NATURE | NEWS

Mathematicians aim to take publishers out of publishing

Episciences Project to launch series of community-run, open-access journals.

Richard Van Noorden

17 January 2013   Corrected: 17 January 2013

Mathematicians plan to launch a series of free open-access journals that will host their peer-reviewed articles on the preprint server arXiv. The project was publicly revealed yesterday in a blog post by Tim Gowers, a Fields Medal winner and mathematician at the University of Cambridge, UK.

The initiative, called the Episciences Project, hopes to show that researchers can organize the peer review and publication of their work at minimal cost, without involving commercial publishers.

"It's a global vision of how the research community should work: we want to offer an alternative to traditional mathematics journals," says Jean-Pierre Demailly, a mathematician at the University of Grenoble, France, who is a leader in the effort. Backed by funding from the French government, the initiative may launch as early as April, he says.

Jean-Pierre Demailly is a leader in an effort to create a researcher-run publishing system.

Many mathematicians — and researchers in other fields — claim that they already do most of the work involved in publishing their research. At no cost, they type up and format their own papers, post them to online servers, join journal editorial boards and review the work of their peers. By creating journals that publish links to peer-reviewed work on servers such as arXiv, Demailly says, the community could run its own publishing system. The extra expense involved would be the cost of maintaining websites and computer equipment, he says.

That cost is not small, but it could eventually be provided in part by the journals' users. The arXiv server, for example, costs about US$826,000 a year to run, and is funded by the Cornell University Library in Ithaca, New York; the Simons Foundation in New York and institutional members.

Demailly says that he first thought of open-access electronic journals that overlay arXiv eight years ago, but the concept became a reality only last June, when he was contacted by the Centre for Direct Scientific Communication (CCSD), based in Villeurbanne, France. The CCSD, a unit of the French National Centre for Scientific Research, develops open-access repositories such as the multidisciplinary archive HAL, which mirrors the arXiv site.

For the Episciences Project, the CCSD plans to create a publishing platform that will support online peer-reviewed journals. Each journal, or 'epijournal', would have its own editor and editorial board, and authors could submit their arXiv-posted papers to their journal of choice. The journal would then organize peer review, perhaps using workflow software provided by the CCSD. Peer-reviewed papers would be posted on arXiv alongside their un-reviewed versions. A central committee (led by Demailly) would manage new journal candidates and make recommendations on paper formatting, but each journal would be free to set its own policies (including whether to charge for publication).

Gowers plans to start a journal in the interdisciplinary field of additive combinatorics; Demailly would not say what other early epijournals might be. Gowers has strong views on shaking up research publishing — last year, he kick-started a boycott of the Dutch publishing giant Elsevier (see also *Nature*'s profile of Gowers).

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The idea of overlaying arXiv is not new: some mathematics journals tried it in the early 2000s but scrapped the idea because libraries began dropping print subscriptions, says Demailly. Meanwhile, there are already some free, community-organized mathematics journals, such as *Documenta Mathematica*, funded by the German Mathematical Society. "They are doing things on their own with a small website; we will have a global platform capable of drastically reducing an individual journal's administration costs," Demailly says.

Demailly says that he expects to adjust the concept with feedback from the mathematics community. "If people want larger reviews linked to papers, or the possibility of online comments and blogs, we can offer this with only minor changes to the platform," he says. At the moment, the model's success or failure hinges on buy-in from mathematicians — but the involvement of Gowers and other prominent mathematicians, such as Terence Tao of the University of California, Los Angeles, may help to build support.

Nature   doi:10.1038/nature.2013.12243

Corrections

Corrected: An earlier version of this story misstated the annual cost of the arXiv as $200,000 instead of $826,000. This has now been corrected.

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Carlos Stuart · 2013-05-13 05:35 PM
If people want larger reviews linked to papers, or the possibility of online comments and blogs, we can offer this with only minor changes to the platform. One is laptop screen Europe that is the best.

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They are doing things on their own with a small website; we will have a global platform capable of drastically reducing an individual journalâ&#x80&#x99s administration costs for Fresh water pearl bracelets or something similar.

rooney dynker · 2013-05-04 12:09 AM

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Felix Birman · 2013-04-30 01:12 PM

A central committee would manage new journal candidates and make recommendations on paper formatting for sure. Here I read about it: Letting Agent Oxford and seems to be real.

Silvie Scarts · 2013-04-30 06:24 AM

I think that you will succeed with this new method and theory! Some Printers Manchester already made some report about it.

Ron Paterson · 2013-04-26 07:18 PM

I'm a bit skeptic about this initiative &#8211 I think everyone should deal with what they are best at! Mathematicians should work on mathematics &#8211 publishers should focus at publishing at minimum cost and maximum, exposure.... That's my opinion.

Dani Jimons · 2013-04-18 07:21 PM

Yes, the want to do it, but is it possible? I think it is not! At least that is my personal opinion. Blinds Kent

lucia smile · 2013-04-12 05:25 AM

The power flushing Birmingham did the same thing and with excellent results. I saw an online report about such thing and maybe we should follow it.

olegary mussul · 2013-03-21 03:49 PM

At some point a longer list will become a List of Great Mathematicians rather than a List of Greatest Mathematicians. I've expanded the List to an even Hundred, but you may prefer to reduce it to a Top Seventy, Top Sixty, Top Fifty, Top Forty or Top Thirty list, or even Top Twenty, Top Fifteen or Top Ten List lipo 6 black ultra

Lucia Smile · 2013-03-19 10:10 AM

I know what you mean. I have one related website and I noticed this trend. I don't see a good reason for this thing! Maybe you can give us extra details. MBAglue

Janice Merkoward · 2013-03-10 10:24 PM

I think the most important thing is to adjust to new innovations and ideas. There is no reason why the mathematician publication will not be online so that anyone can access it , and make comments or responses. This will make mathematics more accessible by the general public. I' a pet lover and after hesuitation i opened the Best dog food blog and I'm very proud of it!

Bob kerny · 2013-03-07 03:53 PM

think this is a great thing - It will open mathematics for me and for every mathematics fans (and there are many of those). The appearance of community-organized mathematics journals, such as Documenta Mathematica is also another step forward, for making mathematics available for everybody. Its about time science will be exposed for everybody. I may even publish my runing machine blog in an independent publication.
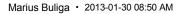
Ron Paterson · 2013-03-07 12:48 PM

This is really a surprise to me &#8211 people should deal what they understand &#8211 What do mathematicians know about publishing? I hope Im wrong, but due to what I know about publishing, these mathematicians have underestimated the time and cost of the whole process. Grossly estimating think its around 600K and not 200K at they estimated before.... and what about the required time?

Christopher Jones · 2013-02-19 10:42 AM

I love it when movements turn out like this. Too often does an outpouring of money or somebody incredibly powerful cut short change for the better. But this is one of the marvelous and unfortunately rare instances when everybody is stepping up to fix a broken system and they're fixing it. It makes me happy for the future.

Marius Buliga · 2013-01-30 08:50 AM

I am running a poll concerning comments in future OA journals (like the epijournals, but not exclusive). There seem to be heated exchanges about pro or con having comments for articles in OA journals.

If you care about this subject then please make a visit and vote, it is anonymous.

Andreea Hill · 2013-01-27 01:05 PM

This is more than a little like the NIN/Radiohead/bignamepopstar dropping out of the record labels thing. if you are already an established mathematician, then you can publish anywhere.

I have a math paper on the arXiv which was submitted to an Elsevier journal. It took almost two years to get a response from a reviewer but, you know what, I'm actually delighted it was reviewed at all (and now I have to respond to comments, which is hard when you don't have an academic job, or much of a job at all.)

Gowers and Tao have Fields medals: people are always going to pay attention to their ideas. The issue has never been cost or technology, but whether i t can sustain a community of mathematicians. That's going to be more about whether little guys like me can get attention for their work rather than rock stars...

Mehmet Karamanoglu · 2013-01-27 01:05 AM

A welcome development by Episciences.org. This certainly is keeping in line with what is now very quickly becoming a highly controversial, but very timely development. While access and speed are the key benefits of open-access publications, maintaining quality and how this is perceived by the wider community will be the longer term challenge. Well worth trying though.

Stevan Harnad · 2013-01-25 09:40 PM

WHAT IS A PEER-REVIEWED JOURNAL?

1. A journal is a peer-review manager (peers, chosen by editor, review free, editor adjudicates reviews and revisions) and copy-editor.

2. If the article is accepted, the accepted draft is certified with the journal's name.

3. The journal generates and distributes (3a) a print and/or (3b) online edition.

A journal that does not generate a print edition (3a) is still a journal.

A journal that does not generate an online edition (3b) is still a journal.

If costs are paid by subscriptions, it's a subscription journal.

If costs are paid by subsidies, it's a subsidized journal.

If caused are paid by the author, it's an author-pays journal.

OA is free online access, immediately upon publication.

If OA is provided by the journal, it's Gold OA publishing.

If OA is provided by the author, it's Green OA self-archiving.

If the journal is OA, it's a Gold OA journal. If not, not.

There is hence no need for (nor any new information provided by) new terms like "diamond," "overlay" or "epi" journal.

An OA journal that charges neither subscriptions nor author-fees is a subsidized journal ("diamond" adds no further information or properties).

An OA journal that generates neither a print nor an online version is an OA journal that generates neither a print nor an online version: the self-archived version is the only version.

The reasons (some) physicists and mathematicians speak of "overlay" journals is because many physicists and mathematicians, before submitting their papers to a journal for peer review, self-archive their unrefereed "preprints" in Arxiv. They also self-archive their final, peer-reviewed "postprints" in Arxiv. They think of the peer-review, copy-editing, and certification as an "overlay" on their unrefereed preprint.

But, by the same token, the peer-review, copy-editing is an "overlay" on every author's unrefereed preprint, whether the journal is print, online, both, or neither; and most authors don't self-archive their unrefereed drafts at all...

Benoît Kloeckner · 2013-01-22 03:06 PM

I have a correction to make to the article:
"Each journal, or â€˜epijournalâ€&#x99, would have its own editor and editorial board, and authors could submit their arXiv-posted papers to their journal of choice."
In fact, arXiv is not the only open archive to be used; it will be possible to submit a paper posted on HaL for example, and maybe other open archive in the future.

Marius Buliga · 2013-01-21 06:12 PM

Congratulations to Episciences.org and to Jean-Pierre Demailly for this initiative. Judging by the reactions in blogosphere, there are many expectations and also a bit of dispute, especially concerning the use of comments in epijournals.

A public discussion will be useful. I am personally in favor of comments, following policies alike those used by wikipedians, see Comments in epijournals: we may learn from Wikipedia . A provocative question is: may well designed policies for comments transform the peer-review process into a massively networked collaboration?

Ronald Brown · 2013-01-21 11:51 AM

The journal Theory and Applications of Categories was founded in 1995 and is a completely free web based journal. The Managing Editor since its foundation is Bob Rosebrugh and he writes on the experience at http://www.ams.org/notices/201301/rnoti-p97.pdf for the American Mathematical Society.

The advantages for authors are that the main delay to publication is the refereeing time, and that the final version is freely available to readers.

Note that originally mathematics journals were expensive because of the expense of typesetting mathematics. Nowadays, with the excellent typesetting available through the program LaTeX, whose version TeX was given freely to the community by Donald Knuth, this typesetting is done by authors. But of course many mathematics journals are still expensive!

A difficulty about founding journals in this way is that some countries base their accreditation of journals for research funding and promotion on their listing by the highly successful Thomson Reuters ISI. lack of such listings may therefore discourages authors from submission. The full procedures for obtaining such listings and the qualifications of those making these judgements, are not publicly available, nor are they subject to outside quality assurance, as far as I am aware. Results of such assessments are simply given to Editors as Yes or No.

As Bertrand Russell is reputed to have remarked, if it is a question of potato sorting, it is better to be a consultant or assessor of potato sorting, that to actually do the sorting!

Ranto Rants · 2013-01-20 01:29 PM

IMS (Institute of Mathematical Statistics) have already taken actions in this line. Papers published in most of their journals are also published in arXiv by the journal itself.

It is quite disturbing how publishers like Elsevier, among many others, charge stratospherical fees for papers that they DID NOT fund, DID NOT produce, DID NOT review, and WERE NOT involved in the editorial process. This is increasing the gap between science in developing and developed countries.
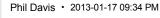

Dana Roth · 2013-01-20 06:31 AM

Given the reasonable costs associated with publishing very high quality journals (e.g. Phys. Rev.), I hope these mathematicians haven't grossly underestimated the time investment required to achieve their goals.

Bernd Einfeldt · 2013-01-18 11:21 AM

Does that really change something or does I just change the group of people who control the publishing process? A few month ago I uploaded a paper to arXiv and accidentally use a headline of a previous paper (cut and paste error). A administrator refused to publish the paper, stating that it contained nothing new &#8211 he obviously did not read it. If your really wanÂ´t open access create a side where everyone qualified can publish his papers online &#8211 first tacked as not reviewed. Thats how Quantum Mechanics was born.

Richard Van Noorden · 2013-01-18 02:18 AM

Thanks for flagging that error Phil &#8211 this has now been corrected.

Phil Davis · 2013-01-17 09:34 PM

The cost of running the arXiv (both direct and overhead costs at Cornell) are closer to $800K, not $200K, as reported in your piece. These expenses do not include the editorial costs of running a journal on top of the repository.

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