

# Open Peer Review - One Step Forward in the Cultural Change of Scholarly Communications

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UNIVERSITY OF DEBRECEN UNIVERSITY AND NATIONAL LIBRARY

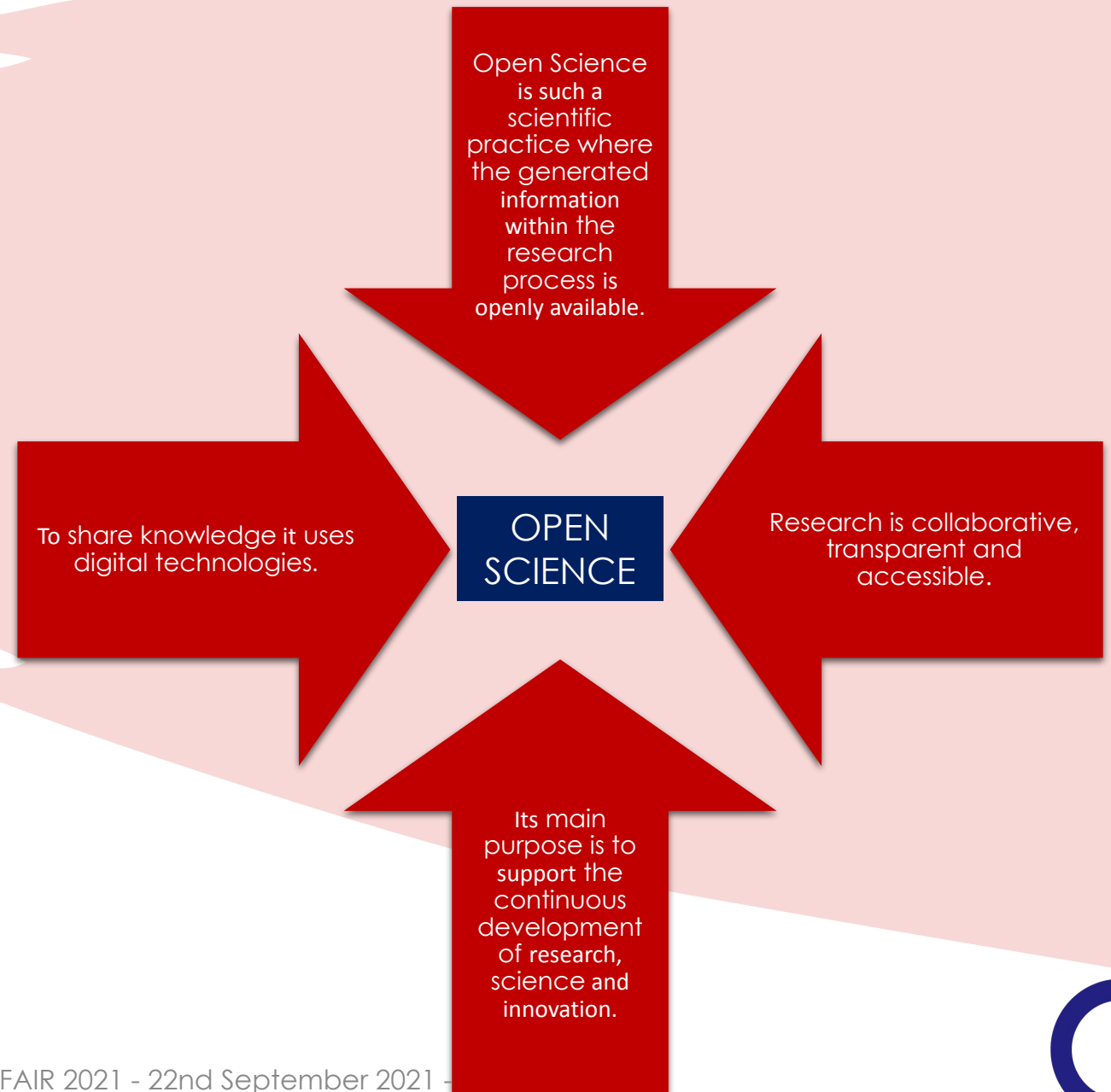
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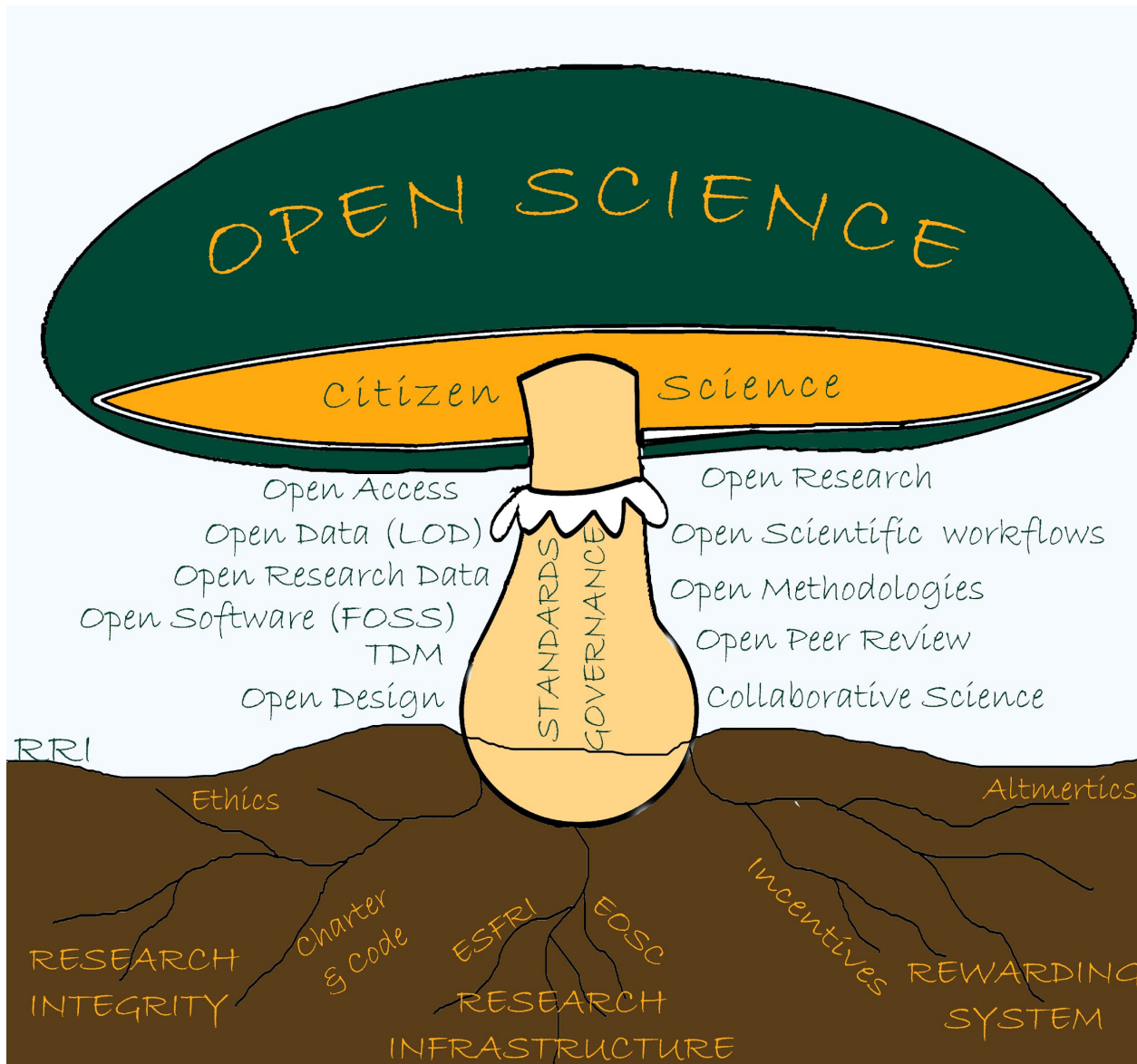


Open Science FAIR 2021 – 22nd September 2021 -  
Innovative Peer Review for Research Libraries



# Open Science

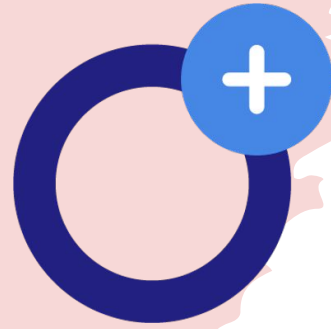




Eva Méndez, 15/02/2017



# OpenAIRE



Map up new models of peer review

Helps to strengthen the evaluation of research via open peer review

Describe alternative peer review tools

Seeking for answers how to motivate and credit review work

Reseraching the efficacy of different OPR models

# Peer review

Quality assurance mechanism where scholarly works are analyzed by others, out of the feedbacks which are used to improve work and make final decisions regarding selections.



# Changing roles

## Role of Peer Review

- Functions: critical review checking the soundness of research assessing originality novelty, interest.

## Changing Role of Editors

- Tasks: first scan, finding reviewers, reviewing, collaboration with authors/other editors

## Growing responsibility of authors

- Tasks: finding reviewers, cooperation with editors/Reviewer, revision based on community comments

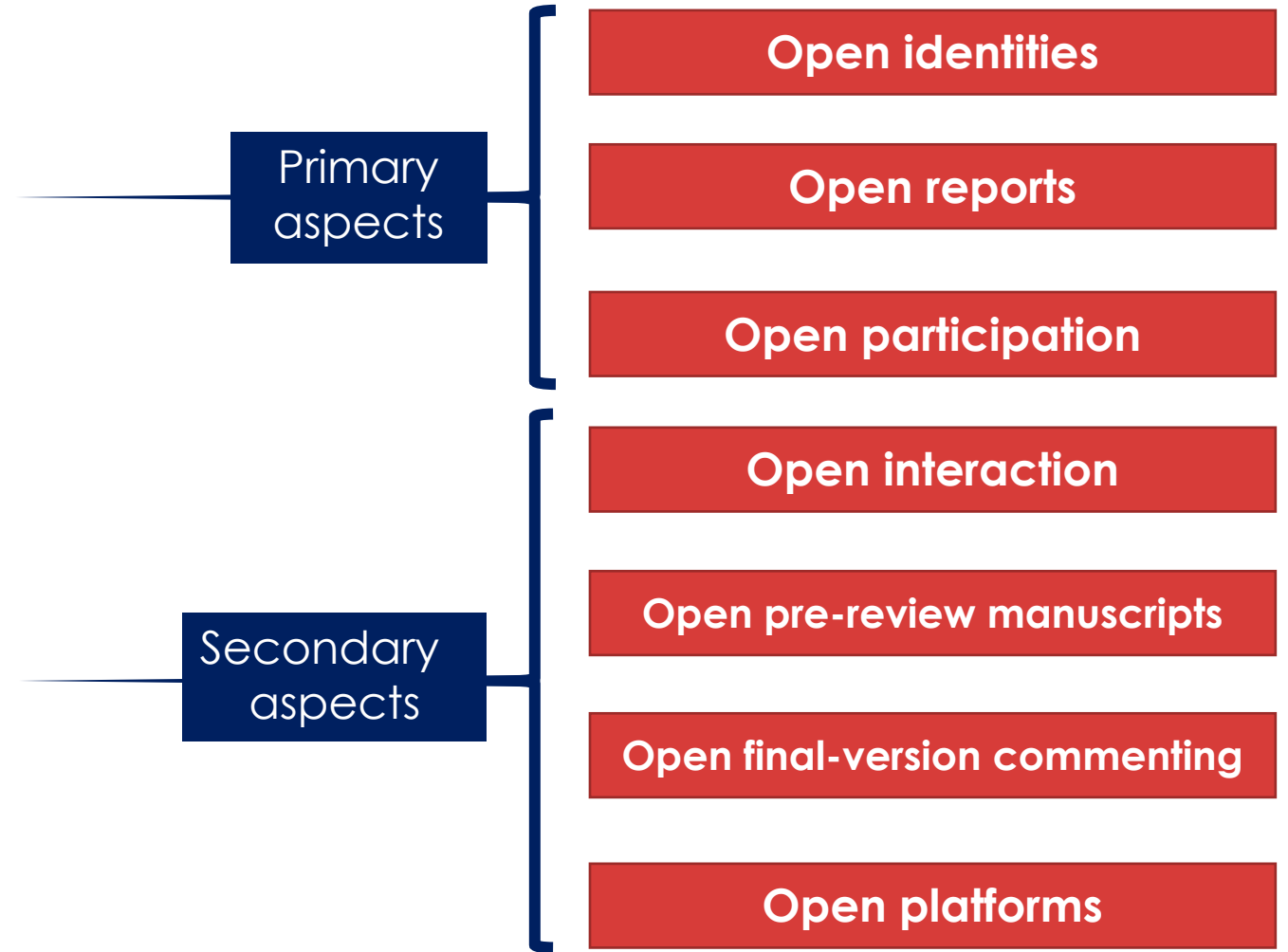
## Involvement of peers

- Role of the community/peers: who is the peer?



# Open peer review

Open peer review is an umbrella term for a number of overlapping ways that peer review models can be adapted in line with the aims of Open Science.







# Open identities



## Pros

- Increase quality of reports
- Foster transparency to avoid conflicts of interest
- More civil language (in review and response)

## Cons

- Difficulty in taking and giving critical feedbacks
- Labor-intensive process



# Open reports



## Pros

- Feedback improves work and provide contextual information
- Giving better feedback - increase review quality
- Enable credit and reward for review work
- Help train young researchers in peer reviewing

## Cons

- Higher refusal rates amongst potential reviewers
- Time-consuming and more demanding process
- Fear of being exposed (esp. for early career researchers)



# Open participation



## Pros

- Expanding the pool of reviewers (including to those non-traditional research actors)
- Support cross-disciplinary dialogue
- Increase number of reviewers being part of the debate

## Cons

- Time issue: difficulties motivating commentators to take part and deliver useful critique
- Self-selecting reviewers tend to leave less “in-depth” responses
- Feedback from non-competent participants



# What does it look like in practice?

## PeerJ

### Facts:

- Optional open peer review
- 40% of reviewer signed their name
- 80% of authors made review reports openly available

#### Review History

KL-MOB: automated COVID-19 recognition using a novel approach based on image enhancement and a modified MobileNet CNN

To increase transparency, PeerJ operates a system of optional signed review and history. This system has been 13 years old and is well established, but not required. By providing their names if they do so, their peer review page records the actions they have reviewed, and if authors are given the option of specifying their entire peer review history alongside their published article, it will allow the complete peer review process to be visible, including reviewer, reviewer letters and editor decision letters.

New to public review? Learn more about additional options and how to use the system.

#### Summary

The submission of this article was received on May 12th, 2021 and was peer-reviewed by 2 reviewers and the Academic Editor.

The Academic Editor made their initial decision on June 15th, 2021.

The first revision was submitted on July 2nd, 2021 and was reviewed by 1 reviewer and the Academic Editor.

A further revision was submitted on August 2nd, 2021 and was reviewed by the Academic Editor.

The article was Accepted by the Academic Editor on August 8th, 2021.

#### Version 0.3 (accepted)

**David Chico** - Aug 5, 2021 - Academic Editor

**ACCEPT**

The authors correctly addressed the points raised by the reviewer at the previous round. The article can be considered for publication.

If PeerJ Staff Note: this decision was reviewed and approved by Jun Chen, a PeerJ Section Editor covering this Section.

Download Version 0.3 (PDF) | Download author's rebuttal letter | Submitted Aug 5, 2021

#### Version 0.2

**David Chico** - Jul 23, 2021 - Academic Editor

**REVISION REQUIRED**

Please address all the points raised by the reviewer and prepare a new version of the manuscript.

Additionally, please measure all the performances of the binary classification through the Matthews correlation coefficient (MCC) because the value already employed.

#### Reviewer 4 - Jul 23, 2021

##### Basic reporting

The emergence of the novel coronavirus pneumonia (COVID-19) pandemic at the end of 2019 led to worldwide chaos. However, the world breathed a sigh of relief when a few countries announced the development of a vaccine and gradually began to return to a "normal state". The emergence of another wave of the pandemic required us to be alert to public health, early detection of infected people in the paramount concern of both specialists and health researchers.

##### Experimental design

This paper proposes a method to detect infected patients through chest x-ray images by using the image dataset available online for COVID-19 (COVIDX), which consists of 2128 X-ray images of COVID-19 cases, 8886 normal cases, and 9275 cases of pneumonia. A hybrid algorithm is applied to improve image quality before undertaking neural network training. This algorithm compares two different representation flows in the image, followed by a contrast enhancement algorithm. To detect COVID-19, we propose a novel convolutional neural network (CNN) architecture called KL-MOB (COVID-19 detection network based on the MobileNet structure).

##### Validity of the findings

The performance of KL-MOB is tested by adding the Kullback-Leibler (KL) divergence loss function when trained from scratch. The KL divergence loss function is adopted for contrast-based image retrieval and fractional classification to improve the quality of image representation. The results are impressive. The overall benchmark accuracy, sensitivity, specificity, and precision are 98.7%, 98.20%, 98.80%, and 98.30%, respectively.

##### Additional comments

(i) Do you give the reasons why "patients can have a good chance of survival if they are diagnosed sufficiently early?"  
(ii) Why do you need neural network here in "One-way around these issues is to use proper image processing techniques for noise reduction and contrast enhancement?"  
(iii) Some COVID-19 papers could be deprecated, see "MEDICAL: Multiple-trait deep convolutional attention network for COVID-19 diagnosis based on chest CT and chest X-ray" and "PSPNet: Pushing the stochastic pooling neural network for an explicable diagnosis of COVID-19 with multiple-scale augmentation"  
(iv) Do you design the model?  
(v) What is the effect of the divergence?  
(vi) What can you find from "In contrast, the output vector 256 in the original data achieved the best value with an accuracy of 98.24%."

Cite this review as  
Anonymous Reviewer (2021) Peer Review #4 of "KL-MOB: automated COVID-19 recognition using a novel approach based on image enhancement and a modified MobileNet CNN v0.2". *PeerJ Computer Science*

Download Version 0.2 (PDF) | Download author's rebuttal letter | Submitted Jul 23, 2021

### Validity of the findings

Table 1 shows that classes are imbalanced and large variance. How it is handled during training? The loss and accuracy graphs need to be presented. Epoch and training explanation needs to present. Authors can compare his work with baseline Deep CNN classifier models.

### Cite this review as

Garg D (2021) Peer Review #1 of "KL-MOB: automated COVID-19 recognition using a novel approach based on image enhancement and a modified MobileNet CNN (v0.1)". *PeerJ Computer Science*



UNIVERSITY OF DEBRECEN



# What does it look like in practice? Science Open

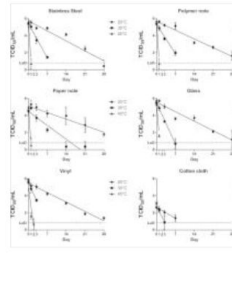
RECORD ABSTRACT ARTICLE 8

The effect of temperature on persistence of SARS-CoV-2 on common surfaces

Author(s): Shane Riddell , Sarah Goldie , Andrew Hill , Debbie Eagles , Trevor W. Drew  
Publication date (Electronic): 7 October 2020  
Journal: Virology Journal  
Publisher: BioMed Central  
Keywords: Environmental stability, SARS-CoV-2, COVID-19, Survivability

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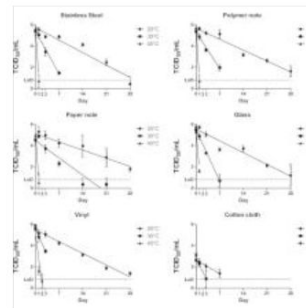
- Post publication peer review
- Reviewers get credit for their reviews via ORCID

The effect of temperature on persistence of SARS-CoV-2 on common surfaces

Author(s): Shane Riddell , Sarah Goldie , Andrew Hill , Debbie Eagles , Trevor W. Drew  
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<https://about.scienceopen.com/peer-review-guidelines/>



# What does it look like in practice? Frontiers

 **Robert Petersen**  
College of Medicine, Central Michigan University, United States

REVIEWED BY

 **Nobuyuki Kimura**  
National Center for Geriatrics and Gerontology (NCGG), Japan

 **Safikur Rahman**  
Munshi Singh College, Babasaheb Bhimrao Ambedkar Bihar University, India

The editor and reviewers' affiliations are the latest provided on their Loop research profiles and may not reflect their situation at the time of review.

## The Perspective of Dysregulated LncRNAs in Alzheimer's Disease: A Systematic Scoping Review

 **Mohammad Reza Asadi**<sup>1,2†</sup>,  **Mehdi Hassani**<sup>3†</sup>,  **Shiva Kiani**<sup>4</sup>,  **Hani Sabaie**<sup>2,5</sup>,  **Marziyeh Sadat Moslehian**<sup>5</sup>,  **Mohammad Kazemi**<sup>6</sup>,  **Soudesh Ghafouri-Fard**<sup>7</sup>,  **Mohammad Taheri**<sup>8\*</sup> and  **Maryam Rezazadeh**<sup>1,5\*</sup>

<sup>1</sup>Molecular Medicine Research Center, Tabriz University of Medical Sciences, Tabriz, Iran

<sup>2</sup>Student Research Committee, Tabriz University of Medical Sciences, Tabriz, Iran

<sup>3</sup>Student Research Committee, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

<sup>4</sup>Department of Molecular Genetics, School of Biological Sciences, Tarbiat Modares University, Tehran, Iran

<sup>5</sup>Department of Medical Genetics, Faculty of Medicine, Tabriz University of Medical Sciences, Tabriz, Iran

## Collaborative peer review

- Unite: authors, reviewers and the handling Editor
- direct online dialogue
- enabling quick iterations
- facilitating consensus
- Editors and reviewers work with the authors to improve their manuscript.
- reviewers name appear on the published article



# What does it look like in practice? Publons

The screenshot shows a user profile on the Publons platform. It includes a sidebar with navigation options: Summary, Metrics, Publications, and Peer review. The main content area is divided into three sections: 'Editorial board memberships' with current and past memberships; 'Verified editor records' showing records for FEBS Letters and Journal of Clinical Investigation; and 'Verified reviews' listing reviews for various journals like Molecular and Cellular Biology, Nature Communications, and The Journal of Immunology.

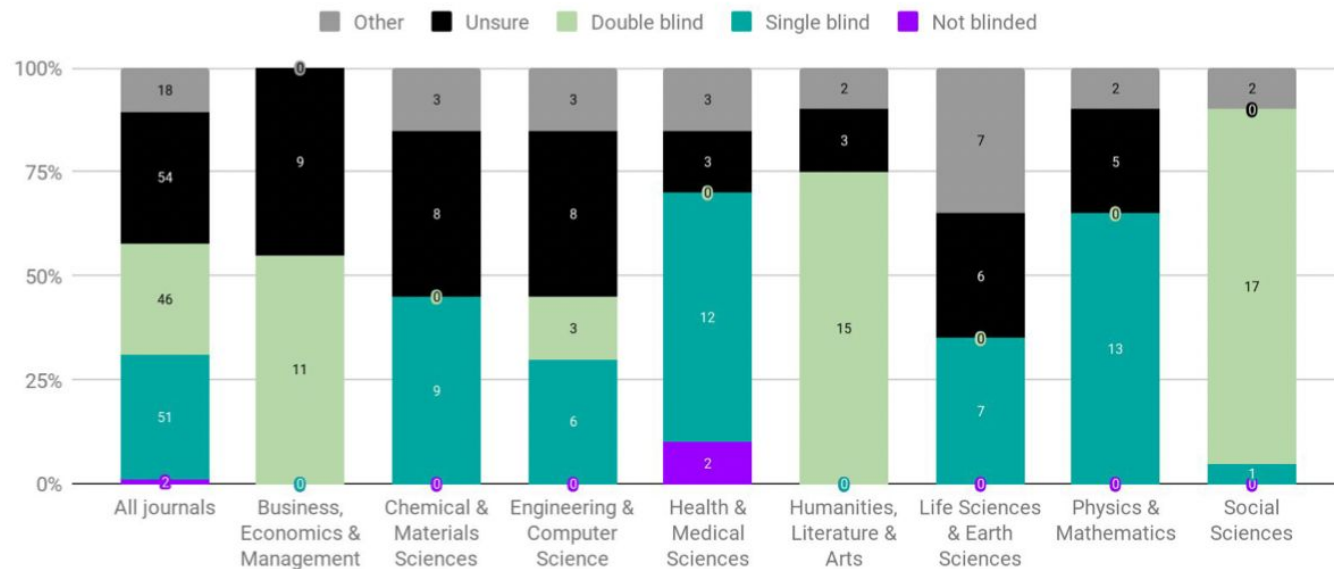
Decouple peer review  
Gives visibility to review and editorial work  
Able to evaluate other reviewers

The screenshot shows the Publons website interface for the University of Debrecen, Hungary. The header includes the Publons logo, navigation links (BROWSE, COMMUNITY, FAQ), and user options (LOG IN, REGISTER, WEB OF SCIENCE). The main content area displays the university's profile with statistics: 359 researchers (6th in Hungary), 3,875 reviews (2nd in Hungary), 894 reviews last year (3rd in Hungary), and 9,820 publications (6th in Hungary). It also lists journal editors at the university, including Torok Peter, Laszlo Nagy, Tibor Magua, Janos Szollosi, Peter Nagy, Peter Balogh, GD Gareth Dyke, and VO Viktor Olah.

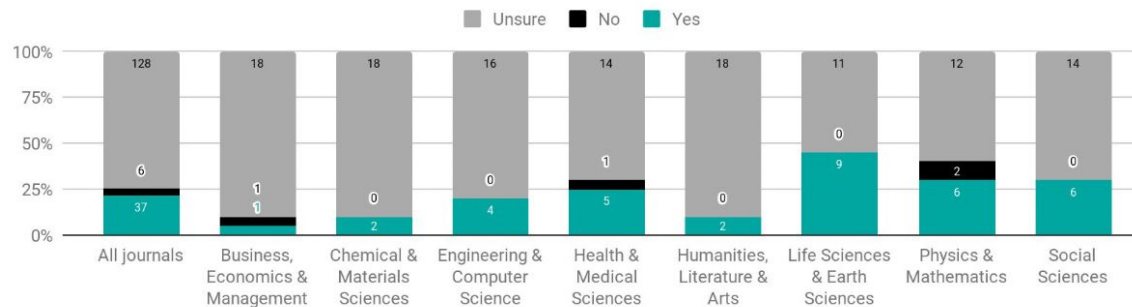


# Transpose database

## What type of peer review is used?



## Can co-reviewers contribute to the review?







## Why OPR?

Transparency

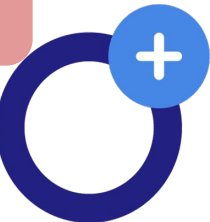
Reliability

Credit for peer reviewers

Educational tools

Accountability

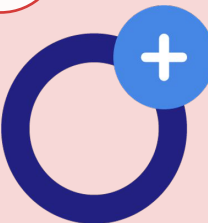
Quality of feedback



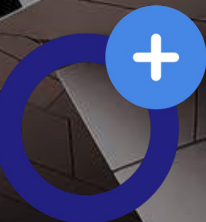
# Two ways to practice OPR

Retain the current peer review system but with open reviews and identities

Develop an entirely new system that is open to the community



Open peer review models  
are developing,  
improvements are made and  
lessons learnt.





How these practices work out in the long run?


- To be able to collect the good/best practices - It would be necessary to have an open dialog with publishers about the review data they are collecting

The picture of open peer review practices are tremendously varying.



# References

- 1. Ross-Hellauer T, Deppe A, Schmidt B. Survey on open peer review: Attitudes and experience amongst editors, authors and reviewers. *PloS one*. 2017;12(12):e0189311.
- 2. Ross-Hellauer T. What is open peer review? A systematic review. *F1000Research*. 2017;6.
- 3. Ross-Hellauer T, Görögh E. Guidelines for open peer review implementation. *Research integrity and peer review*. 2019;4(1):1-12.



*Thank you for your attention!*

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