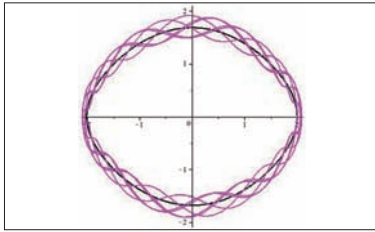


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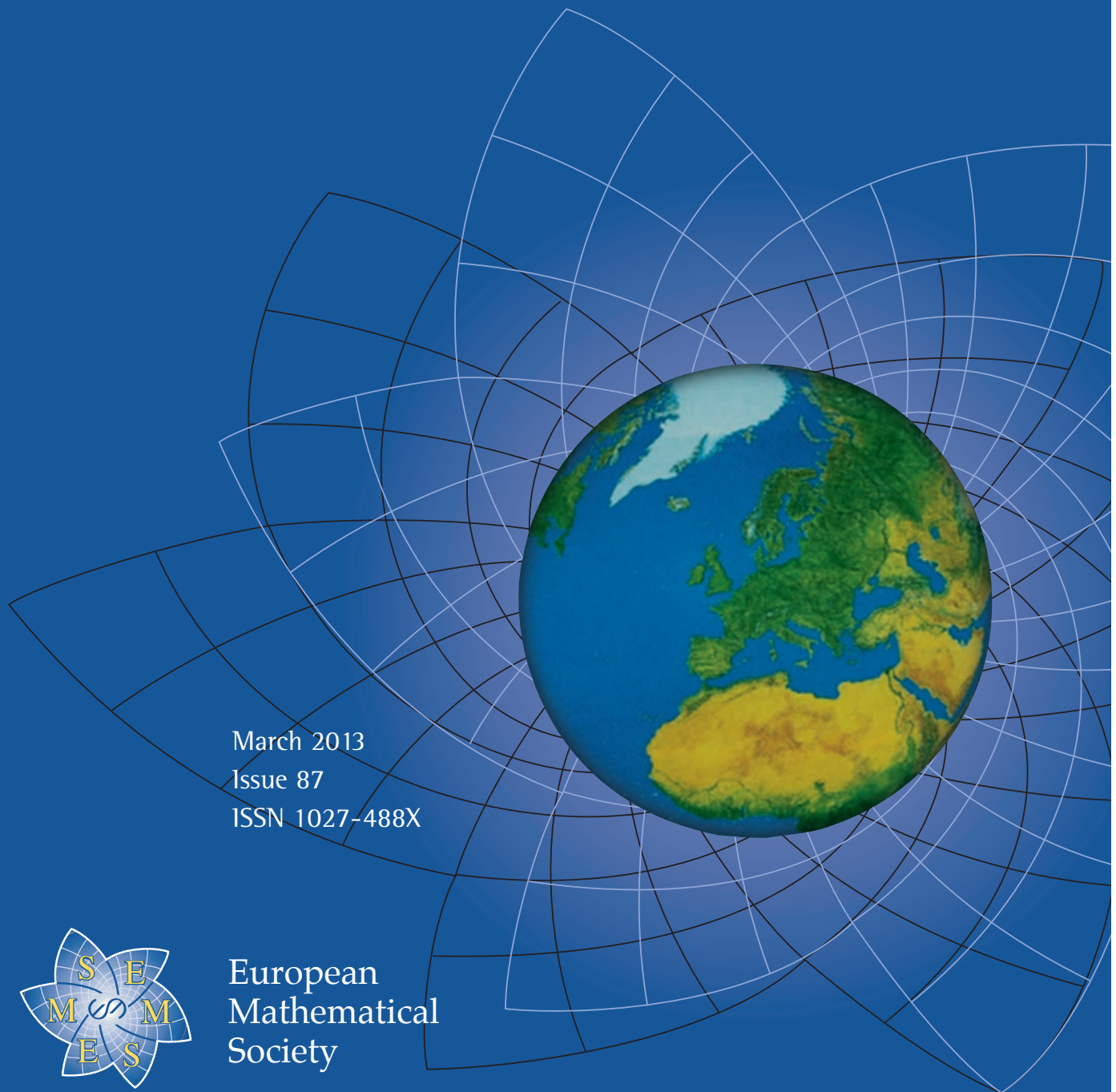
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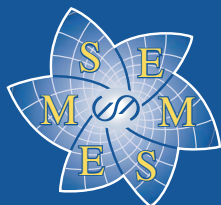
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March 2013
Issue 87
ISSN 1027-488X



European
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European Mathematical Society

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The views expressed in this Newsletter are those of the authors and do not necessarily represent those of the EMS or the Editorial Team.

ISSN 1027-488X
 © 2013 European Mathematical Society
 Published by the
 EMS Publishing House
 ETH-Zentrum SEW A27
 CH-8092 Zürich, Switzerland.
 homepage: www.ems-ph.org

For advertisements and reprint permission requests
 contact: newsletter@ems-ph.org

theory there are the frequentists vs. the interpretations of likelihood. We call ourselves “mild social constructivists”. Others have called us simply “mavericks”.

Despite the often cited saying of Pythagoras that “All is Number”, we doubt whether the Pythagoreans would have called the Songs of the Sirens mathematics. There is a separate and unique corpus of material, created over the centuries by the human intellect, that has been gathered together and has been called mathematics. Unity vs. disunity? *E pluribus unum*.

Acknowledgements

We wish to acknowledge fruitful discussions with Sussi Booß-Bavnbek, Ernest S. Davis and Katalin Munkacsy.

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Episciences: a publishing platform for Open Archive Overlay Journals

Jean-Pierre Demailly (Université Joseph Fourier, Saint-Martin d’Hères, France) on behalf of the epi-math committee

While ever-increasing prices of scholarly publications have raised concerns for a long time, a growing number of interesting evolutions have taken place in the scientific community, especially in mathematics: a universally accepted document format (TeX/LaTeX), a widely adopted electronic open archive with worldwide coverage (arXiv) and more recent attempts to create open access journals and open discussion forums. In the context of commercial publishers seemingly unlikely to propose affordable and sufficiently open solutions for scientific publications, the mathematical community seems ready to adopt new publishing models and get actively involved in the related developments. Since creating open access electronic platforms has become technically easy, the obstacles are more historical and sociological than anything else. What is needed is a convenient framework that gives our community the tools to assess, correct, certify, archive and make widely available their production.

“Episciences” is a project hosted by the CCSD (Centre pour la Communication Scientifique Directe, located

at Lyon University and attached to CNRS/IN2P3, a network of nuclear physics laboratories), in collaboration with Institut Fourier (a mathematics research department at Grenoble University, France). The CCSD develops the open archive “HAL” and also maintains a complete mirror of arXiv and an interface between HAL and arXiv. The aim of “Episciences” is to provide a publishing platform that makes it as easy as possible to host, run or create open archive overlay journals (hopefully a large number of them, independent of each other). Technically, the platform will rely on the HAL archive.

An overlay journal is a scientific journal that is focused on the peer-review process, and backed by one or several open archives for its diffusion and data handling. The first goal is to make it possible to efficiently run a journal at minimal cost and the second goal is to enforce a unified open access to the electronic version. In recent years, some print journals briefly became overlay journals but this experiment could not be sustained over an extended period. Episciences is an attempt at electronic-

only overlay journals, providing a priori a much reduced operational cost.

The journals hosted in Episciences, called epijournals, will be either new publications or existing journals that have accepted to collaborate. Episciences will start with a focus on mathematics but might extend to other fields. The platform is expected to start its operation during the first semester of 2013.

The editorial process envisioned is quite standard: authors submit their articles after making them available in the arXiv or in HAL and provide the ID of their e-print to a specified epijournal of their choice. The editorial board of that epijournal handles the submission exactly as for a traditional scientific journal, appointing referees and deciding to publish – or not – when the report is received. If the article is accepted after suitable corrections have been made, it is subsequently listed on the webpage of the journal as a link to the actual file, the final version of which is stored solely in the open archive.

Episciences will provide all relevant services to help the epijournal editorial boards in managing the various tasks required by the editing and refereeing process. In particular, it will provide a global web platform devoted to implementing these services. One feature that is expected to save editors a lot of time is an email channel that will enable, between the submission and the final decision, the authors and the referees to communicate together while keeping the referee anonymous. The referee will therefore be able to suggest/ask for all needed corrections and modifications from the author and generally the editor will not need to act as an intermediary before a final report is written. The most interesting feature, though, is that the CCSD will entirely develop and host the platform itself, so that extra technical costs are reduced to zero, allowing epijournals to operate in an open access model without having to require author fees or reader subscriptions. A unified presentation of the articles will normally no longer be needed. Instead, Episciences will offer a normalised (La)TeX format suitable for A4/letter printing of the articles; editorial boards and referees will have to take care that the articles are typeset in a professional manner. In addition to giving their scientific views on research papers, the epijournal editorial boards will have the opportunity to post reviews concerning the accepted papers – Episciences encourages this option but does not want to make it compulsory. These reviews would be meant to stress in a positive manner the contributions made by authors: their scopes and perspectives, their relations with existing literature, etc.; they could be based in part on material sent by referees (in an anonymous way and with their consent). Beyond editorial reviewing by epijournals, some other types of reviewing activity, similar to the Math Reviews, for example, might also take place on the Episciences platform, although this possibility is still under investigation at this point.

The Episciences initiative will be supervised in each discipline by a dedicated “Epicommittee”. Such an “epi-math” committee¹ was created in January 2013. Its role is to stimulate the constitution of editorial boards willing to create new epijournals, especially thematic epijournals

in areas not yet covered, to manage possible takeovers of existing journals willing to join, and finally to treat any related ethical and professional issues. Members of the Epicommittee may or may not take responsibility of an epijournal. Reaching a wide geographic coverage of the various mathematical communities worldwide is highly desirable in the short-term.

In political terms, let us conclude this discussion by stating that the Episciences project supported by CCSD aims to develop a viable alternative to existing economic models currently in use in scientific publication. The main goals are:

- Enforcing open access to electronic versions of research papers, while assessing and validating them.
- Allowing the efficient management of newly created electronic journals by reducing their operational costs.
- Developing the infrastructure for modern indexing and searching tools in the context of scientific data management in the longer term.

We hope that mathematicians will consider Episciences as an opportunity to move scientific publication in directions that are better suited to the needs of the scientific community and that experts in the various domains of mathematics will help to constitute many editorial boards, so as to manage many high standard epijournals. Collaboration with the open access archives such as HAL and arXiv is instrumental in this process and, in any case, we encourage scientists to take care that the final versions of their papers – including corrections arising from referees and reviewers – are returned to the open archives. All existing mathematical journals that promote high standards and have a compatible (open) publishing policy are encouraged to join Episciences and use its facilities.



Jean-Pierre Demailly [Jean-Pierre.Demailly@ujf-grenoble.fr] has been a professor at the Université Joseph Fourier, Grenoble, since 1983, and a member of the Institut Universitaire de France since 2002 and the Académie des Sciences² since 2007. He is a specialist in complex analytic geometry.

1 The current members of epi-math (as of 25 January 2013) are: Sun-Yung Alice Chang, Ingrid Daubechies, James Davenport, Jean-Pierre Demailly (one of the initiators of the project along with Benoît Kloeckner and Ariane Rolland at Institut Fourier), Timothy Gowers, Greg Kuperberg, Gadadhar Misra, Junjiro Noguchi, Peter Olver, Thomas Peternell, Terence Tao, Wendelin Werner, Shing-Tung Yau and Xiangyu Zhou. Peter Olver is also Chair of the CEIC (Committee on Electronic Information and Communication) at the International Mathematical Union and James Davenport is another member of the CEIC.

2 The Académie des Sciences has just initiated a Committee for Scientific Edition. Its role is to investigate issues related to the evolution of technology and related practices, especially open archives and electronic publications. The Académie intends to publish a report and recommendations in the course of 2013.

On the “Call for Balanced Negotiations with Scientific Publishers”

Benoît R. Kloeckner (Université Joseph Fourier, Saint-Martin d'Hères, France)

Near the end of 2011, as a scientific advisor for the mathematical library of the Institut Fourier (Grenoble, France), I had to choose whether we should unsubscribe from some journals published by Springer. The goal was to reduce our spending with this publisher at a time when institutional partners were conducting national negotiations with Springer to renew the contracts of French research institutions.

There were tight constraints, since a majority of our Springer subscriptions were “pledged”: the contract that was ending prevented us from unsubscribing from these titles unless we took new subscriptions for at least as large a cost. After trying to cut out unpledged titles, I realised that we could considerably reduce our spending, without cutting out too important journals, if we could unsubscribe freely. Moreover, without this possibility we would be very dependant on the budget we get from our university specifically for the library (which might dry up any year); if this funding were lost and the new contract with Springer was similar to the preceding one, we would be forced to unsubscribe almost all non-Springer titles. Since the little information we got from the negotiations was not very encouraging, together with the chief librarian Francesca Leinardi and the laboratory director Gérard Besson we decided to take action.

First, we launched a discussion on this issue on email lists gathering mathematicians playing roles in departments or libraries in France. It was easy to see that almost everyone agreed about the problem but that something was needed to clearly express this consensus. We then decided, with the support of the council of the Institut Fourier, to launch a petition entitled “L'Appel pour des négociations équilibrées avec les éditeurs de revues scientifiques” (“Call for balanced negotiations with scientific publishers”), which can be read at <http://www-fourier.ujf-grenoble.fr/petitions/index.php?petition=3>.

This call targeted Springer, mostly because of the ongoing negotiations; it was addressed to the institutional negotiators (CNRS, INRIA, Couperin) to ask them not to accept any term that would prevent us from unsubscribing freely or that would impose large annual price increases. The signers asserted that they agreed not to have wide access to Springer journals if it was necessary to avoid such terms; this was designed to give the negotiators the option of walking out of the negotiations.

To cut a long story short, the call was widely disseminated among the French mathematical community (we did not have the means to disseminate it much more widely) and signed by a majority of mathematical research units and by many mathematicians, as well as by some computer science, physics and economics departments, but it had little effect on negotiations. We still have as many pledged journals as before, from which we cannot unsubscribe for three more years, and it seems difficult to hope for a significant improvement for the next contract to be signed in 2014.

However, I do not think the call was a failure: we now know that we, as a community, want to fix the publishing system. And a lot has been tried already, as has been witnessed by high energy physics (see the very interesting SCOAP3 consortium), by biology and health science (with PLoS, the leading open-access publisher relying on article processing charges rather than subscription) and mathematics (with the launch this Autumn of the Forum of Mathematics by Cambridge University Press – see also <http://publishing.mathforge.org/> for discussions on the future of mathematical publishing).

Each of us could be unconvinced by some of these developments but none can continue to blame commercial publishers while pretending we cannot do anything. There are many ways to act, if only by the choice of journals where we submit our work. It is up to us to shape our publishing system for the next decades and it is happening now.



Benoît R. Kloeckner is an associate professor at the Institut Fourier (Université Grenoble 1, France, and CNRS) and scientific adviser of its library.