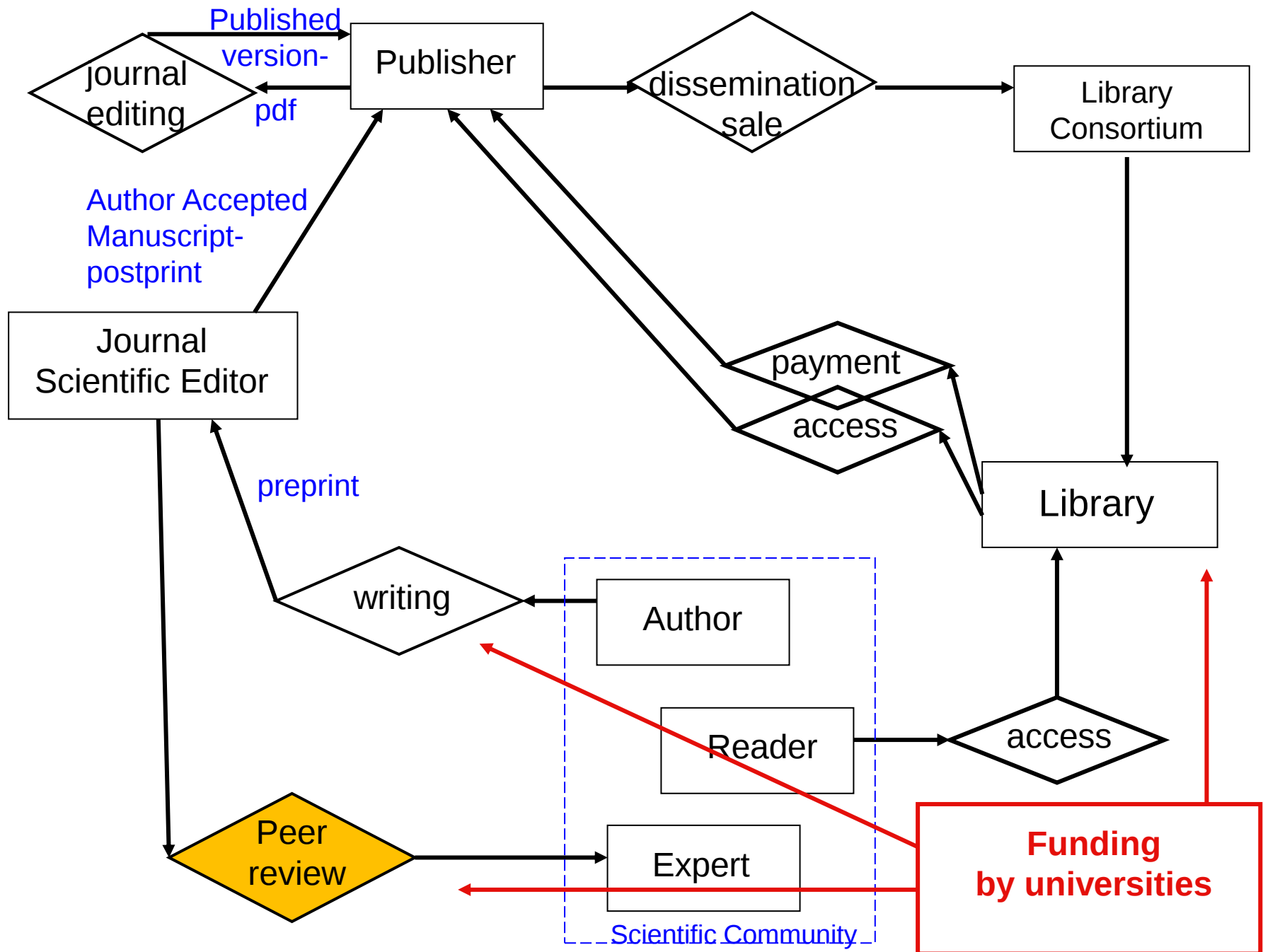


The peer review process & Open peer review

Best practices in writing scientific papers
Round Table #2 in Applied Sciences

Françoise Vandooren
Département de bibliothèques et d'information scientifique
Université libre de Bruxelles
15 November 2021

Peer review in the traditional journal publishing process



The functions of scientific publication

RECORD	VALIDATE	DISSEMINATE	ARCHIVE
Establish intellectual priority	Certify the quality/validity of the research	Ensure accessibility of research results	Preserve research results for future use

+ Researcher's evaluation...



Publish or Perish



Ethical considerations for publication

Code of conduct in scientific publication

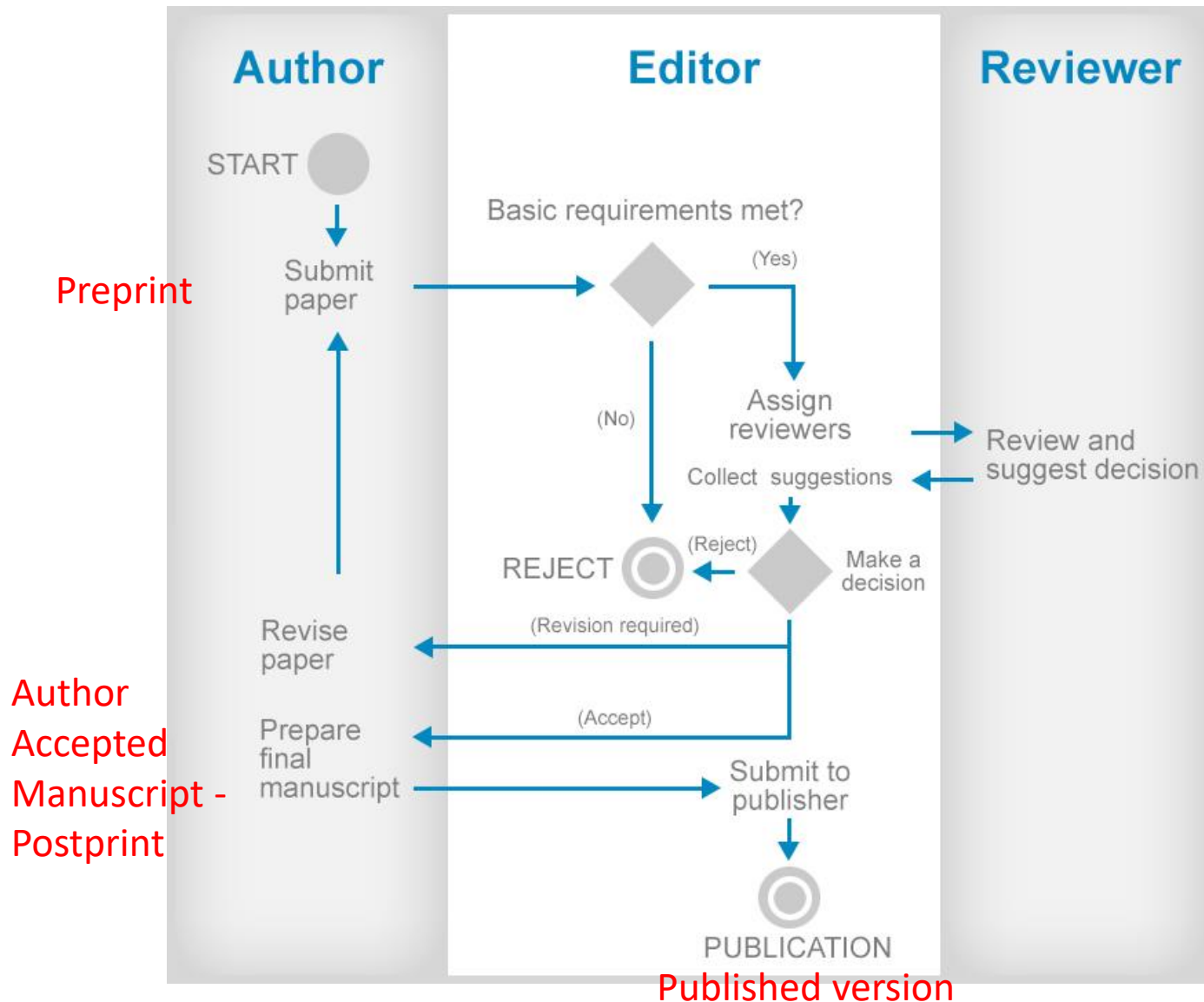
- Conflict of interest and funding sources: to be declared
- Paternity : contributors (only) to be mentioned
- Originality : research not yet published
- Multiple submissions: forbidden
- « Salami slicing »: to be avoided
- [Plagiarism](#) : proscribed
- Scientific integrity: no scientific fraud
- Copyright: to be respected

See also [Code d'éthique de la recherche scientifique en Belgique FNRS](#)

Roles in scientific journal publishing

- Editor in chief:
editorial policy, decision to publish or not
- Editorial board, reviewers:
evaluating manuscripts
- Publisher:
editing, disseminating, selling the journal
+ infrastructure for submitting manuscripts,
managing peer review, search and access journals

Peer review process



Types of peer review

- Blind
the author does not know the identity of the reviewers
- Double blind
the author does not know the identity of the reviewers
and the reviewers do not know the identity of the author(s)

Is the traditional peer-review system broken?

THE CONVERSATION

Academic rigour, journalistic flair

The peer-review system for academic papers is badly in need of repair

February 26, 2017 4:59pm GMT



The scientific refereeing process can be tedious, time-consuming and isn't very rewarding. Shutterstock

The New York Times

Peer Review: The Worst Way to Judge Research, Except for All the Others

A look at the system's weaknesses, and possible ways to combat them.



They Ocasio/The New York Times

Authors



Michael E. Rose

PhD Candidate in Economics, University of Cape Town



Willem H. Boshoff

Associate Professor of Economics, Stellenbosch University

TheScientist

EXPLORING LIFE, INSPIRING INNOVATION

Home / Archive / February 2006 / Uncategorized

Is Peer Review Broken?



Jan 31, 2006

BY ALISON MCCOOK

Peter Lawrence, a developmental biologist who is also an editor at the journal *Development* and former editorial board member at *Cell*, has been publishing papers in academic journals for 40 years. His first 70 or so papers were "never rejected," he says, but that's all changed. Now, he has significantly more trouble getting articles into the first journal he submits them to.

"The rising [rejections] means an increase in angry authors."

-Drummond Rennie

JOURNAL OF THE ROYAL SOCIETY OF MEDICINE Volume 99 April 2006

Peer review: a flawed process at the heart of science and journals

Richard Smith

J R Soc Med 2006;99:178-182



By Aaron E. Carroll

(Jean-François Flot, Introducing PCI. [Open Science webinars – free and FAIR Open Access](#), 26 October 2021.)

Traditional peer review issues

- **Asymmetrical:** often, reviewers know the authors' identity but the reverse is not true
- **Not transparent:** the review process is not publicly available
- **Slow:** it can take months or even years for the review process to reach a decision
- **Wasteful:** results not deemed sensational or significant enough have trouble getting published, leading to a waste of resources
- **Undemocratic:** especially in prestigious journals, the persons in charge of handling the review process and making final decisions are less and less often practising scientists

(Jean-François Flot, Introducing PCI. [Open Science webinars – free and FAIR Open Access](#), 26 October 2021.)

Open Peer Review

Open peer review

Different levels of openness:

- Open up identities

Authors and reviewers are aware of each other's identity

- Make review reports open and accessible

Review reports are published alongside the relevant article.

- Open up participation

The wider community is able to contribute to the review process (peer researcher or even general public).

Open peer review

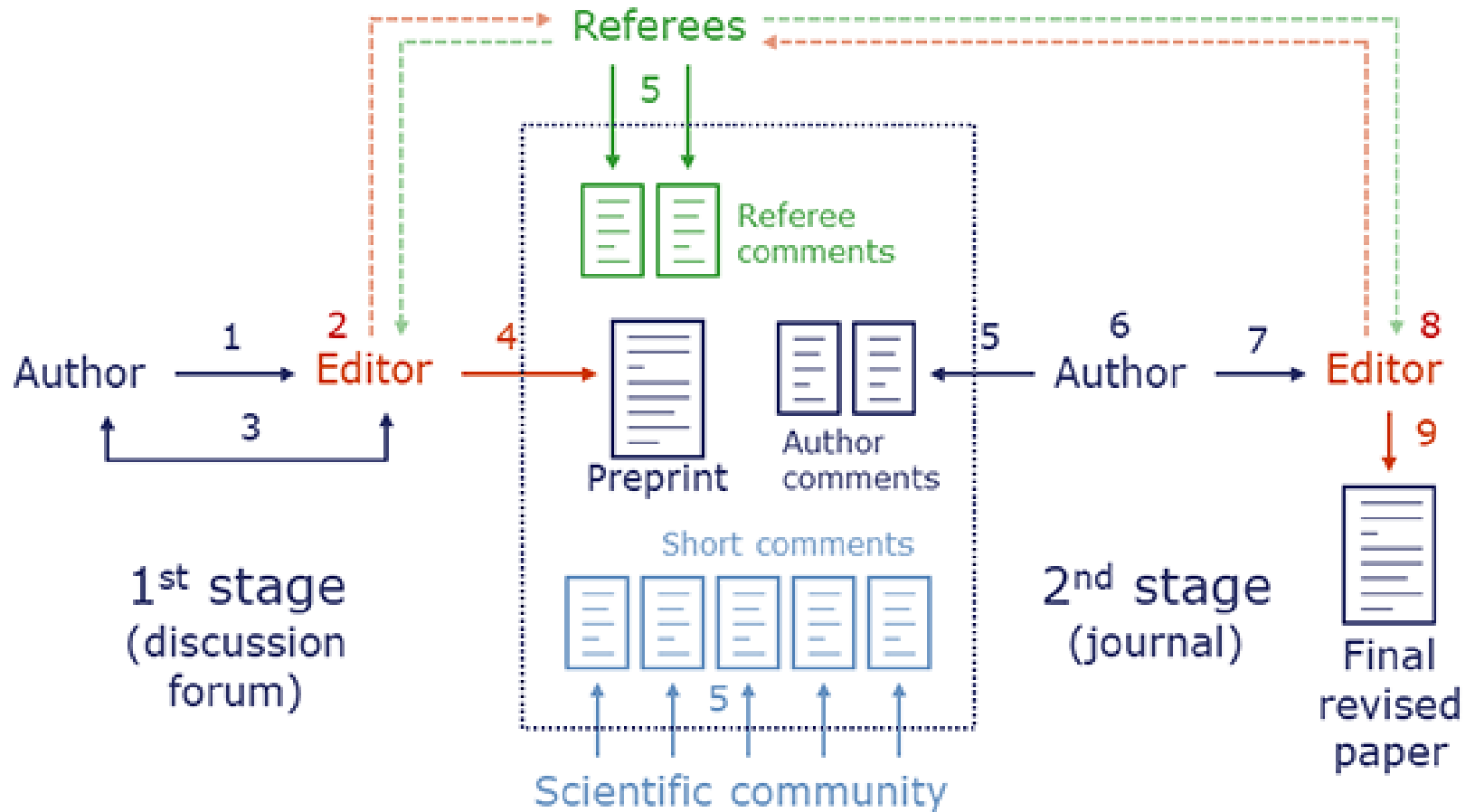
- Encourage interaction

Direct, reciprocal discussion between author(s) and reviewers and/or between reviewers is allowed and encouraged.

- Use open platforms

Review is de-coupled from publishing in that it is facilitated by a different organizational entity than the venue of publication.

Example of interactive public peer review Copernicus Interactive Public Peer Review)



1. Submission | 2. Access review | 3. Technical corrections | 4. Preprint posting | 5. Comments
6. Revision | 7. Revised submission | 8. Peer-review completion | 9. Final revised publication

Predicting turbidity and Aluminum in drinking water treatment plants using Hybrid Network (GA- ANN) and GEP

Ruba Alsaeed et al.

Status: final response (author comments only)

Comment types: AC – author | RC – referee | CC – community | EC – editor | CEC – chief editor |  Report abuse

Login for authors/topical editors

Subscribe to comment alert

CC1: 'Comment on dwes-2021-8', fadi Asker, 02 Apr 2021 

The article in general is good written and it is about a very important issue related to drinking water treatmentI noticed that the references are quite new. And tge equation gives the article more stringth, likewise the GUI .

But I have a question why the researcher used Ga and Ann and GEP

not fuzzy for example?

And at the end of the article I think it is good to mention the other 3 equation that reselted from the research, not just the best one

GOOD LUCK

Citation: <https://doi.org/10.5194/dwes-2021-8-CC1>



AC1: 'Reply on CC1', Ruba Alsaeed, 02 Apr 2021 

We used GA-ANN Because there is some articles on the internet about predicting turbidity and other parameters by Fuzzy logic

So to do something new , we used ANN Hybrid with GA, GA was used because many researches in other fields said that GA can improve the structure of ANN. And it gave great results comparing to similar researches.

And for the other 3 equation, I can provide them in the final copy if I am allowed to add something to the article.

GEP was great tool for predicting in a very amazing way.

Citation: <https://doi.org/10.5194/dwes-2021-8-AC1>



CC2: 'Comment on dwes-2021-8', Salim Heddad, 03 Apr 2021 

AC3: 'Reply on CC2', Ruba Alsaeed, 12 Apr 2021 

AC4: 'Reply on CC2', Ruba Alsaeed, 12 Apr 2021 

Interactive discussion

Status: closed

Comment types: AC – author | RC – referee | CC – community | EC – editor | CEC – chief editor | : Report abuse

RC1: 'Comment on tc-2021-36', Quentin Libois, 29 Mar 2021 

└ AC1: 'Reply to the Review Comments of Quentin Libois', Alexandra Zuhr, 22 Jun 2021 

RC2: 'Comment on tc-2021-36', Simon Filhol, 16 May 2021

└ AC2: 'Reply to the Review Comments of Simon Filhol', Alexandra Zuhr, 22 Jun 2021 

Peer review completion

AR: Author's response | RR: Referee report | ED: Editor decision

ED: Publish subject to revisions (further review by **editor and referees**) (22 Jun 2021) by Chris Derksen ▼

AR by Alexandra Zuhr on behalf of the Authors (31 Jul 2021) [Author's response](#) [Author's tracked changes](#) [Manuscript](#)

ED: Publish subject to revisions (further review by **editor and referees**) (02 Aug 2021) by Chris Derksen ▼

ED: Referee Nomination & Report Request started (25 Aug 2021) by Chris Derksen

RR by Quentin Libois (31 Aug 2021) ▼

RR by Simon Filhol (20 Sep 2021) ▼

ED: Publish subject to technical corrections (20 Sep 2021) by Chris Derksen ▼

Good reasons for open peer review

- Transparency
- Speed
- Reliability
- Consistency
- Motivation and valorization

Source: <https://www.fosteropenscience.eu/learning/open-peer-review>

Benefits for you

For your research :

- improve the quality of your methodology and subsequently the credibility of your findings.
- If you write an open peer review, it will be a new citable research output.

For your skills:

- Read the reviews of other articles and learn from the comments of reviewers and answers by authors.

Any drawback?

- risks to be criticized, taken by the reviewers
- difficulty in recruiting OPR reviewers

Visibility of reviewing activities



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Editorial board memberships

CURRENT MEMBERSHIPS

 Journal of Mechanics in Medicine and ... **WOS**

Verified editor records [?]

 (1) Frontiers in Bioengineering and Biot... **WOS**

 (1) International Journal of Sports Scie... **WOS**

Verified reviews [?]

 (9) Archives of Orthopaedic and Trauma... WOS	 (6) Journal of Orthopaedic Research WOS
 (5) Journal of Medical and Biological En... WOS	 (3) Australasian Physical & Engineering Scien... WOS
 (3) BioMedical Engineering Online WOS	 (3) International Journal of Computer A... WOS
 (2) Annals of Biomedical Engineering WOS	 (2) Applied Sciences WOS
 (2) BMC Musculoskeletal Disorders WOS	 (2) IEEE Transactions on Biomedical En... WOS

Other types of open peer reviewing and publishing platforms

Peer Community In (PCI):

- Preprint + data are posted on a preprint server and submitted to a PCI community; if accepted by a Recommender, it is peer reviewed; if accepted, the Recommender writes a report that is published on open access, with the reviews, on PCI. Preprint can be published in a journal.

F1000:

- Peer review of articles published in F1000Research takes place after publication on F1000; expert reviewers are suggested primarily by the authors ; peer review process is entirely open and transparent:

Watch [the video interview of Jean-Louis Tison](#), professor at ULB

He explains the open peer review system
used by the journal The Cryosphere



References

PhD on tracks

[The peer review process](#)

FOSTER Open Peer Review

[This course will introduce you to Open Peer Reviewing and let you know how you can get started with it.](#)

Ross-Hellauer T. **What is open peer review?** A systematic review [version 2; peer review: 4 approved]. F1000Research 2017, 6:588 <https://doi.org/10.12688/f1000research.11369.2>

Jean-François Flot, **Introducing PCI.** [Open Science webinars – free and FAIR Open Access](#), 26 October 2021.

