

Community governed Open Science

Innovation and Sustainability through Distributed Infrastructures

Eloy Rodrigues

Building a sustainable, global
knowledge commons

COAR is an international association that brings together individual repositories and repository networks in order to build capacity, align policies and practices, and act as a global voice for the repository community.

- Office is based in Germany and Portugal
- Over 150 members and partners on all 5 continents
- We are not a service provider

www.coar-repositories.org



Building a sustainable, global
knowledge commons

A Global Knowledge Commons

“...position repositories as the foundation for a distributed, globally networked infrastructure for scholarly communication, on top of which layers of value added services will be deployed, thereby transforming the system, making it more research-centric, open to and supportive of innovation, while also collectively managed by the scholarly community.”

A Global Knowledge Commons

Institutions provide
stable long-term
access to and
preservation of
content



E.g. MIT Libraries as an Open
Global Platform

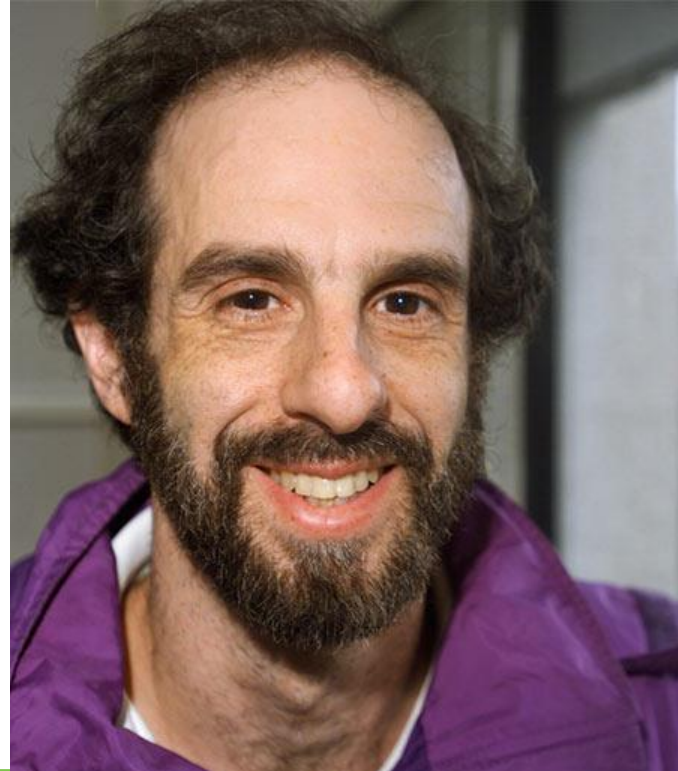


Researchers and
research communities
provide content + peer
review



Building on Paul Ginsparg's vision

“a relatively complete raw archive unfettered by any unnecessary delays in availability”, on top of which “[a]ny type of information could be overlayed ... and maintained by any third parties”, including tools for validation, filtering and communication (Ginsparg, 1994)



Innovation in scholarly communication?



Confederation
of Open Access
Repositories



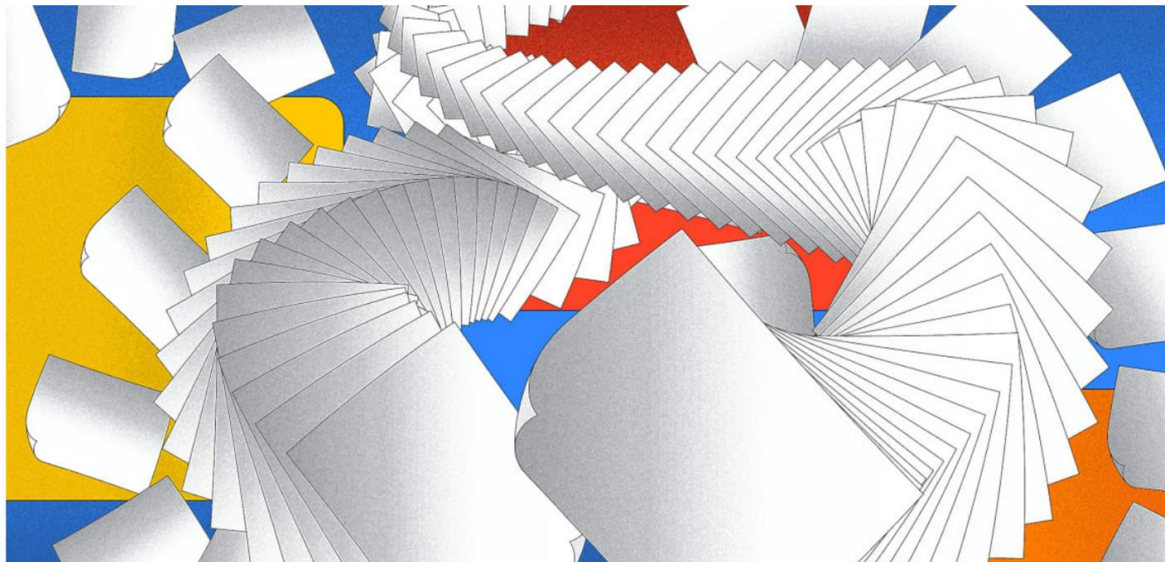
An idea whose time has come?

- Dysfunctionality of the scholarly communication system
- Price inflation and increasing vendor control
- Rise of preprints
- Policy drivers for open research
- Promotion of the knowledge commons, and academy-owned infrastructure
- COVID-19...

08-05-20 | WORLD CHANGING IDEAS

How the COVID-19 crisis has prompted a revolution in scientific publishing

Preprint servers have existed for decades, but the fight against the coronavirus has seen their use soar. They're changing how science is done—but need important guardrails.

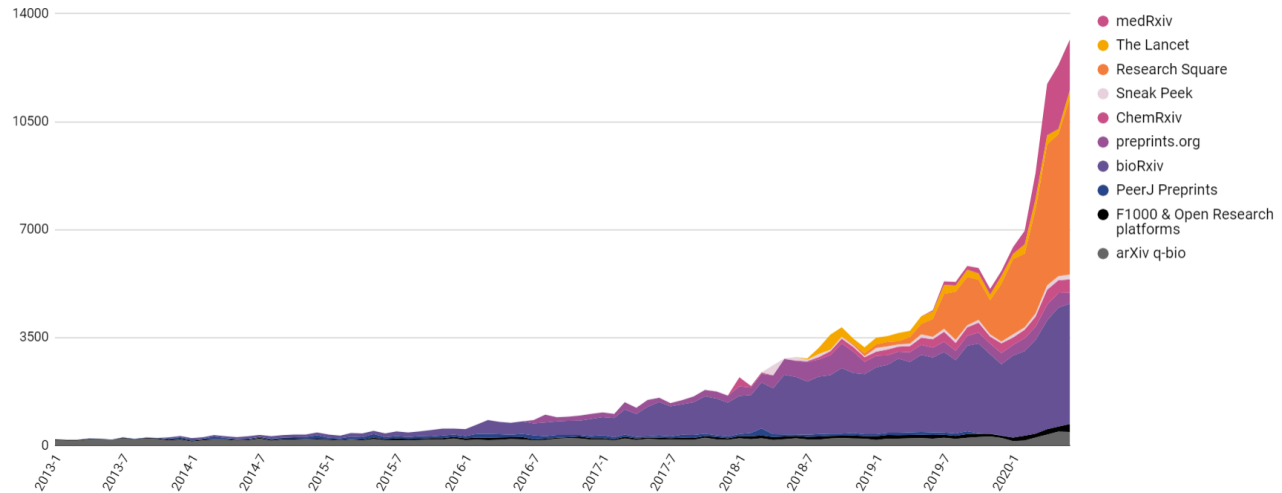


COVID-19 pandemics

- **Significant rise of preprints, especially on the biomedical field, in absolute terms**, in relative weight on the total of publications, **and on visibility and impact**, not only on academic impact (citations), but especially in societal impact (Altmetrics, traditional media, and social media);

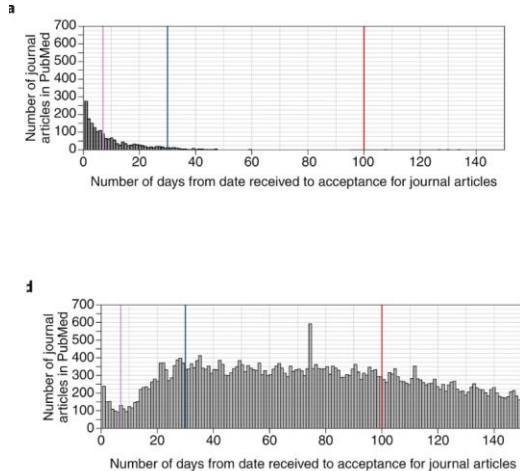
Biomedical preprints per month through 2020-06

Sources: Jordan Anaya (PrePubMed), Naomi Penfold, EuropePMC, arXiv, Crossref, SSRN



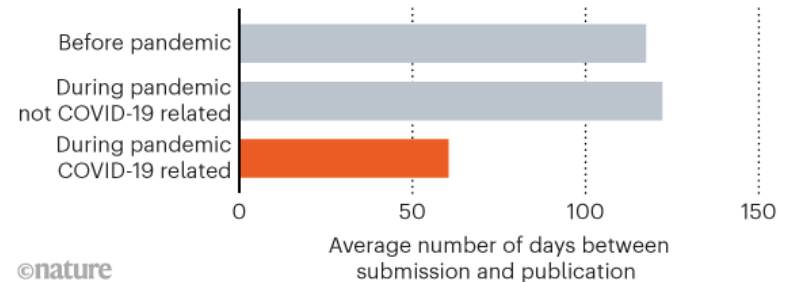
COVID-19 pandemics

- **Significant reduction on publication time for COVID-19 articles**
(study found 6 day median time from submission to publication, compared to more than 100 days for all the articles in the same journals, other reported drop from 117 to 60 days average)



RAPID REVIEW

Peer-reviewed journals have accelerated publication of studies on the coronavirus. One analysis of 14 titles, mainly in virology, found that the time to publish had dropped from 117 to 60 days.



a, COVID-19 articles. **d**, Articles published in the same journals in 2019 in which COVID-19 articles were published

Next Generation Repositories

Behaviours and Technical Recommendations of the COAR Next Generation Repositories Working Group

November 28, 2017



Northern lights, Norway

Pubfair

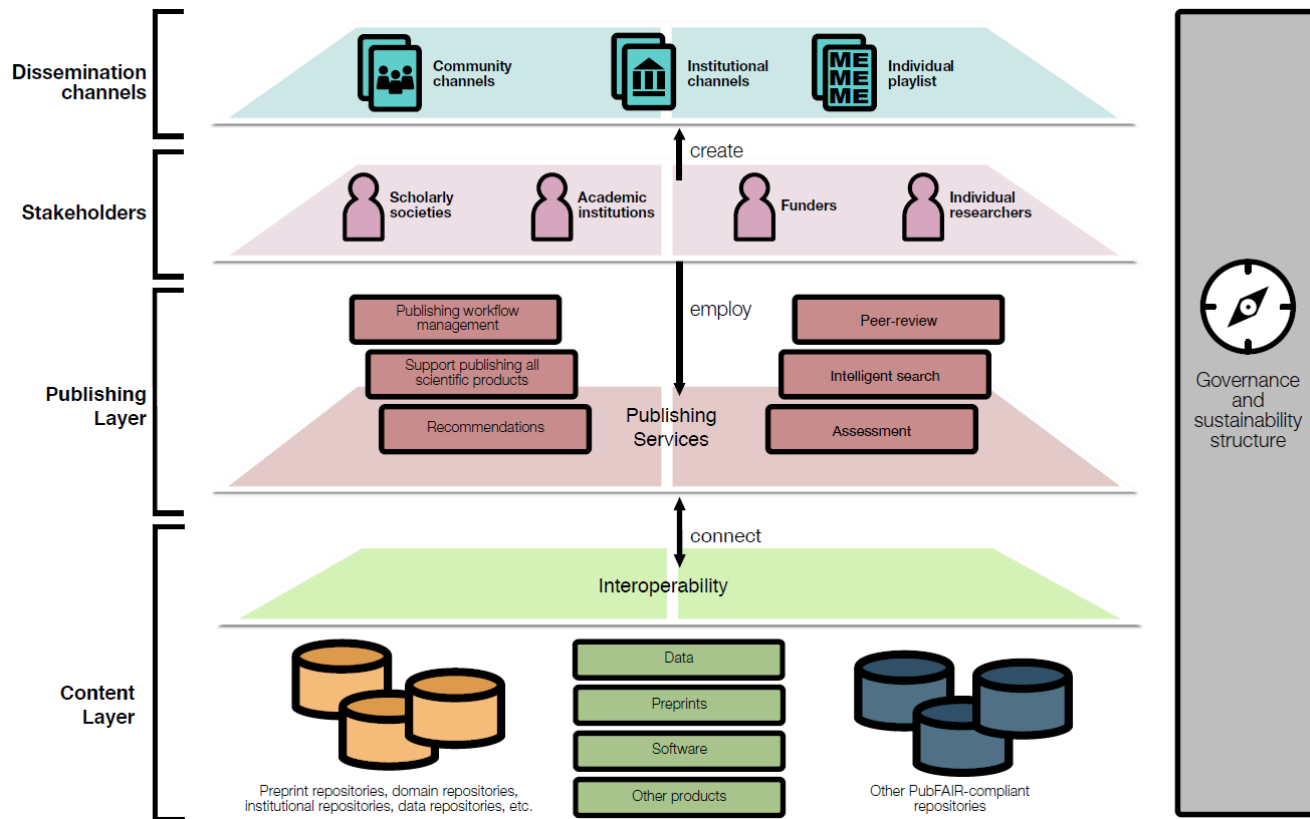
A distributed framework for open publishing services

Version 2, November 27, 2019

By Tony Ross-Hellauer, Benedikt Fecher, Kathleen Shearer, and Eloy Rodrigues

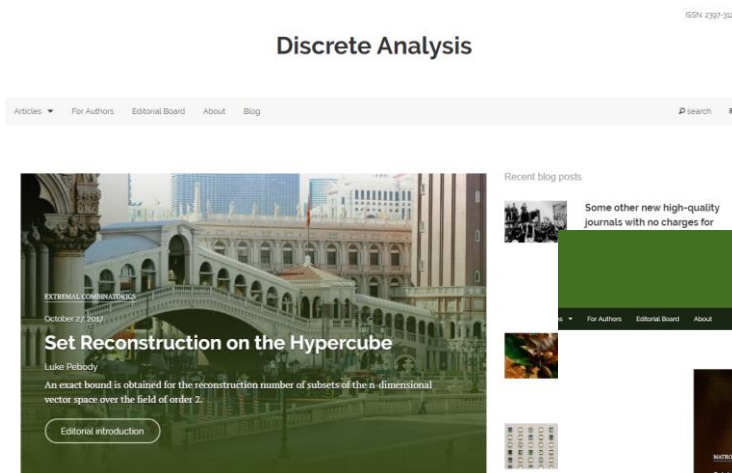


Pubfair Architecture

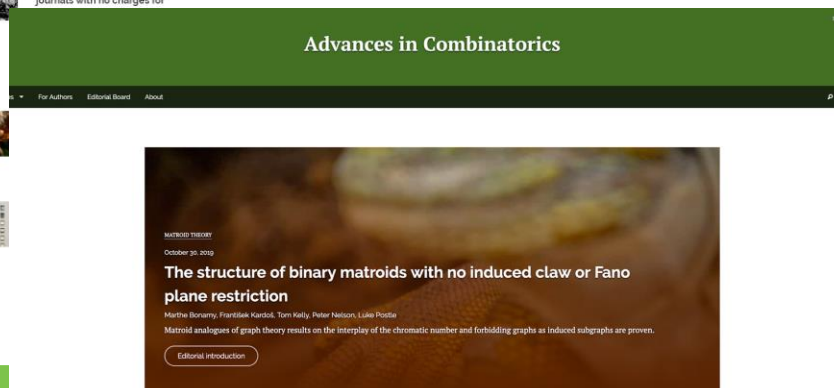


Overlay journals

“The editors of an overlay journal locate suitable material from open access repositories and public domain sources, read it, and evaluate its worth. This evaluation may take the form of the judgement of a single editor or editors, or a full peer review process.” (Wikipedia: “[Overlay Journal](#)”, accessed Oct 2019)



- Built on arXiv
- No charges for readers or authors
- Authors submit articles



Estimated library costs for 2018-19

Costs of Discrete Analysis
Slide from Martha Whitehead



Comparable to the cost of Article Processing Charge (APC) for a single article

Expense	CAD	USD	Euro
Scholastica subscription	\$1597.42	\$1188.00	€1060.19
Scholastica author submission fees	\$336.18	\$250.00	€223.13
Domain name	\$11.00	\$8.18	€7.30
In-kind staff	\$1073.8	\$798.8	€712.8
Total	\$3018.4	\$2244.98	€2003.42

Example - Épisciences



épisciences.org

Overlay Journal Platform

[Home](#) [About](#) [Epi-committee▼](#) [Journals](#) [Resources▼](#) [My Account▼](#)

Home

Episciences.org is an innovative combination of the two routes of free access: the gold route by hosting journals in open access (overlay journals) and the green route where articles are submitted to these journals by depositing them in an open archive

The editorial boards of such epijournals organize peer reviewing and scientific discussion of selected or submitted preprints. Epijournals can thus be considered as "overlay journals" built above the open archives; they add value to these archives by attaching a scientific caution to the validated papers.

Open access ; free to read ; free to publish.

There is no charge to access articles published in journals hosted by the Episciences.org.

There is no charge to publish articles in journals hosted by the Episciences.org.

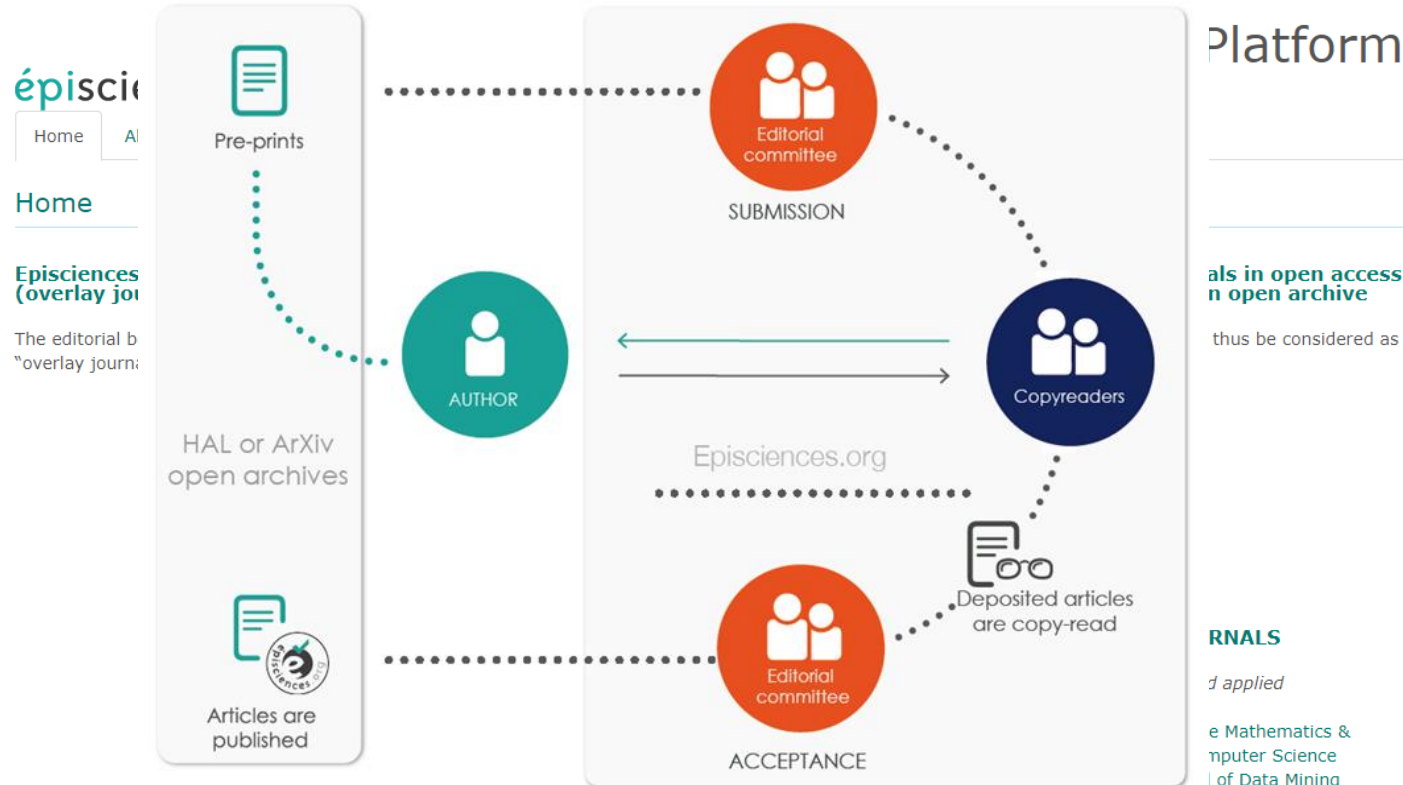
How to create an overlay journal on Episciences.org?

JOURNALS

*Informatics and applied
mathematics*

DMTCS Discrete Mathematics &
Theoretical Computer Science
JDMDH Journal of Data Mining
and Digital Humanities

Example - Épisciences



Recent overlay journal

Search Dashboard ▾ Login or Signup

Rapid Reviews
COVID-19

RR:C19

HOME ABOUT ▾ EDITORIAL INFO ▾ RR:C19 REVIEWS ▾ MEDIA WORK WITH US



Rapid Reviews: COVID-19 is an open-access overlay journal that accelerates peer review of COVID-19-related research preprints to advance new and important findings, and prevent the dissemination of false or misleading scientific news. The editors, led by Professor Stefano Bertozzi and based at UC Berkeley, approach COVID-19 and its wide-ranging effects from a multidisciplinary and global perspective, reviewing papers from the fields of medicine; public health; the physical, biological, and chemical sciences; engineering; social sciences and the humanities. Read more about RR:C19 [here](#).

Sign up for news & alerts

Read the Reviews

Editor's Spotlight

Strong consensus that SARS-COV-2 origin study is misleading and not supported by evidence.

Other examples of overlay ecosystem



A platform for the crowdsourcing of preprint reviews.

Search preprints with PREviews or requests for review by DOI, arXiv ID or title

Add PREview | Request PREview

Most reviewed ▼

bioRxiv

Published on 2020-01-15

Uncovering the hidden antibiotic potential of Cannabis

Maya A. Farha, Omar M. El-Halfawy, Robert T. Gale, Craig R. MacNair, Lindsey A. Carfrae, Xiong Zhang, Nicholas G. Jentsch, Jakob Magolan, Eric D. Brown

2 PREviews 17 Requests

bioRxiv

Published on 2020-09-11

The Costs and Benefits of a Modified Biomedical Science Workforce

Michael D. Schaller

1 PREviews 1 Requests

bioRxiv

Published on 2020-07-07

Gender, race and parenthood impact academic productivity during the COVID-19 pandemic: from survey to action

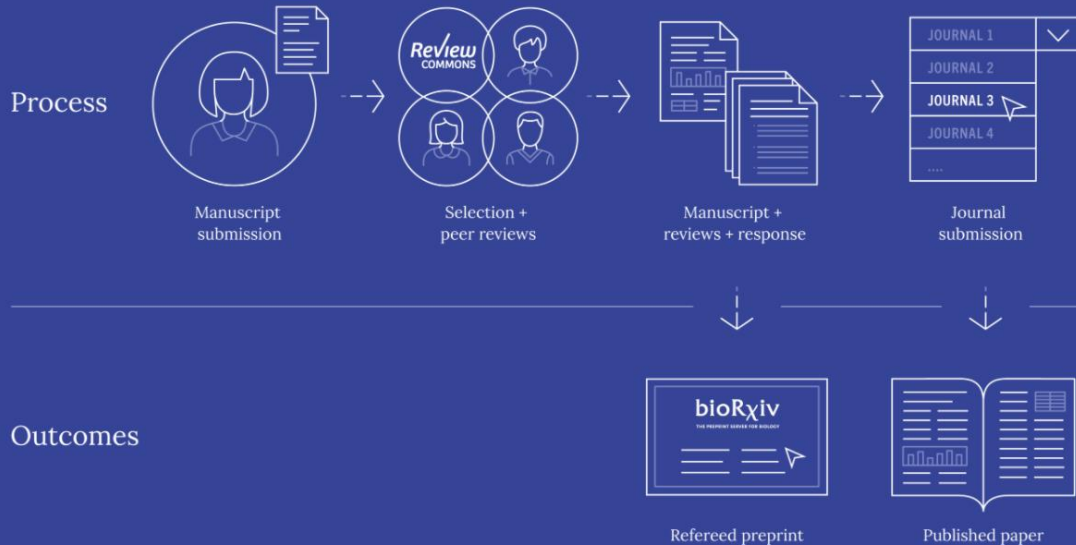
Fernanda Stanislauski, Livia Kmetzsch, Eugenia Zandonà, Fernanda Reichert, Rossana C. Soletti, Zelia M.C Ludwig, Eliade F. Lima, Adriana Neumann, Ida V.D. Schwartz, Pamela B. Mello-Carpes, Alessandra S.K. Tamajusuku, Fernanda P. Werneck, Felipe K. Ricachenevsky, Camila Infanger, Adriana Seixas, Charley C. Staats, Leticia de Oliveira

4 PREviews 1 Requests

Give
Feedback

Other examples of overlay ecosystem

HOW IT WORKS



Other examples of overlay ecosystem



PCI in a few lines
Current PCIs
How does it work?
PCI networks
Who's talking about PCI?
Donation to PCI
Material and Ressources
FAQs
A propos / Legal Notice
Blog posts

PCI in a few lines

Aim of Peer Community In

Search ...

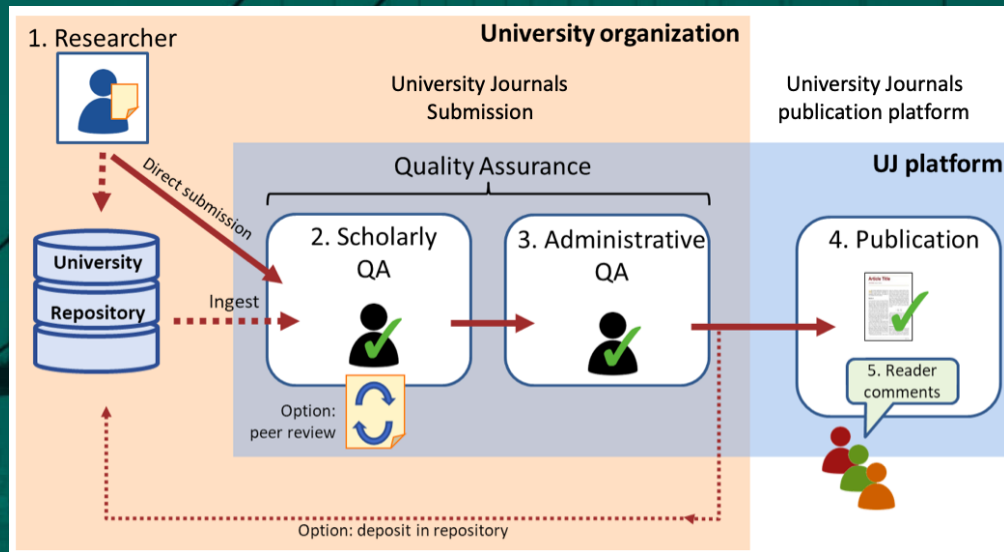
Sort by **Relevance** ▼

*"Peer Community in" (PCI) is a non-profit
scientific organization that aims to create*

Other examples of overlay ecosystem

University Journals — innovative academic publishing

About University Journals For Universities For Researchers Contact us



Google Scholar



Scopus®



etc.

Modelling Overlay Peer Review Processes with Linked Data Notifications

Draft 1 – for public input – Aug 4, 2020

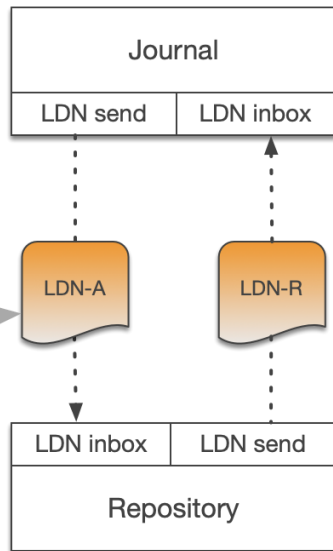
Prepared by Paul Walk, Martin Klein, Herbert Van de Sompel, and Kathleen Shearer

With input from [use case contributors](#)

<https://comments.coar-repositories.org/>

Notification 1: Request for review initiated via repository

Vocabulary
needed for
different
statuses

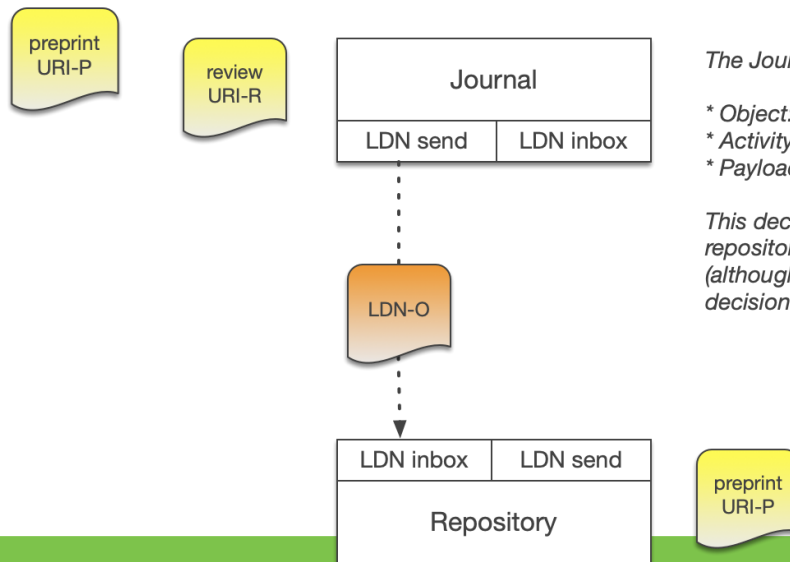


Repository sends review request (LDN-R) to Journal

- * Object: preprint identified by URI-P
- * Activity type: offer

Journal considers request and acknowledges with status (LDN-A) (e.g. accepted for review, rejected outright...)

Notification 2: Outcome of review



The Journal sends a notification to the Repository

- * Object: offer previously sent by repository
- * Activity type: "accept" or "reject"
- * Payload extra: URI-R identifying review details

This decision refers to an offer previously sent by the repository, not directly to the preprint identified by URI-P (although, since the offer refers directly to this preprint, the decision does refer to it indirectly).

Closing message

“Everything we have gained by opening content and data will be under threat if we allow the enclosure of scholarly infrastructures.”

Bilder G, Lin J, Neylon C (2015) Principles for Open Scholarly Infrastructure

Thank you!

The screenshot shows a blog post interface. On the left, a vertical list of names: Kathleen Shearer, Eloy Rodrigues, Bianca Amaro, William Nixon, Dr Daisy Selematsela, Martha Whitehead, Kazutsuna Yamaji, Wolfram Horstmann, and the date September 24th, 2020. The main content area has a dark background with white text for the title and a red line for engagement metrics. Below the main text, there are four red circular icons for social media sharing (print, email, Facebook, Twitter) and a paragraph of text.

COVID-19 has profoundly changed the way we conduct and share research. Let's not return to business as usual when the pandemic is over!

4 comments | 70 shares

Estimated reading time: 4 minutes

COVID-19 has led to rapid and open sharing of research outputs. But will this new, radically open research communications paradigm result in permanent change? Confederation of Open Access Repositories (COAR) executive board members, Kathleen Shearer, Eloy Rodrigues, Bianca Amaro, Wolfram Horstmann, William Nixon, Daisy Selematsela, Martha Whitehead and Kazu Yamaji, argue that the new research climate proves that longstanding shortcomings regarding the time and cost of research can be overcome with enough political will, and that maintaining a culture of

<https://bit.ly/350HTI5>