# Reviewers Information Pack

## What is peer-review?

### Introduction

Today, validation by peers and publication in a scientific journal and scientific conferences continues to be the method through which authors register, validate, disseminate and archive their discoveries and results. The peer-review process is an essential part of the publishing of scientific results. It validates and confirms a researcher's work and establishes a method through which work can effectively be evaluated.

Most reviewers are themselves authors, researchers or sometimes, editors in their own right. Reviewers are in fact colleagues and fellow scientists who wish to directly contribute an integral part of the scientific process. Quite often, in large scientific meetings or conferences, the delegates themselves act as reviewers for the other participants.

### Why Reviewers review?

The peer-review process allows authors and editors an opportunity to use and develop their own expertise in a number of significant ways. By assessing the quality and validity of another author's work, within the same area of expertise, a Reviewer:

- Ensures the continued rigorous standards of the scientific process since peer-review system has been in place for centuries and each generation of researchers engaged in the process contributes to the ever increasing wealth of scientific information
- Upholds the integrity of the journal, by identifying invalid research, as well as the reviewer helps the journal maintain its quality and standards
- Fulfills a sense of scientific obligation to the community and their own area of concentration
- Establishes relationships with reputable colleagues and their affiliated journals, and may also increase his/her opportunity to be invited to join an Editorial Board
- Reciprocates professional courtesy as typically authors and reviewers are often interchangeable roles. In assisting an author with their paper, reviewers 'replay' the same courtesy they receive when authoring their own papers
- Establish expertise in and knowledge of the field
- Increase reputation and exposure to key figures in the community
- Stays current and 'in the loop' with respect to the discipline's latest literature

### Types of Peer-review

There are essentially, three varieties of peer-review:

*Single Blind Review*. The names of the reviewers are hidden from the author. This is the traditional method of reviewing, and is, by far, the most common type

- Advantage: Reviewer anonymity allows for impartial decisions free from influence by the author.
- Disadvantages: Authors fear the risk that reviewers working in the same field may withhold submission of the review in order to delay publication, thereby giving the reviewer himself the opportunity to publish first.
- Reviewers may use their anonymity as justification for being unnecessarily critical or harsh when commenting on the author's work.

*Double Blind Review*. Both the reviewer and the author remain anonymous.

- Advantages: Author anonymity prevents any reviewer bias based on, for example, an author's country of origin or previous controversial work.
- Articles written by 'prestigious' or renowned authors are considered on the basis of the content of their papers, rather than on the author's reputation.
- Disadvantages: It is uncertain whether a paper can ever truly be 'blind'-especially in specialty 'niche' areas. reviewers can often identify the author through the paper's style, subject, matter or through self-citation.

*Open Review*. Reviewer and author are known to each other.

- Advantage: Some scientists feel this is the best way to prevent malicious comments, stop plagiarism, prevent reviewers from drawing upon their own 'agenda' and encourage them, honest reviewing.
- Disadvantage: Others argue the opposite view. They see Open Review as a less honest process in which politeness or fear of retribution may cause a reviewer to withhold or tone down criticism. For example, junior reviewers may hesitate to criticize more esteemed authors for fear of damaging their prospects. Independent studies tend to support this.

## Duties of Reviewers

### Contribution to Editorial Decisions

Peer-review assists the editor/chairman/session organizer in making editorial decisions and through the editorial communications with the author may also assist the author in improving the paper. Peer-review is an essential component of formal scholarly communication, and lies at the heart of the scientific method.

### Promptness

Any selected reviewer who feels unqualified to review the research reported in a manuscript or knows that its prompt review will be impossible should notify the editor /chairman/session organizer and excuse himself from the review process. In general, a reviewer can simply ignore an assigned review.

### Confidentiality

Any papers received for review must be treated as confidential documents. They must not be shown to, or discussed with others except as authorized by the editor /chairman/session organizer.

### Standards of objectivity

Reviews should be contacted objectively. Personal criticism of the author is inappropriate. Referees should express their views clearly with supporting arguments.

### Acknowledgement of Sources

Reviewers should identify relevant published work that has not been cited by the authors. Any statement that an observation, derivation, or argument had been previously reported should be accompanied by the relevant citation. A reviewer should also call to the editor /chairman/session organizer's attention any substantial similarity or overlap between the manuscript under consideration and any other published paper of which they have personal knowledge.

### Disclosure and Conflict of Interest

Unpublished materials disclosed in a submitted paper must not be used in a reviewer's own research without the express written consent of the author. Privileged information or ideas obtained through peer-

review must be kept confidential and not used for personal advantage. reviewers should not consider any papers in which they have conflicts of interest resulting from competitive, collaborative, or other relationships or connections with any of the authors, companies, or institutions connected to the paper.

## Guidelines for Reviewers

### Purpose of peer review

Peer review is a critical element of scholarly publication, and one of the major cornerstones of the scientific process. Peer Review serves two key functions:
Acts as a filter: Ensures research is properly verified before being published
Improves the quality of the research: rigorous review by other experts helps to hone key points and correct inadvertent errors

### On being requested to review

*Does the article you are being asked to review truly match your expertise?*

The editor/chairman/session organizer who has approached you may not know your work intimately, and may only be aware of your work in a broader context. It is possible then that the article that has been assigned to you do not match your expertise. In this case, simply ignore the assignement.

*Do you have time to review the paper?*

Reviewing an article can be quite time consuming. The time taken to review can vary from field to field, but an article will take, on average, 3 hours to review properly. Will you have sufficient time before the deadline stipulated in the invitation to conduct a thorough review? If you can not conduct the review, simply ignore the assignement.

*Are there any potential conflicts of interest?*

A conflict of interest will not necessarily eliminate you from reviewing an article, but full disclosure to the editor will allow them to make an informed decision. For example, if you work in the same department or institute as one of the authors, worked on a paper previously with an author or have a professional or financial connection to the article. These should all be listed in the comments that you will address the editor /chairman/session organizer.

### Conducting the Review

Reviewing needs to be conducted confidentially. Conferences in general, provide detailed guidance for the reviewing process, but you would be expected to evaluate the article according to the following:

*Suitability of topic*

- Is the article appropriate for presentation in this conference?
- Is the topic important to colleagues working in the field?

*Content*

- Is the paper technically sound?
- Is the coverage of the topic sufficiently comprehensive and balanced?
- How would you describe the technical depth of the paper?
- How would you rate the technical novelty of the paper?

*Presentation*

- How would you rate the overall organization of the paper?

- Are the title and abstract satisfactory?
- Is the length of the paper appropriate?
- Are symbols, terms, and concepts adequately defined?
- How do you rate the English usage?
- How do you rate the Bibliography?

*Overall rating*

- How would you rate the technical contents of the paper?
- How would you rate the novelty of the paper?
- How would you rate the "literary" presentation of the paper?
- How would you rate the appropriateness of this paper for presentation in the Conference?

Moreover, in writing comments to authors or to the editor/chairman/session organizer, you should have in mind the following:

*Originality*

- Is the article sufficiently novel and interesting to warrant publication?
- Does it add to the canon of knowledge?
- Does the article adhere to the journal's standards?
- Is the research question an important one?
- In order to determine its originality and appropriateness for the journal it might be helpful to think of the research in terms of what percentile it is in? Is it in the top 25% of papers in this field?

You might wish to do a quick literature search using tools such as Scopus to see if there are any reviews of the area. If the research been covered previously, pass on references of those works to the editor.

*Structure*

- Is the article clearly laid out?
- Are all the key elements present: abstract, introduction, methodology, results, conclusions?

*Consider each element in turn:*

- Title, does it clearly describe the article
- Abstract, does it reflect the content of the article
- Introduction, does it describe what the author hoped to achieve accurately, and clearly state the problem being investigated? Normally, the introduction is one to two paragraphs long. It should summarize relevant research to provide context, and explain what findings of others, if any, are being challenged or extended. It should describe the experiment, hypothesis (es); general experimental design or method
- Methodology. Does the author accurately explain how the data was collected? Is the design suitable for answering the question posed? Is there sufficient information present for you to replicate the research? Does the article identify the procedures followed? Are these ordered in a meaningful way? If the methods are new, are they explained in detail? Was the sampling appropriate? Have the equipment and materials been adequately described? Does the article make it clear what type of data was recorded; has the author been precise in describing measurements?
- Results. This is where the author/s should explain in words what he/she discovered in the research. It should be clearly laid out and in a logical sequence? You will need to consider if the appropriate analysis been conducted? Are the statistics correct? If you are not comfortable with statistics advise the editor when you submit your report. Any interpretation should not be included in this section\
- Conclusion/Discussion. Are the claims in this section supported by the results, do they seem reasonable? Have the authors indicated how the results relate to expectations and to earlier research? Does the article support or contradict previous theories? Does the conclusion explain how the research has moved the body of scientific knowledge forward?

- Language. If an article is poorly written due to grammatical errors, while it may make it more difficult to understand the science, you do not need to correct the English. You may wish to bring it to the attention of the editor, however.
- Finally, on balance, when considering the whole article, do the figures and tables inform the reader, are they an important part of the story? Do the figures describe the data accurately? Are they consistent, e.g. bars in charts are the same width, the scales on the axis are logical.

*Previous Research*

If the article builds upon previous research does it reference that work appropriately? Are there any important works that have been omitted? Are the references accurate?

*Ethical Issues*

- Plagiarism. If you suspect that an article is a substantial copy of another work, let the editor know, citing the previous work in as much detail as possible
- Fraud. It is very difficult to detect the determined fraudster, but if you suspect the results in an article to be untrue, discuss it with the editor
- Other ethical concerns. If the research is medical in nature, has confidentiality been maintained? If there has been violation of accepted norms of ethical treatment of animal or human subjects these should also be identified

**Communicating Your Report to the Editor**

Once you have completed your evaluation of the article the next step is to write up your report. The report is an electroncally submitted form and except from the predefined questions, you can address his comments to both the editor/chairman/session organizer and the author. These comments, if they exist, should contain the key elements of your review, addressing the points outlined in the preceding section. Commentary should be courteous and constructive, and should not include any personal remarks or personal details including your name.

Providing insight into any deficiencies is important. You should explain and support your judgment so that both editors and authors are better able to understand the basis of the comments. You should indicate whether your comments are your own opinion or reflected by data.

When you make a recommendation regarding an article, you have the following options.

a) Rejected due to poor quality, or out of scope
b) Accept without revision
c) Accept but needs revision (either major or minor)

In the latter case, clearly identify what revision is required. Note that this option is available only at the first phase of the revieweing process. After the author submits his or her revised manuscript, no more revisions can be requested.