openly visible and citable
24-karat	<i>generosity to community: academic control</i>	<ul style="list-style-type: none"> • the entire responsibility for publication decisions is in the hands of active professional scientists

A useful exercise

Educate yourself on the business model of publishers you:

- publish with
- referee for
- perform editorial work for

Watch out for wolves in sheep's clothing

SciPost's business model

- no APCs, no subscriptions [*Platinum*]
- fully not-for-profit operations [*Palladium*]
- consortial model: donations
(inspirations: arXiv, OLH, ...)

Organizations benefitting from our activities

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Organizations / Organizations

Organizations

This page lists Organizations which have benefitted from SciPost's publishing activities.

Organizations are linked through appearing in a publication's author affiliations, grant-giving agencies or explicit support acknowledgements.

For each Organization, the NAP (number of associated publications) is given (you can order in decreasing/increasing NAP using the header arrows).

Click on a row to see more details about the Organization, including per-year breakdowns of:

- associated publications
- associated authors
- partnership history

Click on flag to view by Country

View all



Country	Name [acronym]	NAP  ^ v	SciPost sponsor?
 [BE] Belgium	European Commission [EC] Parent of: European Regional Development Fund, European Research Council	77	Not yet
 [BE] Belgium	European Research Council [ERC] Parent: European Commission	60	Not yet



Fonds zur Förderung der wissenschaftlichen Forschung / FWF Austrian Science Fund [FWF]

Parent: [Austrian Academic Library Consortium](#)

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Publications associated to this Organization:

2019

- [Sub-Doppler laser cooling of \$^{39}\text{K}\$ via the \$4S \rightarrow 5P\$ transition](#)
by Govind Unnikrishnan, Michael Gröbner, Hanns-Christoph Nägerl,
SciPost Phys. 6, 047 (2019)
- [Quantum null energy condition and its \(non\)saturation in 2d CFTs](#)
by Christian Ecker, Daniel Grumiller, Wilke van der Schee, Shahin Sheikh-Jabbari, Philipp Stanzer,
SciPost Phys. 6, 036 (2019)
- [Search for lepton-flavour-violating decays of the \$Z\$ boson into a \$\tau\$ -lepton and a light lepton with the ATLAS detector](#)
by Wing Sheung Chan on behalf of the ATLAS collaboration,
SciPost Phys. Proc. 1, 048 (2019)
- [Multiloop functional renormalization group for the two-dimensional Hubbard model: Loop convergence of the response functions](#)
by Agnese Tagliavini, Cornelia Hille, Fabian B. Kugler, Sabine Andergassen, Alessandro Toschi, Carsten Honerkamp,
SciPost Phys. 6, 009 (2019)
- [Tangent-space methods for uniform matrix product states](#)
by Laurens Vanderstraeten, Jutho Haegeman, Frank Verstraete,
SciPost Phys. Lect. Notes 7 (2019)

The PubFractions System

- Upon publication, authors are asked to apportion a unit of "support credit" between organizations
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- Every year, SciPost computes an average full infrastructure cost per publication
- Organizations can use this to determine their level of support

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 [FR] France

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Parent of: Aix-Marseille University, Laboratoire de Physique Théorique de la Matière Condensée, Université Pierre et Marie Curie, École Polytechnique

Details

Publications & PubFractions

Associated Authors

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Publications associated to this Organization (with total PubFractions

2019 (total pubfractions: 1.900)

- [Conformal field theory on top of a breathing one-dimensional gas of hard core bosons](#)
by Paola Ruggiero, Yannis Brun, Jérôme Dubail,
SciPost Phys. 6, 051 (2019)
Pubfraction: 0.500
- [Equilibrium fluctuations in maximally noisy extended quantum systems](#)
by Michel Bauer, Denis Bernard, Tony Jin,
SciPost Phys. 6, 045 (2019)
Pubfraction: 0.300
- [Search for lepton-flavour-violating decays of the \$Z\$ boson into a \$\tau\$ -lepton and a light lepton with the ATLAS detector](#)
by Wing Sheung Chan on behalf of the ATLAS collaboration,
SciPost Phys. Proc. 1, 048 (2019)
Pubfraction: 0.000
- [Status of DUNE](#)
by Alessandra Tonazzo on behalf of the DUNE Collaboration,
SciPost Phys. Proc. 1, 043 (2019)
Pubfraction: 0.700
- [Latest results of the OPERA experiment on nu-tau appearance in the CNGS neutrino beam](#)
by N. Agafonova, A. Alexandrov, A. Anokhina, S. Aoki, A. Ariga, T. Ariga, A. Bertolin, C. Bozza, R. Brugnera, A. Buonaura, S. Buontempo, M. Chernyavskiy, A. Chukanov, L. Consiglio, N. D'Ambrosio, G. De Lellis, M. De Serio, P. del Amo Sanchez, A. Di Crescenzo, D. Di Ferdinando, N. Di Marco, S. Dmitrievsky, M. Dracos, D. Duchesneau, S. Dusini, T. Dzhatdoev, J. Ebert, A. Ereditato, J. Favier, R. A. Fini, F. Fornari, T. Fukuda, G. Galati, A. Garfagnini, V. Gentile, J. Goldberg, S. Gorbunov, Y. Gornushkin, G. Grella, A. M. Guler, C. Gustavino, C. Hagner, T. Hara, T. Hayakawa, A. Holtnagel, K. Ishiguro, A. Iuliano, K. Jakovcic, C. Jollet, C. Kamiscioglu, M. Kamiscioglu, S. H. Kim, N. Kitagawa, B. Klicek, K. Kodama, M. Komatsu, U. Kose, I. Kreslo, F. Laudisio, A. Lauria, A. Longhin, P. Loverre, M. Malenica, A. Malgin, G. Mandrioli, T. Matsuo, V. Matveev, N. Mauri, E. Medinaceli, A. Mereaglia, S. Mikado, M. Miyanishi, F. Mizutani, P. Monacelli, M. C. Montesi, K. Morishima, M. T. Muciaccia, N. Naganawa, T.

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Plan S

What about Plan S?

Personally, I am *very much* in favour

How does SciPost relate to Plan S?

SciPost is (over)compliant

... but has not yet received official support from cOAlitionS (*from some members: yes it did*)

C.f. Point 3 of Plan S; *we are hopeful!*

Robert-Jan Smits @ KNAW Dec. 2018



What about reactions to Plan S?

Personally, here, I am *partly concerned*

Genuine concerns exist, but...

lots of incorrect info is being propagated

I'd prefer to think scientists as being immune to fake news and hidden agendas, but...

My hope remains that scientists will embrace the needed reform rather than undermine it

Evaluation metrics

Many problems with current system:

- Data is behind closed doors
- Protocols unknown; irreproducible
- If proprietary: expensive
- If "free": jungle; bad frontend
- Filters/metrics are not customizable

Current metrics are too insultingly simple to be significant, but too insultingly significant to simply ignore.

An excellent initiative

the Initiative for Open Citations I4OC.org

Basic idea:

- Citation data can be included in a published article's metadata by the Publisher
- The metadata is deposited at Crossref
- The publisher agrees to give the citation metadata a CCo license
- Anybody can query Crossref to get the citation metadata

Problems

- Not all publishers include citations in their metadata
- Not all publishers participate in I4OC
- The metadata that is present, isn't always perfect

Nonetheless, at SciPost, we are currently developing a metrics engine based on the Crossref data.

End message:

Scientists: you hold the keys to the future.

With you, full OA with reproducible research
will inevitably happen.

Without you, it won't.

So take your responsibilities and just do it.

Thanks!