

# The myths of scientific edition

An awareness campaign

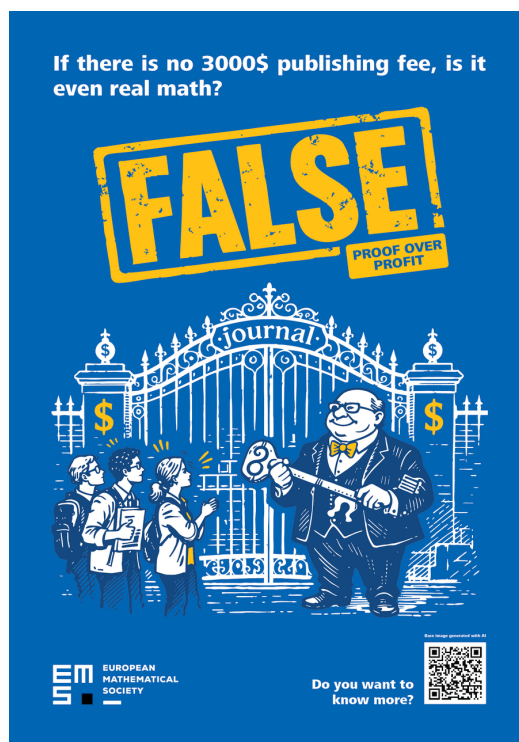
Christophe Ritzenthaler

You are walking down the street, and someone steals your wallet. Your first reflex? You run after the thief ... only to hand over your watch as well. Then, once you get home, you call the city council to make sure this person is properly rewarded for their actions. Does this sound absurd? Yet, this is exactly what many of us do with our articles (our wallet), our time as reviewers or editors (our watch), and the funding of our institutions or governments when dealing with major commercial publishing houses like Springer, Elsevier, and others.

This ‘triple taxation’ along with the more recent drifts in the scientific publishing system (such as article processing charges (APCs), predatory journals, etc.) has already been widely commented on. It has been discussed in these very pages [7, 8], in numerous specialized journals and preprints [2, 4–6], and even in mainstream media [1, 3]. Some of you might feel a sense of *déjà-vu* reading these lines, and that is a sign that we are finally starting to address the issue at a scale commensurate with what is at stake (namely, our jobs and careers!).

Let us take a moment to pat ourselves on the back, as our community has not remained passive. Diamond open-access journals (free for both reader and author),<sup>1</sup> “Subscribe to Open” models like at EMS Press,<sup>2</sup> and journals supported by university presses that reinvest profits into the community are all on the rise. Initiatives are multiplying, much to the dismay of commercial publishers who are, naturally, fighting back. They do so by deliberately confusing Diamond and Gold open access, promoting ranking of journals based on bias factors, increasing APCs, scaling up *paper mills*, degrading reviewing standards, or imposing transformative agreements.

Naively, the solution seems to be within reach: after all, are we not already doing all the work? Not exactly: peer review, formatting, printing, or archiving, scientific publishing has a cost. It is much smaller in practice than the ones imposed by the big commercial editors (just look at their profits!), but it must be borne



by a benevolent actor (foundation, university, etc.). Once this is the case, implementing these changes takes time and energy, time that we would, of course, prefer to spend on our core business, which is research, rather than delving into the legal technicalities of publishing contracts.<sup>3</sup> There is also a scaling factor if we wanted to massively migrate all mathematical journals to absorb the annual production of our articles. The problem is in fact structural and much deeper: it is the entire system based on quantitative evaluation, on indices (impact factor and others), which is at the

<sup>1</sup> For a list of such journals, see the CIMPA Open Access node at <https://www.cimpa.info/en/node/68> or the curated list of “mathematician-friendly” journals by K. Ramdani at <https://karim-ramdani.perso.math.cnrs.fr/2025/11/14/quelques-revues-mathematiciens-friendly/>.

<sup>2</sup> <https://ems.press/open-access/subscribe-to-open>

<sup>3</sup> It may be an inspiring story to write down in another article the difficulties and obstacles created by Springer during the transition of the journal *Foundations of Computational Mathematics* (<https://ems.press/journals/focm>) to EMS Press.

source of the multiple drifts we are witnessing today. It is sometimes difficult to realize the tsunami this represents when working in the West. For some countries where university funding is directly proportional to the number of articles, it is a disaster: a Pakistani colleague, an algebraic geometer by training, told me about his forced conversion to a more prolific field of research to avoid being fired!

In such a systemic context and faced with the unbridled imagination of commercial publishers, it is good to remain alert, to raise awareness among the younger generation about these issues, but without stigmatizing those in the most precarious situations. Five posters (two you can see here) were designed with this goal in mind and illustrate five 'false pretenses' or 'myths' spread by commercial lobbies:

- The Cost Myth
- The Ownership Myth
- The Metric Myth
- The 'Big Deal' Myth
- The Efficiency Myth

Each poster has a QR code allowing users to consult a short explanatory text and references to further understand the subject. I will let you discover them and will simply add a few words about the genesis of the project.

During the annual ERCOM<sup>4</sup> meeting at Institut Henri Poincaré in 2025, one of the discussion topics focused on issues related to scientific publishing. On this occasion, it was decided to create an awareness campaign, either in the form of posters, short videos<sup>5</sup> or webinars.<sup>6</sup> This is the first initiative to come to fruition thanks to the collective work of a small group of colleagues:

- Ilka Agricola,<sup>7</sup> chair of the IMU Committee on Publishing
- Markus Juvonen,<sup>8</sup> community engagement manager of the EMS
- Evelyn Miot,<sup>9</sup> chair of the EMS Committee on Publications and Electronic Dissemination
- Christophe Ritzenthaler,<sup>10</sup> chair of ERCOM
- Olaf Teschke,<sup>11</sup> managing editor of zbMATH



It would be unfair not to mention another major contributor: the ubiquitous AI, which helped us to draft the posters before they were finalized by the EMS Press graphic designer, Panna Tomori. A big thank you to her and to Heiko Schinke, who manages the ERCOM website where the documents are stored.

All this material is freely accessible on ERCOM webpage<sup>12</sup>: the posters can be downloaded and printed to be displayed wherever they might catch the attention of colleagues, especially in our research centers and conference venues.

Speaking of AI, our community is on the brink of massive upheaval.<sup>13</sup> Just as the excesses of commercial publishing force us to rethink how we disseminate knowledge, artificial intelligence challenges the very nature of how we produce it. While our immediate fear might be the proliferation of increasingly undetectable *AI slop*, the future could completely redefine what is expected of a researcher. Even more than today, we will need to emphasize values beyond sheer quantity or our simple role as *problem solvers*. We must focus on intelligibility and the added value of bringing new understanding to humanity. To use the words of Bill Thurston: "*The product of mathematics is clarity and understanding. Not theorems, by themselves.*"

<sup>4</sup> <https://ercom.org>

<sup>5</sup> An example are the conference videos from a Simons Foundation workshop (<https://www.simonsfoundation.org/event/mps-workshop-on-perspectives-on-electronic-information-communication-in-the-mathematical-sciences/>).

<sup>6</sup> A notable example is the excellent series of webinars on publication and open access for doctoral students and young researchers organized by the French National Network of Mathematics Libraries (RNBM, <https://www.mbm.org>).

<sup>7</sup> <https://geometry-marburg.de>

<sup>8</sup> <https://researchportal.helsinki.fi/en/persons/markus-juvonen/>

<sup>9</sup> <https://www-fourier.univ-grenoble-alpes.fr/~miote/>

<sup>10</sup> <https://ritzenth.pages.math.cnrs.fr/web/>

<sup>11</sup> <https://scholar.google.com/citations?user=2youRoEAAAAJ>

<sup>12</sup> <https://ercom.org/awareness.html>

<sup>13</sup> On this topic, I can advise reading David Bessis's blog (<https://davidbessis.substack.com/p/the-fall-of-the-theorem-economy>).

## References

- [1] A. Abizadeh, Academic journals are a lucrative scam – and we're determined to change that. *The Guardian* (2024) <https://www.theguardian.com/commentisfree/article/2024/jul/16/academic-journal-publishers-universities-price-subscriptions>
- [2] I. Agricola, L. Heller, W. Schilders, M. Schubotz, P. Taylor and L. Vega, *Fraudulent publishing in the mathematical sciences*. *Notices Amer. Math. Soc.* **72**, 1038–1049 (2025)
- [3] M. Ansele, A researcher who publishes a study every two days reveals the darker side of science. *El País* (2023) <https://english.elpais.com/science-tech/2023-06-04/a-researcher-who-publishes-a-study-every-two-days-reveals-the-darker-side-of-science.html>
- [4] F. Beigel, D. Brockington, P. Crosetto, G. Derrick, A. Fyfe, P. G. Barreiro, M. A. Hanson, S. Haustein, V. Larivière, C. Noe, S. Pinfield and J. Wilsdon, The drain of scientific publishing. arXiv: 2511.04820v2 (2025)
- [5] J. Brainard, *Fast-growing open-access journals stripped of coveted impact factors*. *Science* (2023)
- [6] M. Catanzaro, *Citation cartels help some mathematicians—and their universities—climb the rankings*. *Science* (2024)
- [7] M. Schubotz and J. P. Solovej, *Fraudulent publishing in mathematics: a European call to action and how information infrastructure can help*. *Eur. Math. Soc. Mag.* **138**, 33–35 (2025)
- [8] O. Teschke, *Green, gold, platinum, nickel: on the status of Open Access in mathematics*. *EMS Newsl.* **110**, 60–63 (2018)

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